So we've got beam elements, truss elements, and a flat shell. We've got some cantilever ring parts of the building, so we probably need the truss in there. We need beam systems for the floors and the roof.

Okay, so we need a structural system for each rectangle. Okay, and we got some default settings. So let's start.

How does this work? This is a different setup. No, it's not. All right, I can click on them, and then I can see which one.

Okay, I'm just going to click on them. And okay, that's how it works. So we first click a beam system everywhere and then we will look again to put some trusses in the parts where it's needed.

I don't know if we also need stability because in that case we need some more trusses. This is probably a truss. Oh, in that direction, maybe not.

Yeah, it depends. We probably also need a stable structure. So in that case, okay, it's a bit of trial and error because I can't see which elements I'm selecting.

So let's put a stability system over there and continue with beaming. This is a truss. We also want a truss system over here for stability reasons.

We need that truss for the cantilever, and we need some more trusses for the stability in one direction. Okay, here we're going to put a truss, here we're going to put a truss. We need to stabilize also the top part, so maybe I need some truss system all the way to the bottom.

This is not a truss. It's really hard to find the corresponding numbers to the elements. Okay, we need a truss system over here.

Now that one is right, and then we also need it. No, we don't need the truss over there. It's hard to place it in the right space.

Okay, this is really hard. If I click once, the whole building will just flip. I really can't find the right elements.

Okay, so we don't need the truss over there, but we're in the bottom. We also need a truss over there, so maybe in the other direction. Oh, it's so shitty.

Okay, it's really trial and error. So we need some extra trusses over here with the cantilevering parts, so let's find the right location. This program really doesn't work.

Okay, so we got a FWARE beam system. From that way on, we can try to find where we can put the truss. I really can't find it.

This one, we need a truss for the stability in one direction, but maybe we can put the stability system more to the right, so that changes the approach. It really doesn't work. Okay, so let's put some trusses.

No. Yes, we do. I'm still trying to find the right locations, but it's really hard.

Okay, I'm just going to put some trusses in there because this really doesn't work. How do I find the right location? Ah, here we got one. So we still need two locations.

Three locations, actually. That one. Okay, we still need three locations left.

I'm just going to click everyone trying to find the right one. This one. This is the one I was looking for, so let's put another one out, and then do I need a truss over there? This really doesn't work.

It's the worst. Okay, I will just go on because I can't find the right locations. Just one try.

Okay, well, let's go on. We see four different models. We see in option two, which is clearly over-designed.

We get an option three, which has a lot less material, but still a lot of material. Too much trusses and too much walls. And option four clearly has no bracings whatsoever.

So underneath each model, the total strain energy is shown. So we see clearly with the models with more material, there's less strain energy. So we're going to probably go on with the model with the least amount of... No, we're not.

Probably we go on with my model because it's more realistic. We also see that there's a lot of absorption in the structure that's probably deformed a lot, and yeah, we don't need a structure that deforms a lot, but we also don't want something like option two that maybe is really stiff, but it's way too stiff, too much material. So we go somewhere in between.

That's option one or three. And I actually think option two has maybe not enough crosses, but it's the most close to it. So we need a stiff structure, but not too stiff.

So I will go with option three. I will go with option one.

So first we look at the different spaces and I think if you would remove option 7 that would mean a lot of less structural material needed. So if we look at the strain energy, if we look at option 7 we can also see that there is a lot of strain energy inside of that so yeah we would probably remove that. And there are also other spaces that have a lot of strain energy but they are on the bottom so that explains a lot, a lot of forces are in there.

So we are going to remove space 7, we are asked to split a maximum of one space. So I don't know what is meant by split, so probably split the structural system. I think then we will split 5 because at some parts of space 5 carries the load from the floors on top.

So we might want to separate that part but I don't know what is meant by split a space but I would choose 5 or 6 but I choose 5. Okay, I think that was the right choice. Now you see buildings with spatial modification, three different spatial designs are shown which are generated by AI. So different spaces split and removed.

So if you look at models we can see our own model which we split and in the option 4 of AI we got somewhat similar, they split it part 6 so that is actually what I wanted to do at first, what I had chosen to do. And we had other options, we got some separations on top. So we are either going to continue with option 1 or option 4, so I will continue with option 1. Okay, so now we are going to start with iteration 2, continue, same steps, this time I am going to do it different, I am going to use a flat shell everywhere and then I can see which one I am actually selecting, maybe that is faster.

So it is easier to work with. So we have no cantilevers anymore, so that means we only need the choice to transfer the vertical forces down, we do not need any, or we only need to transfer the horizontal forces down and we do not need to transfer any vertical forces anymore. So that is why we only use trusses for stability and we got a top part which needs to be stabilized so we are going to put trusses in that part.

So we are going to use a beam system over there. Okay, this is more easy than I did previous, because now I can see where I work, the only downside is that I can not see through the building, so sometimes I need to shift a bit. So it is still difficult, but I am still continuing with my plan and it works fine.

Sometimes I need to turn the model, but it is way faster than I did in previous. Still continuing. Okay this works, I think it looks fine by now, but I still need one truss over there which is hard to find now.

I think it is this one, no it is not. Okay, I got everything. So we got again AI generated models, still one model that is option two that has a lot of material and option four which has way too less material because we do not have any trusses which you might need because now you have a lot of bending moments in your structures, in your structural elements.

And we got an AI generated model which also uses too much material, so I will stick with my model. And we can remove from space, well I think I would remove space 10 based on because space 10 brings a lot of load to space 8 and space 3 which has also a lot of strain energy, but also option 4 has a lot of strain energy and I do not get why. I will just remove space 10.

We got one truss split, well in that case I would split space 6 so we get a low part and a higher part. Then the AI also did some splitting and well I think my splitting still makes the most sense. Option 3 did splitting and deleted an element which makes the whole building cantilever.

I think that is not something efficient and option 4 also and option 2 did one splitting less or yeah a different part. So yeah I think I will still go on with my option which divides the building into lower parts and higher parts and maybe can separate the structure that way. So I will go on with my option.

I am I think unsatisfied because the program does not work nicely as a user does not see the element numbers so it is hard to find corresponding number. Difficult because yeah it is actually the same reason so it was difficult to use because the numbers were not shown in the 3D model. Yeah I did not find it.

No I think I would not use it because yeah options from AI were not optimal. Yeah I have no suggestions on how you could improve it. I think maybe that is the answer.

It is hard to improve. I thought that is the answer. Yeah.

Yeah. We need to do that, but we don't have too much. We'll wait and see until we get it.