Focus Group Protocol

PCS Cargonaut Solution - Research Phase #3

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Date..........: Wednesday, 06-10-2021
Moderator.....: Markus Funke
Participants..: anonymized
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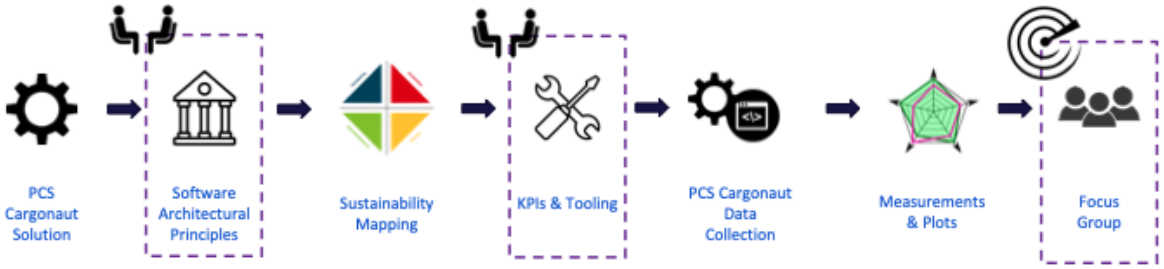
Research Questions

RQ 1: How can Key Performance Indicators of software architectural principles be operationalized and measured concerning sustainability?

RQ 1.1: Which tools are applicable to measure the solution sustainability Key Performance Indicators?

RQ 1.2: To what extent can the measurements be monitored in an automatic way?

Where are we?



Guidelines


Focus Group Guidelines
There are no wrong answers!
Everything will be valuable!
Limited time frame!
45min max!
Audio will be recorded!
Only for research transcriptions
Software Sustainability
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Questions

PRSM+T Model

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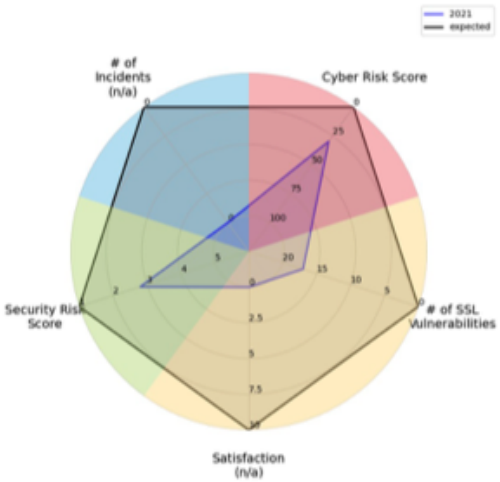
Spider Plot

- **Is the final model well defined and can you confirm the combination with the Spider Plot?**
- **What does the data (Spider Plot) mean to you?**
- **What are potential problems in using or understanding the model and the plot?**

Schiphol

Software Sustainability

#1)

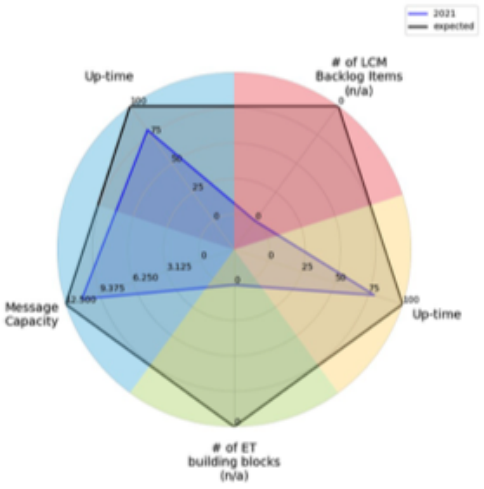


Schiphol

Software Sustainability

#1 P4: I'm trying to understand the model. I do not understand it. What do the values mean? What does it mean if a value is 0? Or what does the 5 mean?
Overall, the model together with the plot sounds and looks ok to me. However, you would need to explain it a little bit more to make it more understandable. So only the terms are a bit meaningless or hard to understand.
I do think that having such a model is quite helpful, but we do need the real data to quantify the actual situation. We apply such model in the current situation. So once a year, we want to get insight into the majority of our security organization. So we have some similar models. In order to understand how majure we are. I believe that kinda model will help us. It will help us to understand what kind of things we are doing right or wrong.

#2)



Schiphol

Software Sustainability

#2 P2: Question about the ET building blocks. Because we do have the number of ET building blocks available. We don't have a tool for that. (remark by the moderator that the number is zero since we were not able to get the data by the tool) So I do not know if we need a tool to measure that. But this can be done manually right now.
The max should be not zero.
So then what is good what is bad.
If you have a project and you could say that e.g. 20 building blocks are applicable but you only use 15, then you should measure it by applicable building blocks.

P5: This chart looks better then the first one. But again, the zeros are biasing the view. Looking the plot bad. I understand that the

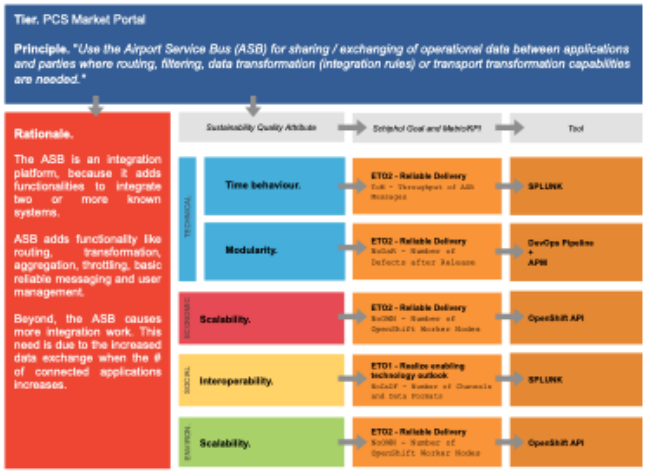
outer polygone is the expected one. So you can see that the technical dimension behaves like almost expected, but the zeros let the model look bad. You dont have data then it looks like it is really bad.

It is a bit confusing that Up-time is mentioned twice. In both dimensions.

About the ET Building blocks. It would depend per project. It is not like that in every project you use all building blocks. So the max is not the max of all building blocks at Schiphol. It might also be that for some solutions are no building blocks. For some components you do not use any building block. That is not necessarily bad, but there is basically no building block. You just create it yourself.

P4: The ETO building blocks depends on the context. It is difficult to say whether it is bad or good.

#3)



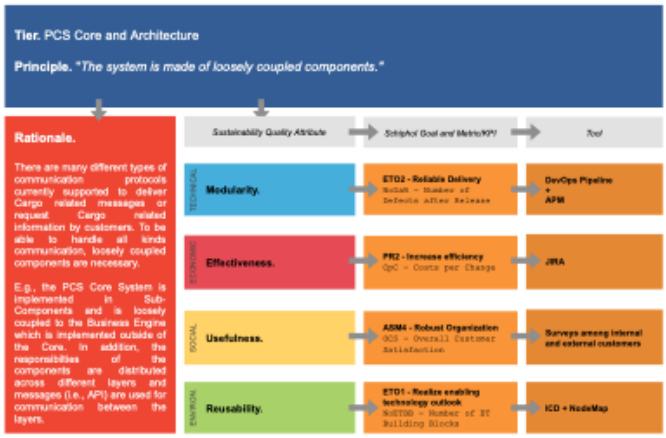
Schiphol

Software Sustainability

#3 P2: Message throughput. So this data is based on the PoC? Not for the live env.? (Moderator comment: as explained by Marcel, the test manager, indeed, the data are not that good because they are measured at a specific date/time. It could be that the data are not that good. They perform multiple test runs a day)

P5: Because this would mean that we still have some work to do.

#4)



Schiphol

Software Sustainability

#4 P2: defects after release should be compared to the components we have. Because the more components you have the more defects you will have. The bigger the system is the more likely the number will increase. There should be kinda ratio by the number of components we use.

The problem is when you don't have a maximum, you never got a perfect situation here. Because you can't define a max.

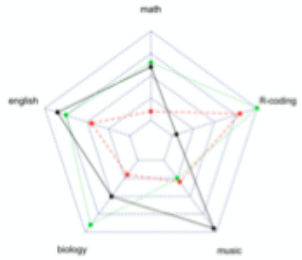
The problem with costs per change is: you would need it to compare it with a 'not loosely coupled' solution. But there is no system what you could use to compare with. So then it is really difficult to get a good number for this.

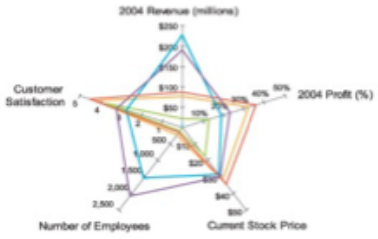
The number of ETO building blocks is the same as before and therefore same comments are in place for that.

P5: The number can not be fixed on that dimension. And maybe the same goes for costs per change. Unless you put it to infinity. Then it is a finite line statement and this not usefull at all here.

The last spider plot is less usefull then the rest.

Spider Charts





- **What is your opinion about Spider Charts?**
- **Do you use Spider Charts @Schiphol and for what?**
- **What is your opinion about Spider Charts with different scales (right plot)?**

Schiphol

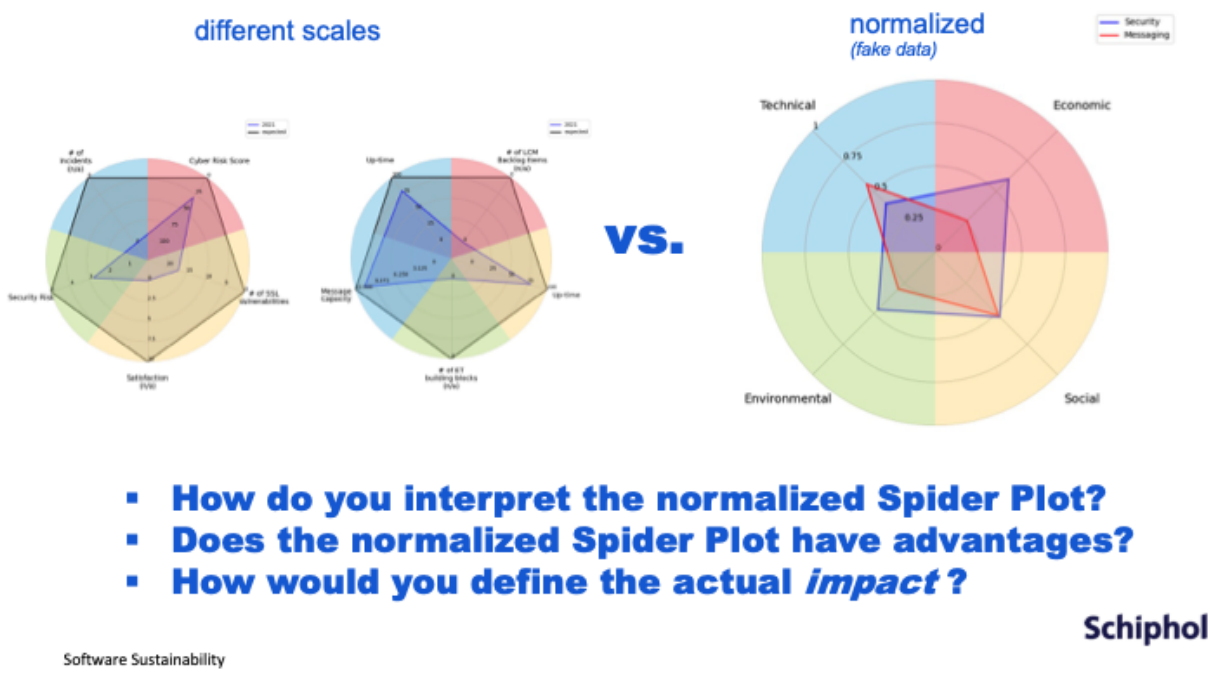
#4

P2: I like spider charts. But I haven't seen it at Schiphol. I used it at my former company. But I havent really seen it at my department.

P5: I haven't seen this kind of diagrams. But I think it could be useful. And my opinion about the different scales: in my opinion you can't do it anyway. This is due to the different dimensions. So I think that is fine.

P4: We use it for security roadmap. There we jsut use it. To show how majure all products and services are that we offer to our customers. So not only technical stuff. We can also show how mature we are as a Cyber Security Organization. So I think it is quite useful. But the main point is, we would need similar terms that we

could compare to each other. Similar terms together so that we can compare then. For outsiders it is really difficult to interpret if you have so many different terms/KPIs together. In general, I think these kind of vizualization is quite helpful.



#4 P2: The way I look at it. The normalized version is the management summary, and the other ones are the detailed version to have a better and detailed look at it. I think you can use both. It shows you which aspect you have to focus on. So where do we need to spend money ? This could be a discussion.

P5: I think that doesn't change anything. Because the normalization is basically already done in the other plots. Because I think implicitly the normalization is already there. The real data are "hidden". If you only put the relative length you would loose information.

The normalized picture shows more or less the same image. But you lose the scales. But from the detailed picture you can calculate means.

You loose the information about what the calculation was about.