"The one ring to connect it all"

You don't need a phone any more, because everything is now connected in this one ring that is always on (you)

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Technology Impact Cycle Tool

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Impact on society
What impact is expected from your technology?

What is exactly the problem? Is it really a problem? Are you sure?
You don't need to carry around a lot of devices anymore, because everthing is now connected in just one small device that you can easily carry with you, with which you can see your agenda / the weather forecast, open doors, start your car, get reminders, etc, etc.

This way you can leave other stuff like keys and mobile phones at home, because the ring will do anything for you.

Are you sure that this technology is solving the RIGHT problem?
Yes, this might come in handy and I think people would like to have one.

How is this technology going to solve the problem?
People are often chaotic and tend to forget things. This little device helps you to get control of your life and mkaes shure you don't forget things.

What negative effects do you expect from this technology?
The ring can be stolen, broken or broken into. And it might make your life so efficient that it will take some of what makes us human away from us.

In what way is this technology contributing to a world you want to live in?
I like a world where everything is efficient and where I don't have to think about simple things.

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.
We have to make it hackers-proof!

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?
If the ring gets lost or is stolen, than people can access your house, your car, your data, etc. Identity theft can also be an issue here. They can also hack the ring. This allows them to extract information from your ring or know your location where you are now. They can also steal your ring. If they have DNA from you, they will get access to the ring. This allows them to invade your car, home and also do multiple options to make your life miserable.

Can fakers, thieves or scammers abuse the technology?
At the moment, a contactless card can be scammed, so it is not a big step to think that people can steal or misuse data from the ring if they are close enough to get the signal.

They can f.i. make music or voices come out of your ring if they hack it. With this the victim can be bullied or humiliated in public. They can also call you at annoying moments for fun.

Can the technology be used against certain (ethnic) groups or (social) classes?
It can be extremaly practical for people with special needs, like handicapped people or elderly with dimentia, but it can also exclude people who can't afford the technology or who are not able to use it in a correct way (f.i. because of a disability or because of low digital litteracy).

When I show a hand with 5 fingers in the commercial and it puts it on the index finger. But people who miss that finger will feel attacked and left behind.

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.
Wearing a ring can be a visual sign of belonging to a certain group of tech-addepts. It can make other people feel like not-haves if they cannoot afford or use this.

People with 4 or fewer fingers on one hand can also be bullied by the bad actors to put the ring on the finger that they miss in the eyes of the victim.

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

truth?

Identities and data can be stolen and bad actors can get access to almost everything that a person has or is.

They can use it to make words come out of the ring to the people of your surroundings. Make the ring project something that you don not want to on the floor or wall.

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

The ring should be secured very well. This can be done in the sense that it only work on the finger of the owner (master-slave accepted) or with digital security measures as well. An alteration of the human body to prevent you from losing the ring can be an option as well, although we think this will go a bit to far for the most of us...

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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?

Yes, it registeres and connects to almost every data-point you can imagine, just as our mobile phones do or can do at the moment.

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

Only data that the user gives access to are aquired and sens back to the user himself. But, when projecting things at a wall or user voice to give the user feedback, other could watch or hear them as well. That can be an issue.

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

There is no such thing as minimal data aquiring here, but the user has given his consent and the data is only meant for the user and not for others. If others get access this might become problematic.

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

No, it does not.

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

For now it is unclear how long the data will be used and stored. If this is infinite, historic data can possibly be used against the user, f.i. by insurance companies (f.i. you decided to go out and drive a car, while the ring has warned you for slippery roads)

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

Maybe collecting only real time data would be part of the solution to avoid problems in the future, but than the feedbackloops will also be less usefull (because the tool cannot say 'like yesterday' anymore)

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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?
We bacome more and more dependent on technology and this is an actual example that is no exclusion to that. Who are we and what can we do when we loose the ring, loose internet connection or loose our data? Can we still think for ourselves then and make up our mind?

How does the technology influence the users' autonomy?
It is always on (you), so we aspect that people won't take it off often. Because it is so small, it is tempting to wear it at night as well (as it can track your sleeping pattern then). In this way it can become like an extended bodypart and it can be addictive. But, you can always ignore the suggestion that the ring gives you if you want to do things in an other way.

What is the effect of the technology on the health and/or well-being of users?
Health can be optimazed by the metrics of the ring but it can also make you less human, because you depent to much on technology and think less for yourself.

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.
Technology can help us as an extended part of being human, but it can also make us less human. Maybe we should put some serendipity back into the system, to make shure coincidences that are not programmed can still arise.

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Stakeholders
Have you considered all stakeholders?

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

Name of the stakeholder
ring user

How is this stakeholder affected?
he or she is the owner of the ring (and probably also of the data)

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?

Name of the stakeholder
people in the surroundings of a ring owner

How is this stakeholder affected?
these are the people that see and hear things that the ring does for its owner

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
ring developer

How is this stakeholder affected?
this person might get rich from bringing this tool to the market

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?

Yes

Name of the stakeholder
(legal) authorities

How is this stakeholder affected?
these people should deceide wether the ring is legal or not

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
people who cannot afford or use the technologie

How is this stakeholder affected?
people can feel FOMO because of this

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.
this is not something between the developer and user. It affects more people, so more people should be involved in the process.

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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?
At the moment all data that can be aquired is aquired and used for the benefit of the user. This might not be perfect, but it works for now...

How does the technology organize continuous improvement when it comes to the use of data?
The more data the ring gets, the more accurate it can predict the future. But itmight give us some false security when we base all our decisions upon that data.

How will the technology keep the insights that it identifies with data sustainable over time?
If only real time data are used, not much problems will arise. But then the predictive value will also be less. If a whole profiel is build upon historical data, more can be given to the user, but also the risk of misuse become higher.

In what way do you consider the fact that data is collected from the users?
Most users click on the accept button anyhow and trade their data for convenience. If the data is only shown to the user himself, no problems will arise, but if he want to compare himself to otheres, big datasets have to be build and that might cause some issues (but will also make the product better and more profitable).

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.
Collecting only real time data and store it locally for the user only might be an option, but it will also limit the functionalilty of the tool.

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Inclusivity
Is your technology fair for everyone?

Will everyone have access to the technology?
No, only the people who want and can afford the ring will have one.

Does this technology have a built-in bias?
It handls from a kind of 'standard person' who has a house, drives a car etc.
For people who live in tents or on the street, walk from A to B etc, all the
functionality might turn out to be useless.

Does this technology make automatic decisions and how do you account for them?
Yes, it does. Based on the weather forecasts it predicts things you will need
(like an umbrella) and based on your calender it will urge you to hurry up.
Those correlations are 1-on-1 explainable for now, but might get more
complicated in the future.

Is everyone benefitting from the technology or only a a small group? Do you see this as a problem? Why/why not?
As the ring doesn't use a screen, people might see more of their surrounding
if you compare it to the actual situation where people tend to stare at screens
more. This might open up our society a bit more. On the other hand it is
probably so that some people will get filthe rich from this tool while other are
not. Information can be sold and adversisements can be targetted even
better than they are now. This will probably benefit some more then others.

Does the team that creates the technology represent the diversity of our society?
No, this concept is thought out by one ICT and Media Design student at
Fontys University of Sciences, without consulting any others, exept from
teachers.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.
We could make this technology accessable to none or to everybody or make
it cheaper for some, so they can get access to it.

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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?
No, this is not nessecary for the user. He only has to know and understand the frontend of the tool.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?
No

Is it possible to file a complaint or ask questions/get answers about this technology?
Yes, there is a service desk where a user can go to with questions or technical problems.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?
No, it is up to the user how he uses the tool.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.
MAybe a bit of explenation on the website before people buy the ring will be a good idea.

Sustainability

Is your technology environmentally sustainable?

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

A ring is a small thing so it doesn't need a lot of energy (and it doesn't run on batteries, it is rechargable (with green energy, if you like))

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

It uses kind of the same materials as a mobilephone, but then in smaller amounts because the device is smaller. The ring itself is from metal and can be golden plated and is in that sense also jewelry.

Do you think the lifespan of the technology is realistic?

Yes, Even if the technology doesn't work anymore, you still have the jewelry-function, so you can still wear it. Only if people change in weigth frequently, the ring has to be adapted.

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

It is another thing that people probably want to have, nect to the things they already have. In that sense we should think if this is really nessecarry (but it would be a good thing if we skip the phones though)

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

The smaller the better!

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Future

Did you consider future impact?

What could possibly happen with this technology in the future?

People all have this little devices and they cannot live without, they became dependent on technology. Energyconsumption is sky-high and we pollute our environment to much. Because of inequallities wars started between the have and have-nots.

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.

People are freed from looking at their screens all the time. They feel human again and only use this small rings when needed. It helps them only at the times when their human skills are not enough.

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.

People all have rings now and that ring dictates them waht to do and how to think. Technology has the overhand and treats humans as a resource to their benefit, a bit like in the way that we treat plants now.

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

I think the balance between human and technology should be always somewhere inbetween.

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

A commerial party can make the developer rich in a sec but can also use all user generated data in a commerial sense.

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.

The developer should think of a way how this technology is applied in a way it contributes to society and not harming it.