

Audio file

Case study 4

Transcript

00:00:02 Speaker 1

So afternoon, [name of interviewee 1].

00:00:06 Speaker 1

Yes [name of interviewee 1] and better.

00:00:10

Right?

00:00:10 Speaker 1

So nice to meet you, so first just [name of interviewee 1] and [name of interviewee 2].

00:00:20 Speaker 2

Surname yeah.

00:00:21 Speaker 2

It's difficult for us, [name].

00:00:29 Speaker 1

OK, so and yes, your address is [name].

00:00:40 Speaker 1

Uh, so your roles your your I mean your roles are your.

00:00:48 Speaker 3

[Dutch text]].

00:00:49 Speaker 3

Right?

00:00:52 Speaker 2

No, so his role in this company is sustainable consultant.

00:01:03 Speaker 3

You have research and development.

00:01:08 Speaker 2

Yeah, so here in this company.

00:01:11 Speaker 2

We have the research.

00:01:14 Speaker 2

The research department and also the.

00:01:16 Speaker 2

The realization and engineering department.

00:01:20 Speaker 1

Yeah, and you are from engineering department, we.

00:01:22 Speaker 2

Are both from the engineering and realisation department.

00:01:31 Speaker 1

OK.

00:01:35 Speaker 1

Yeah, so the name of this project is it called called [name of project]?

00:01:42 Speaker 3

[name of project]

00:01:42 Speaker 1

No yes yeah yeah.

00:01:44 Speaker 2

And the problem?

00:01:49 Speaker 3

The new [name of company].

00:01:53 Speaker 2

The new House [name of company]

00:01:54 Speaker 2

Yeah, that's a new office center new office center.

00:02:05 Speaker 2

If you translate it to English, but that's a name so.

00:02:08 Speaker 3

The transformation of office

00:02:14 Speaker 2

[name]

00:02:16 Speaker 3

[name]

00:02:17 Speaker 1

Ah OK, cool because I didn't find any any, so it's the new office center of [name of company].

00:02:23 Speaker 1

Yeah, yeah, interesting.

00:02:26 Speaker 1

Before I start with the questions that I sent you before just I want to ask general question, interesting question about circularity.

00:02:33 Speaker 1

So how do you see the?

00:02:36 Speaker 1

Influence because we had no, you know, here there is.

00:02:39 Speaker 1

There are so many circularity initiatives.

00:02:43 Speaker 1

And ambitious here in the Netherlands.

00:02:46 Speaker 1

So I want really to know.

00:02:49 Speaker 1

How they affect the building industry and also the and Real estate market?

00:02:57 Speaker 2

[Dutch translation]

00:03:00 Speaker 2

[Dutch translation]

00:03:06

[Dutch translation]

00:03:08 Speaker 3

[Dutch answer]

00:03:15 Speaker 3

[Dutch answer]

00:03:17 Speaker 3

[Dutch answer]

00:03:21 Speaker 3

[Dutch answer]

00:03:23 Speaker 3

[Dutch answer]

00:03:25 Speaker 3

[Dutch answer]

00:03:31 Speaker 3

[Dutch answer]

00:03:34 Speaker 3

[Dutch answer]

00:03:37 Speaker 3

[Dutch answer]

00:03:40 Speaker 3

[Dutch answer]

00:03:46 Speaker 2

So well before the focus in the industrial is more on the energy saving or like the increase of renewable energy.

00:03:56 Speaker 2

But nowadays because of the increase of the focus on circularity we have.

00:04:03 Speaker 2

Much more emphasize emphasis on materialization of the buildings.

00:04:09 Speaker 2

Then in this case, there are a lot of thing that becomes important.

00:04:14 Speaker 2

That's the big impact of the materials.

00:04:17 Speaker 2

Or yeah.

00:04:19 Speaker 2

Or are the buildings in which we call it as MPG in Dutch.

00:04:25 Speaker 2

And there are also other aspects that becomes important.

00:04:30 Speaker 2

For instance the design or realization of adaptive building or adaptive design.

00:04:40 Speaker 2

And in this case it's basically talking for instance, about implementing installations that can be.

00:04:49 Speaker 2

Detach from the building or can be adaptive.

00:04:54 Speaker 2

Easily when it's talking about the usage of the building in the future.

00:05:01 Speaker 2

And in a way This is basically try trying to prolong the life Time of the building.

00:05:13 Speaker 1

OK and material to keep keep the material in use?

00:05:17 Speaker 1

Yeah, that's what you mean.

00:05:19 Speaker 1

So the adaptive.

00:05:20 Speaker 1

So I just I want to understand.

00:05:22 Speaker 1

So like using those ambitious, you mentioned that previously there was considered just renewables and so on.

00:05:30 Speaker 1

But now with circularity.

00:05:33 Speaker 1

Other than the focus is on material and so.

00:05:38 Speaker 1

The importance because you want material and dematerialization and everything or keep material reuse.

00:05:45 Speaker 1

So now you start to consider adaptive design as an important thing.

00:05:51 Speaker 1

And your work.

00:05:54 Speaker 1

That's what I understood.

00:05:56 Speaker 1

Yeah? yes yeah.

00:05:59 Speaker 1

And for for considering adaptive design, you mentioned that like you, it's adaptive design helps for that, or like how can I say like it can be facilitated or achieved by by designing for the attachment or like yeah?

00:06:22 Speaker 2

[Dutch translation]

00:06:23 Speaker 1

Oh Right?

00:06:31 Speaker 2

[Dutch translation]

00:06:35 Speaker 3

You have the seven layers for Brend.

00:06:40 Speaker 2

[Dutch translation]

00:06:41 Speaker 3

[Dutch answer]

00:06:46 Speaker 2

[Dutch translation]

00:06:49 Speaker 2

So also you have the seven layers of Brand

00:07:00 Speaker 3

[Dutch answer]

00:07:03

Oh no.

00:07:04 Speaker 3

[Dutch answer]

00:07:06 Speaker 3

[Dutch answer]

00:07:09 Speaker 3

[Dutch answer]

00:07:13 Speaker 2

OK, so then we have this framework which we call as the seven layer of Brand
I know it's very well, yeah.

00:07:23 Speaker 2

So then we use this concept basically as the.

00:07:27 Speaker 2

Framework for our projects.

00:07:29 Speaker 1

OK.

00:07:31 Speaker 1

OK.

00:07:32 Speaker 3

[Dutch answer]

00:07:34 Speaker 3

[Dutch answer]

00:07:34 Speaker 3

[Dutch answer]

00:07:35 Speaker 3

[Dutch answer]

00:07:41 Speaker 3

[Dutch answer]

00:07:43 Speaker 2

So besides of this, we also have another framework that's called [Dutch name].

00:07:48 Speaker 1

Yeah, the butterfly diagram the butterfly.

00:07:50 Speaker 1

This one yeah.

00:07:52 Speaker 3

No, no, no, another one.

00:07:52 Speaker 2

So this one.

00:07:54 Speaker 2

Model AH, it's another one which was developed by CircleStad.

00:07:59 Speaker 2

And in that model, the model is called new normaal.

00:08:04 Speaker 2

And in this model you have basically 10 parameters where we have to be aware of regarding circularity.

00:08:13 Speaker 1

Is it called the?

00:08:15 Speaker 1

What's the name of the model?

00:08:17 Speaker 1

Newer new one or model?

00:08:17 Speaker 2

New normaal.

00:08:19 Speaker 3

From CircleStad.

00:08:21 Speaker 1

OK.

00:08:28 Speaker 1

Start means city or what?

00:08:30 Speaker 2

Yes, but simple start is or is an organization.

00:08:34 Speaker 1

Ah, circle.

00:08:37 Speaker 1

Ah, yes, yeah.

00:08:39 Speaker 1

I saw the circlestad.

00:08:48 Speaker 1

OK, interesting.

00:08:51 Speaker 1

So by yeah, so by those initiatives, you start truly to consider those things and you consider those models.

00:08:59 Speaker 1

Is this, are those models you considered any or in in many like just just an overview? Like do you think just few organisations considers both models or many organisations consider both models?

00:09:13 Speaker 3

[Dutch answer]

00:09:16 Speaker 3

[Dutch answer]

00:09:25 Speaker 3

[Dutch answer]

00:09:28 Speaker 3

[Dutch answer]

00:09:30 Speaker 2

Circlestad is actually an organization or an initiative that wants to promote this framework with the goal that this framework can be implemented as regulations for the whole Netherlands.

00:09:47 Speaker 1

OK, so probably many many organization will consider that one?

00:09:53 Speaker 2

one, what's that?

00:09:55 Speaker 2

What do you mean?

00:09:56 Speaker 1

The the the model.

00:09:56 Speaker 2

By that

00:10:00 Speaker 2

The framework.

00:10:02 Speaker 3

[Dutch answer]

00:10:03 Speaker 3

[Dutch answer]

00:10:04 Speaker 3

[Dutch answer]

00:10:08 Speaker 2

Lots of company itself are actually part of the circlestad.

00:10:16 Speaker 3

[Dutch answer]

00:10:20 Speaker 3

[Dutch answer]

00:10:21 Speaker 2

I see, yeah, so there are lots of questions actually coming up in the organization and then these questions is shared in the platform inside the circlestad.

00:10:36 Speaker 3

[Dutch answer]

00:10:44 Speaker 3

[Dutch answer]

00:10:56 Speaker 3

[Dutch answer]

00:11:00 Speaker 3

[Dutch answer]

00:11:02 Speaker 3

[Dutch answer]

00:11:04 Speaker 2

And inside it there are lots of parameters that relates to circularity, like the reduction of material usage and detachment possibilities or the buildings or and then the future proof of the building future proof future proofness of the building.

00:11:31 Speaker 2

There is also the.

00:11:33 Speaker 2

Top fell toxic, Toxic risk in within the building and materials and also the source of the material systems.

00:11:47 Speaker 1

OK.

00:11:51 Speaker 1

OK, so so for that reason, like let's say the the the, the, the model, what I can see like it's considered the end judgment material source.

00:12:00 Speaker 1

Texas Texas City of material is from that Model beside that you also consider Brand layers, yeah?

00:12:09 Speaker 2

[Dutch translation]

00:12:10 Speaker 2

[Dutch translation]

00:12:14 Speaker 2

[Dutch translation]

00:12:17 Speaker 2

[Dutch translation]

00:12:22 Speaker 3

[Dutch answer]

00:12:24 Speaker 3

[Dutch answer]

00:12:27 Speaker 3

[Dutch answer]

00:12:27 Speaker 3

[Dutch answer]

00:12:35 Speaker 2

Yeah, of course.

00:12:35 Speaker 2

So then we use it, but also there are lots of other guidelines that can be used and we we we are trying to use the the models in different projects.

00:12:47 Speaker 1

So you know you are also trying to use those models or also other models?

00:12:53 Speaker 2

[Dutch translation]

00:13:03 Speaker 2

So we use this one, but also the combination of them.

00:13:06 Speaker 1

Ah OK, OK, so and we talked when when I think the next general question that I was planning to ask about the real estate market and so on, but I think we discussed like many companies are involved and how it's going to shift

00:13:21 Speaker 1

So now I may.

00:13:23 Speaker 1

I start now with.

00:13:24 Speaker 1

The the our key.

00:13:26 Speaker 1

Questions which which which would which?

00:13:29 Speaker 1

Which is which I like which I have already sent to you before.

00:13:35 Speaker 1

According to your experience.

00:13:37 Speaker 1

Uh, and the and and [company name], or even in other and also we talked about the models and so on so we talk about circularity, but also you mentioned adaptive, are adaptive about adaptability?

00:13:58 Speaker 1

When you say like adaptive or adaptable building and circular building.

00:14:06 Speaker 1

How it looks like?

00:14:11 Speaker 2

[Dutch translation]

00:14:14 Speaker 2

[Dutch translation]

00:14:23 Speaker 3

[Dutch answer]

00:14:28 Speaker 2

At the end of the day, adaptive building is part of circularity aspect.

00:14:34 Speaker 1

OK.

00:14:36 Speaker 3

[Dutch answer]

00:14:40 Speaker 3

[Dutch answer]

00:14:42 Speaker 3

[Dutch answer]

00:14:44 Speaker 2

Then the adaptivity of the building has to be taken care of during the design of the project, or the building so that in the future it can be used for other things.

00:14:57 Speaker 1

OK.

00:15:00 Speaker 1

OK.

00:15:06 Speaker 1

But also I have questions.

00:15:07 Speaker 1

I shouldn't really say like agree or disagree, but yeah, you're right in terms of that adaptivity or adaptability is part of circularity, but generally, how do you think?

00:15:19 Speaker 1

Like when I want to say this building is adaptive and circular like just let's say the things that we makes it circular and adaptable adaptable yeah, like. Name name the things that make the building adaptable and circular.

00:15:53 Speaker 2

[Dutch translation]

00:15:56 Speaker 2

[Dutch translation]

00:15:59 Speaker 2

[Dutch translation]

00:16:05 Speaker 2

[Dutch translation]

00:16:09 Speaker 2

[Dutch translation]

00:16:11 Speaker 2

[Dutch translation]

00:16:16 Speaker 2

[Dutch translation]

00:16:20 Speaker 2

[Dutch translation]

00:16:20 Speaker 3

[Dutch answer]

00:16:23 Speaker 2

What is it?

00:16:24 Speaker 3

[Dutch answer]

00:16:30 Speaker 3

[Dutch answer]

00:16:35 Speaker 3

[Dutch answer]

00:16:36

[Dutch answer]

00:16:37 Speaker 3

[Dutch answer]

00:16:41 Speaker 3

[Dutch answer]

00:16:43 Speaker 3

[Dutch answer]

00:16:50 Speaker 3

[Dutch answer]

00:16:55 Speaker 3

[Dutch answer]

00:16:56 Speaker 3

[Dutch answer]

00:17:00 Speaker 3

[Dutch answer]

00:17:01 Speaker 3

[Dutch answer]

00:17:02 Speaker 2

Yeah, so for adaptive buildings then the the focus lies on the on the design on how that we can implement for different aspects of a building which can be, uh, which can be flexible.

00:17:32 Speaker 1

OK.

00:17:33 Speaker 2

For instance, the usage of flexible installations and about the height of a floor, that's and the strength of the foundation to hold the weight of the building.

00:18:07 Speaker 1

OK, those for adaptive yeah and they are part of circularity but also oK, now we know that diversity of usage flexibility.

00:18:19 Speaker 1

A dimensions and also this strength, so those are the part of of adaptivity and how circularity can be also?

00:18:31 Speaker 1

With adaptivity like.

00:18:35 Speaker 1

Like those makes the building adaptive, but also what things that we can add on to make.

00:18:41 Speaker 1

It also circular?

00:18:44 Speaker 3

[Dutch answer]

00:18:54 Speaker 3

[Dutch answer]

00:18:57 Speaker 3

[Dutch answer]

00:19:04 Speaker 3

[Dutch answer]

00:19:10 Speaker 3

[Dutch answer]

00:19:12 Speaker 3

[Dutch answer]

00:19:16 Speaker 3

[Dutch answer]

00:19:33 Speaker 3

[Dutch answer]

00:19:50 Speaker 2

The for instance the circularity aspect is the selection of materials between concrete and wood, in which, for instance, the implementation of the tone.

00:20:02 Speaker 2

It's not really flexible, it's not really.

00:20:08 Speaker 2

Uh, it's not really adjustable, in which case that in the.

00:20:13 Speaker 2

Future you have.

00:20:15 Speaker 2

To maybe make some, uh, make some holes then it's very difficult to do it with concrete, and which actually it's very easy to be done if we have wood construction, and then if.

00:20:35 Speaker 2

This and then for instance is if if you have a.

00:20:45 Speaker 2

And construction inside the building which hold the weight of the building.

00:20:54 Speaker 2

Then it's also not really easy to replace that.

00:20:59 Speaker 2

It's not really circular if you actually don't really have this kind of constructions that hold the whole weight of the building, then you can make it really easy to detach that part.

00:21:14 Speaker 2

And replace it with something else.

00:21:20 Speaker 1

So beside adaptivity, my my.

00:21:24 Speaker 1

My understanding is that circularity also needs consider adaptive things like the attachment of material material.

00:21:33 Speaker 1

Let's say like that are lightweight that we can like.

00:21:37 Speaker 1

It's not fixed.

00:21:39 Speaker 1

First of that we can remove it easily.

00:21:42 Speaker 1

And also about also this selection of material.

00:21:47 Speaker 2

[Dutch translation]

00:21:51 Speaker 2

[Dutch translation]

00:21:54 Speaker 2

[Dutch translation]

00:21:58 Speaker 2

[Dutch translation]

00:22:02 Speaker 3

[Dutch translation]

00:22:04 Speaker 3

[Dutch translation]

00:22:05 Speaker 3

[Dutch translation]

00:22:08 Speaker 3

[Dutch answer]

00:22:11 Speaker 3

[Dutch answer]

00:22:11 Speaker 1

Yeah, so both are if I understand what he's mentioning like they are in.

00:22:18 Speaker 1

Integrated yeah or like the adaptive yeah yeah?

00:22:25 Speaker 3

[Dutch answer]

00:22:30 Speaker 3

[Dutch answer]

00:22:32 Speaker 3

[Dutch answer]

00:22:35 Speaker 2

Yeah, so then.

00:22:37 Speaker 2

By implementing the circular.

00:22:41 Speaker 2

Realization of appeal of a building you are not only not only implementing the circularity aspect, but also the adaptability.

00:22:50 Speaker 1

OK, yeah.

00:22:53 Speaker 1

Yeah, interesting.

00:23:06 Speaker 2

Yeah, and with circularity aspect, there is still an extra subject that we actually have to see.

00:23:15 Speaker 2

That's for instance how the material was.

00:23:19 Speaker 2

And at the first time created and how?

00:23:24 Speaker 2

Environmental friendly is the process of the making of the material.

00:23:30 Speaker 1

OK, so beside this the material, let's say the material solves the and even the material impact or like the environmental impact of material.

00:23:40 Speaker 1

Yeah yeah yeah OK interesting.

00:23:47 Speaker 1

Interesting, so thank you, OK?

00:23:52 Speaker 1

For the second questions and now we talked really interesting about how circularity and adaptivity or adaptability are integrated for the second questions.

00:24:02 Speaker 1

Because this question will come to it later for this project, but here I want just.

00:24:08 Speaker 1

To listen from you about what are the key strategies strategy?

00:24:15 Speaker 1

And when we say like strategies like actions.

00:24:18 Speaker 1

Or even solutions that make that we can use to make the building adaptable and circular.

00:24:33 Speaker 1

Like the mean or like the key strategies that like any project.

00:24:38 Speaker 3

[Dutch answer]

00:24:42 Speaker 3

[Dutch answer]

00:24:45 Speaker 3

[Dutch answer]

00:24:47 Speaker 3

[Dutch answer]

00:24:49 Speaker 3

Lower demanding still over 10 here.

00:24:55 Speaker 3

[Dutch answer]

00:24:58 Speaker 2

[Dutch answer]

00:24:59 Speaker 2

For instance in the new building projects then it's very important to already have a long term thinking during the design.

00:25:12 Speaker 2

For instance 20 years where.

00:25:15 Speaker 2

During the selections and picking some options.

00:25:21 Speaker 2

[Dutch answer]

00:25:29 Speaker 3

[Dutch translation]

00:25:31 Speaker 3

[Dutch translation]

00:25:37 Speaker 3

[Dutch translation]

00:25:41 Speaker 2

So and and also, for instance relays it with the function of the.

00:25:51 Speaker 2

In the future, you can at the moment you can actually build the building for houses or dwellings, but in the future that it will be transformed in transform into utility or the other way around that basically have to design the building with higher.

00:26:01 Speaker 4

You did it.

00:26:08 Speaker 2

Our requirements in which that when it is transformed it will still qualify the requirements of the other function.

00:26:19 Speaker 3

[Dutch answer]

00:26:21 Speaker 3

[Dutch answer]

00:26:25 Speaker 3

[Dutch answer]

00:26:29 Speaker 3

[Dutch answer]

00:26:31 Speaker 1

OK, yeah .

00:26:32 Speaker 2

You get that one last one?

00:26:33 Speaker 1

No no no.

00:26:35 Speaker 2

So also that.

00:26:37 Speaker 2

The the an example is that a lot of the.

00:26:41 Speaker 2

The height.

00:26:43 Speaker 2

Of a floor in a building in the.

00:26:45 Speaker 2

Netherlands is very low.

00:26:47 Speaker 2

And because of this, it's not possible to transform houses or apartments into offices, because there is no space to put insulation.

00:26:59 Speaker 3

[Dutch answer]

00:27:00 Speaker 3

[Dutch answer]

00:27:01 Speaker 3

[Dutch answer]

00:27:04 Speaker 2

And if if if you take it into consideration in the during the design of a new buildings, then yes.

00:27:12 Speaker 1

OK, those are our three things like long term thinking or desired for longterm and flexibility, implementation and design and also designed for higher requirement.

00:27:24 Speaker 1

And I sometimes I called design.

00:27:26 Speaker 1

For extra capacity.

00:27:28 Speaker 1

Like extra height for future for extra requirements.

00:27:32 Speaker 1

As you mentioned to meet future changes, but those are a bit for, for, for, for future buildings, and that's fine, but is there something that we can also do with existing building?

00:27:45 Speaker 1

Like when we want to transform existing building?

00:27:48 Speaker 1

How we can make it adaptable?

00:27:50 Speaker 1

Adaptive and circular.

00:27:52 Speaker 1

Is there any other?

00:27:55 Speaker 1

Strategies that we can make in existing building to make it adaptive and circular.

00:28:00 Speaker 3

[Dutch answer]

00:28:06 Speaker 3

[Dutch answer]

00:28:13 Speaker 3

[Dutch answer]

00:28:15 Speaker 3

[Dutch answer]

00:28:17 Speaker 3

[Dutch answer]

00:28:20 Speaker 3

[Dutch answer]

00:28:25 Speaker 3

[Dutch answer]

00:28:26 Speaker 3

[Dutch answer]

00:28:33 Speaker 2

Yeah, oftentimes what happened is that.

00:28:37 Speaker 2

The the possibility is really limited.

00:28:40 Speaker 2

And that.

00:28:42 Speaker 2

What often is done with the existing building is that in the end it was also demolished, not completely, but.

00:28:53 Speaker 2

Almost the almost a lot of the constructions are demolished except the part that holds the weight.

00:29:01 Speaker 2

Of the building.

00:29:02 Speaker 2

The main construction and then from then on out it's starting again with a new design which is adaptive and flexible.

00:29:12 Speaker 3

[Dutch answer]

00:29:13 Speaker 3

[Dutch answer]

00:29:17 Speaker 2

And the best possibility is to reuse the material that were demolished.

00:29:24 Speaker 2

Into the same the new building, or actually just somewhere else?

00:29:29 Speaker 2

With another new construction project.

00:29:35 Speaker 1

OK.

00:29:56 Speaker 1

Yes, yeah.

00:29:59 Speaker 2

Very good.

00:30:02 Speaker 3

[Dutch answer]

00:30:08 Speaker 3

[Dutch answer]

00:30:10 Speaker 3

[Dutch answer]

00:30:17 Speaker 2

Yeah, well and also.

00:30:20 Speaker 2

The what you also often see is that we we let the foundations be there.

00:30:27 Speaker 2

And also if.

00:30:28 Speaker 2

It's actually, uh.

00:30:29 Speaker 2

Building from concrete that you can also add an extra layer an extra floor with only on the woods.

00:30:39 Speaker 2

That's basically to create extra volume for the building.

00:30:47 Speaker 3

[Dutch answer]

00:30:51 Speaker 3

[Dutch answer]

00:30:53 Speaker 3

[Dutch answer]

00:30:57 Speaker 3

Thank you.

00:30:58 Speaker 3

[Dutch answer]

00:31:04 Speaker 3

[Dutch answer]

00:31:05 Speaker 3

Addition to market.

00:31:08 Speaker 2

And for, and also by even.

00:31:11 Speaker 2

In new building or in existing building.

00:31:15 Speaker 2

Uh, if we have a high floor.

00:31:19 Speaker 2

It's always possible, like at the end, to add an extra floor.

00:31:24 Speaker 2

In the middle.

00:31:26 Speaker 2

Like there was one of our project which has a high floor like four and half meter and it's possible to add an extra floor and yes.

00:31:37 Speaker 1

In the middle.

00:31:39 Speaker 2

In the future.

00:31:41 Speaker 1

OK, even maybe here in this.

00:31:45 Speaker 1

We will come to talk about this later.

00:31:48 Speaker 1

Yeah, so really.

00:31:49 Speaker 1

Thank you so much because I.

00:31:51 Speaker 1

I mean many many many nice, so I heard many nice strategies and my question is, is that generally those those strategies?

00:32:02 Speaker 1

I'm sure based on your knowledge, but also did you do that in in your projects?

00:32:08 Speaker 1

Did you do?

00:32:09 Speaker 1

Did you do those strategies in your projects?

00:32:11 Speaker 3

[Dutch answer]

00:32:12 Speaker 3

[Dutch answer]

00:32:22 Speaker 3

[Dutch answer]

00:32:31 Speaker 3

[Dutch answer]

00:32:36 Speaker 2

Yeah, so then yeah we have done it several times.

00:32:38 Speaker 2

Of course places this, not only this building, and then also [name of a project]. It's a school and there is also [name of a project]. It's also new building. But yeah, most of the time is for new building.

00:32:54 Speaker 1

Ah, OK.

00:32:57 Speaker 3

[Dutch answer]

00:33:00 Speaker 3

[Dutch answer]

00:33:02 Speaker 3

[Dutch answer]

00:33:04 Speaker 3

[Dutch answer]

00:33:05 Speaker 3

[Dutch answer]

00:33:08 Speaker 3

[Dutch answer]

00:33:10 Speaker 3

[Dutch answer]

00:33:12 Speaker 2

Yeah, yeah.

00:33:13 Speaker 2

Mos, maybe it's actually it's not interesting to make some kind further research with several projects in Amsterdam.

00:33:26 Speaker 2

Where in that area there are lots of.

00:33:29 Speaker 2

Existing building that has to be renovated.

00:33:32 Speaker 2

In Bijlmer .

00:33:33 Speaker 2

In Bijlmer?

00:33:39 Speaker 1

Ah yeah.

00:33:42 Speaker 3

[Dutch answer]

00:33:45 Speaker 1

Transformation is there transformation projects in Bijlmer?

00:33:49 Speaker 3

[Dutch answer]

00:33:52 Speaker 3

[Dutch answer]

00:33:53 Speaker 3

[Dutch answer]

00:33:55 Speaker 2

Yeah, yeah, there are lots.

00:33:57 Speaker 2

Of existing buildings that are being.

00:34:02 Speaker 2

That are being renovated to become better.

00:34:06 Speaker 1

Bijlmer.

00:34:09 Speaker 1

OK.

00:34:13 Speaker 1

Now we talked about those strategies like long term thinking, flexibility, implementation in the design, design for higher requirements, retain the structure and reuse the demolition material in the project or another project and also we said like add on when you want to add on floor like you use lightweight material.

00:34:40 Speaker 1

Those are strategies for circular, circular, adaptable building.

00:34:45 Speaker 1

And and some of them are for new bow and some of them are for even existing building.

00:34:54 Speaker 1

What are the things that may make the implementation of those strategy easy?

00:35:03 Speaker 2

[Dutch translation]

00:35:07 Speaker 2

[Dutch translation]

00:35:10 Speaker 2

[Dutch translation]

00:35:11 Speaker 3

[Dutch answer]

00:35:14 Speaker 3

[Dutch answer]

00:35:17 Speaker 3

[Dutch answer]

00:35:19 Speaker 2

The construction the construction of the building will has to be really good.

00:35:36 Speaker 1

OK.

00:35:37 Speaker 3

[Dutch answer]

00:35:39 Speaker 2

Or existing.

00:35:41 Speaker 1

OK.

00:35:43 Speaker 1

For existing and new, what are also other things that really make or facilitate the implementation of those strategies besides the construction of the building, are there others or only?

00:36:02 Speaker 3

[Dutch answer]

00:36:10 Speaker 3

[Dutch answer]

00:36:12 Speaker 2

And also it's.

00:36:13 Speaker 2

The location of the buildings and the usage because it. It's basically also a societal aspect of the.

00:36:22 Speaker 1

Huh, yeah.

00:36:24 Speaker 2

Of the.

00:36:26 Speaker 2

Society then if it's.

00:36:29 Speaker 2

If it holds important value, then it will be easy to maintain building, keep the building.

00:36:35 Speaker 1

OK, so societal aspects, interesting location and the function of the building. Is there, are there other societal aspects that makes implementation of the strategy easier or?

00:36:59 Speaker 3

[Dutch answer]

00:37:01 Speaker 3

[Dutch answer]

00:37:03 Speaker 3

[Dutch answer]

00:37:04 Speaker 2

And for instance, the the shortage of houses that are happening at the moment and also the empty offices that are happening, then those two can be combined to do or reuse buildings and to implement.

00:37:29 Speaker 3

[Dutch answer]

00:37:32 Speaker 3

[Dutch answer]

00:37:39 Speaker 3

[Dutch answer]

00:37:40 Speaker 2

Yeah, but also the of course the most important is the quality of the building itself.

00:37:46 Speaker 2

How much it can be maintained.

00:37:48 Speaker 2

Is it still satisfy the regulation or not.

00:37:52 Speaker 1

Yeah, so now we talked about the four things that makes it easy to implement those strategies.

00:38:00 Speaker 1

But what are the, let's say the obstacles or maybe called, I think bottlenecks or barriers that impede the implementation of those strategies.

00:38:13 Speaker 3

[Dutch answer]

00:38:16 Speaker 3

Just kidding.

00:38:20 Speaker 3

[Dutch answer]

00:38:30 Speaker 3

[Dutch answer]

00:38:33 Speaker 3

[Dutch answer]

00:38:35 Speaker 3

[Dutch answer]

00:38:40 Speaker 3

[Dutch answer]

00:38:41 Speaker 3

[Dutch answer]

00:38:44 Speaker 3

[Dutch answer]

00:38:50 Speaker 2

Yeah, so well, the the first one is, for instance, the lack of available information about the buildings.

00:38:59 Speaker 2

There is no pictures there is no a design of the building.

00:39:06 Speaker 2

And then also the possibility of contamination of the building with some toxic materials like aspects or such things.

00:39:16 Speaker 2

Also be the foundation.

00:39:19 Speaker 2

And the last one is that the construction itself, the.

00:39:25 Speaker 2

The material is just not up to standard to be used again.

00:39:30 Speaker 3

[Dutch answer]

00:39:32 Speaker 3

[Dutch answer]

00:39:37 Speaker 2

Yeah, for instance, for the aspect of sound proofness and fire resistance of the building that has to become a focus.

00:39:52 Speaker 1

So because I will come to this so lack of information, contamination of toxic material, and the the material or the building is not standardized or like not using, or the material is not with high standards.

00:40:12 Speaker 1

And finally, could we say this point violation of fire safety and are also maybe obstacles?

00:40:21 Speaker 1

Or the material is not fulfilling?

00:40:25 Speaker 1

The regulations.

00:40:27 Speaker 2

[Dutch translation]

00:40:29 Speaker 2

[Dutch translation]

00:40:31 Speaker 2

[Dutch translation]

00:40:36 Speaker 2

[Dutch translation]

00:40:40 Speaker 2

[Dutch translation]

00:40:44 Speaker 2

Yeah, just yeah then that there are lots of changes in the regulations.

00:40:50 Speaker 1

Oh, OK.

00:40:53 Speaker 1

OK.

00:40:54 Speaker 3

[Dutch answer]

00:40:56 Speaker 3

[Dutch answer]

00:41:00 Speaker 3

[Dutch answer]

00:41:12 Speaker 3

[Dutch answer]

00:41:18 Speaker 2

Yeah, for instance, like if you transform an office into a building and oftentimes it's not possible to put the toilet directly to go down, then you have to put the sanitations inside the floor, but that's actually an obstacle.

00:41:50 Speaker 2

Yeah, the available space height inside the floor or actually under the floor might not be enough to actually put the sanitation pipes for instance.

00:42:04 Speaker 2

That's basically part of the requirements in the regulations.

00:42:08 Speaker 1

OK.

00:42:10 Speaker 1

So this example is part of the regulation and part of the building itself.

00:42:15 Speaker 1

The example that he gave.

00:42:21 Speaker 1

OK.

00:42:30 Speaker 1

OK.

00:42:33 Speaker 1

Now we end with the first part, and now, I think we'll move to the interesting part, which is about this project.

00:42:44 Speaker 1

And we will talk mainly about this building and it's interesting.

00:42:51 Speaker 1

And I think we are in the place where we will talk, so thank you so much for the first part.

00:42:56 Speaker 1

I learned a lot from you, so thanks.

00:42:59 Speaker 1

Now I will move to the second point.

00:43:03 Speaker 1

And in this project in this project, like which is like [name of the company] office center, why this building has been transformed?

00:43:19 Speaker 3

[Dutch answer]

00:43:22 Speaker 2

It's also good to know that this project was actually his graduation project.

00:43:33 Speaker 3

[Dutch answer]

00:43:37 Speaker 3

[Dutch answer]

00:43:39 Speaker 2

That so this building was gym from 1955 with its own characteristics.

00:43:50 Speaker 2

Old with its own characteristics.

00:43:53 Speaker 1

It's so yeah, I I heard that information but I mean why this building you choose this building or like [name of the company] choose this building?

00:44:04 Speaker 3

[Dutch answer]

00:44:14 Speaker 3

[Dutch answer]

00:44:19 Speaker 3

[Dutch answer]

00:44:23 Speaker 3

[Dutch answer]

00:44:28 Speaker 2

So then it's of course there are two the the the building was empty, the gym basically at that time, empty.

00:44:37 Speaker 3

[Dutch answer]

00:44:39 Speaker 1

[Dutch answer]

00:44:39 Speaker 3

[Dutch answer]

00:44:43 Speaker 3

[Dutch answer]

00:44:45 Speaker 1

OK, so the building was empty and it had.

00:44:51 Speaker 2

An it has high floor highs, high high rooms high high ceilings.

00:44:56 Speaker 2

And also that it has strong construction strong structure.

00:45:05 Speaker 3

[Dutch answer]

00:45:07 Speaker 2

Yeah, which give lots of possibilities and the transformation.

00:45:12 Speaker 2

And then of course it's also part of the mission of [name of the company].

00:45:18 Speaker 2

That is to implement the theory into practice.

00:45:24 Speaker 1

Just OK.

00:45:33 Speaker 1

The last one I didn't get that one.

00:45:35 Speaker 2

And also this is basically the.

00:45:38 Speaker 2

This is the.

00:45:39 Speaker 2

The the.

00:45:43 Speaker 2

Implementation of our mission as [name of the company] that is to not to do the theory into practice to make the theory into practice.

00:45:54 Speaker 1

So one of them is to make the theory on the practice or the other way around?

00:46:02 Speaker 2

To implement the theory into practice.

00:46:07 Speaker 2

And also to gain knowledge.

00:46:15 Speaker 2

Because back then we were more focused on the energy installation aspects.

00:46:21 Speaker 3

Living lab.

00:46:22 Speaker 2

It's it becomes a living lab.

00:46:28 Speaker 1

So experiment.

00:46:36 Speaker 1

Interesting so yeah.

00:46:39 Speaker 1

Now the second question.

00:46:42 Speaker 1

Why did you consider circularity in this project?

00:46:47 Speaker 1

Is is.

00:46:55 Speaker 3

[Dutch answer]

00:46:57 Speaker 3

[Dutch answer]

00:47:01 Speaker 3

[Dutch answer]

00:47:02 Speaker 3

[Dutch answer]

00:47:07 Speaker 2

Yeah, so then that's.

00:47:10 Speaker 2

The possibility to prolong the utilization of the building is the most important thing in circularity and also sustainability.

00:47:21 Speaker 3

[Dutch answer]

00:47:24 Speaker 2

That's the value of the building.

00:47:26 Speaker 1

Ah, so so you consider circularity because it added value to the building, yeah?

00:47:27 Speaker 2

As well.

00:47:38 Speaker 1

No, I mean you you you, how can I explain it like?

00:47:45 Speaker 1

You you implemented circularity in this project?

00:47:48 Speaker 1

Because you you realized or like or like you knew that it will add a?

00:47:53 Speaker 2

Yeah.

00:47:58 Speaker 3

[Dutch answer]

00:48:04 Speaker 3

[Dutch answer]

00:48:05 Speaker 3

[Dutch answer]

00:48:07 Speaker 3

[Dutch answer]

00:48:10 Speaker 3

[Dutch answer]

00:48:11 Speaker 3

[Dutch answer]

00:48:15 Speaker 3

[Dutch answer]

00:48:17 Speaker 3

[Dutch answer]

00:48:19 Speaker 2

So then with this transformation, we basically can reuse the different materials in the building, and that by itself prolongs the value of the building for maybe 100 years.

00:48:33 Speaker 2

[Dutch translation]

00:48:38 Speaker 3

[Dutch answer]

00:48:40 Speaker 3

[Dutch answer]

00:48:45 Speaker 3

[Dutch answer]

00:48:46 Speaker 3

[Dutch answer]

00:48:48 Speaker 2

And uh, and also regarding requirements, for instance energy production and also in climate condition inside the building is already up to standard for the next, let's say 50 or 100 years.

00:49:12 Speaker 2

It's ready for it's basically ready for the future.

00:49:16 Speaker 1

OK.

00:49:25 Speaker 3

[Dutch answer]

00:49:27 Speaker 4

[Dutch answer]

00:49:28 Speaker 3

[Dutch answer]

00:49:33 Speaker 2

Yeah, there's also.

00:49:35 Speaker 2

Uh, back then there were.

00:49:37 Speaker 2

Also, possibilities to reuse the glass and the and the frame.

00:49:44 Speaker 2

Which at that time was outside of the.

00:49:49 Speaker 2

Of the walls.

00:49:50 Speaker 2

Of the buildings, but now it has been reused inside the building.

00:49:55 Speaker 1

So you you, if I understand the the the.

00:50:00 Speaker 1

Answer of why you you make the transformation of this building circular is like first like to prolong the building.

00:50:12 Speaker 2

That's some.

00:50:15 Speaker 1

And also.

00:50:18 Speaker 1

To to to fulfill the requirements of the climate condition.

00:50:26 Speaker 2

Not just the the climate.

00:50:28 Speaker 2

That one is.

00:50:31 Speaker 2

Is, uh.

00:50:34 Speaker 2

An aspect which show that the building is ready for the next 50.

00:50:39 Speaker 1

OK.

00:50:41 Speaker 1

OK.

00:50:43 Speaker 1

So, but I'm I the question is just about circularity, like why you consider circularity in this project.

00:50:49 Speaker 1

So first it's it's to promote the material in the building.

00:50:54 Speaker 1

Yeah, yeah, and.

00:50:56 Speaker 1

Add value, yeah.

00:51:01 Speaker 1

Then the other things come on like you, you you found that the the building is ready to for for the climate.

00:51:09 Speaker 1

But I mean just my question about the reasons why you consider circularity.

00:51:14 Speaker 1

So to prolong and to add value, you can say that yeah.

00:51:18 Speaker 1

No, yeah.

00:51:20 Speaker 1

OK, so now I want to really because I noticed some in the group when I was.

00:51:28 Speaker 1

Searching for this project and before I contact you, [name of the interviewee – speaker 3].

00:51:32 Speaker 1

I found many many interesting strategies you implemented I when I was like finding searching for this case and here I want listen from you what are what are the strategies that you implemented in this project like the oplosing or of strategy that you did in this project, but I I not sent you you used.

00:52:01 Speaker 1

Uhm, renewable energy measures like solar panel.

00:52:06 Speaker 1

I'm not sure if you did use in this one?

00:52:09 Speaker 1

Ah, you used secondary material or second hand building products.

00:52:18 Speaker 1

Also, you integrated different and standardized wall panels.

00:52:24 Speaker 1

I'm not sure?

00:52:26 Speaker 3

[Dutch answer]

00:52:29 Speaker 3

[Dutch answer]

00:52:31 Speaker 3

[Dutch answer]

00:52:37 Speaker 3

[Dutch answer]

00:52:39 Speaker 3

[Dutch answer]

00:52:44 Speaker 3

[Dutch answer]

00:52:50 Speaker 3

[Dutch answer]

00:52:54 Speaker 3

[Dutch answer]

00:52:58 Speaker 2

He thinks what you mean was related to the what we call [Dutch expression].

00:53:06 Speaker 2

The the wall.

00:53:08 Speaker 2

The outer wall which actually can be used for different functions for sound proofing and for.

00:53:26 Speaker 1

I see.

00:53:27 Speaker 1

OK, yeah so, but I I mean would you mind please?

00:53:31 Speaker 1

Because I I can see the presentation has many, many things I want.

00:53:35 Speaker 1

If you list the circular and adaptive strategies that you did in this building?

00:53:42 Speaker 3

[Dutch answer]

00:53:44 Speaker 1

Yeah yeah, yeah.

00:53:47 Speaker 2

To the.

00:53:50 Speaker 3

[Dutch answer]

00:53:56 Speaker 3

[Dutch answer]

00:53:58

I see.

00:53:59 Speaker 2

The insulation of the floor under this building came from somewhere else.

00:54:07 Speaker 1

Ah, so you used?

00:54:08 Speaker 2

It's serious.

00:54:09 Speaker 3

[Dutch answer]

00:54:15 Speaker 2

Yeah, the the floor of the gym itself is maintained.

00:54:22 Speaker 3

[Dutch answer]

00:54:26 Speaker 2

Yeah, that's why we decide to isolate the bottom bottom floor, but not the top part you.

00:54:35 Speaker 1

You decided to?

00:54:36 Speaker 2

Isolate the bottom part of the floor.

00:54:39 Speaker 2

Not not the top part.

00:54:39 Speaker 1

OK.

00:54:40 Speaker 1

OK.

00:54:43 Speaker 3

And then.

00:54:44 Speaker 3

[Dutch answer]

00:54:47 Speaker 3

[Dutch answer]

00:55:02 Speaker 2

Yeah, and back then there was ceiling.

00:55:08 Speaker 2

There was a lower ceiling.

00:55:11 Speaker 2

With isolation.

00:55:13 Speaker 2

With this isolation layer and we reuse the isolations for the roof.

00:55:20 Speaker 2

While the ceiling itself the material.

00:55:25 Speaker 2

Is being used for the extra floor than we have here and also to make the table this table?

00:55:36 Speaker 1

Ah, so OK.

00:55:40 Speaker 1

So the the the the.

00:55:45 Speaker 1

The installation of this ceiling, you reused it in the.

00:55:50 Speaker 1

Upper floor yeah?

00:55:53 Speaker 2

The insulation Yep, is reused for the roof.

00:55:58 Speaker 1

For the roof.

00:56:05 Speaker 1

And the ceiling you used it for?

00:56:08 Speaker 2

Different kind of implementation like table and the extra floor that we have.

00:56:14 Speaker 1

OK.

00:56:19 Speaker 1

For furniture we can hold yeah, like you use the ceiling itself for furniture, yeah.

00:56:25 Speaker 2

Not only furniture of course, but yeah, take both furnitures and decorations and also the extra floor structure for construction floor.

00:56:37 Speaker 3

[Dutch answer]

00:56:40 Speaker 2

The the wood beam.

00:56:41 Speaker 2

The wood plank.

00:56:43 Speaker 2

For the floor that one.

00:56:46 Speaker 1

OK.

00:56:50 Speaker 3

[Dutch answer]

00:56:53 Speaker 3

[Dutch answer]
00:56:59 Speaker 2
The ventilation .
00:57:03 Speaker 2
Like we.
00:57:09 Speaker 2
Blow the air in.
00:57:12 Speaker 2
It was to be used as well.
00:57:13 Speaker 1
The ventilation.
00:57:16 Speaker 2
So blow air here.
00:57:18 Speaker 1
OK.
00:57:20 Speaker 1
So the whole system or just the system that?
00:57:25 Speaker 3
[Dutch answer]
00:57:28 Speaker 3
[Dutch answer]
00:57:31 Speaker 2
No, no, only the only.
00:57:34 Speaker 2
The only the roasters.
00:57:38 Speaker 2
Process isn't this.
00:57:40 Speaker 1
Ah, we call it like diffusers maybe?
00:57:43 Speaker 1
Or duct well, I don't know what's happening.
00:57:47 Speaker 1
Yeah I think.
00:57:48 Speaker 1
It looks like diffusers, so you reuse them.
00:57:50 Speaker 1
Yeah, yes.
00:57:53 Speaker 3
Well, in the in the room.
00:57:55 Speaker 3
Yeah, OK.
00:57:55 Speaker 2
In the gym hall
00:57:59 Speaker 3
[Dutch answer]
00:58:01 Speaker 3
[Dutch answer]
00:58:02 Speaker 3

[Dutch answer]

00:58:04 Speaker 3

[Dutch answer]

00:58:09 Speaker 2

Yeah, and also the existing. heating system back then was being reused.

00:58:18 Speaker 2

Inside the.

00:58:20 Speaker 2

Inside which were.

00:58:22 Speaker 3

[Dutch answer]

00:58:23 Speaker 3

[Dutch answer]

00:58:25 Speaker 3

[Dutch answer]

00:58:28 Speaker 2

Yeah, inside the trail for the for the stairs.

00:58:35 Speaker 1

The railings you mean?

00:58:36 Speaker 1

This railing is you use it.

00:58:36 Speaker 2

Yes, the railings.

00:58:38 Speaker 1

From?

00:58:39 Speaker 2

The material from the heating radiator.

00:58:44 Speaker 2

Is reused for rail.

00:59:00 Speaker 3

[Dutch answer]

00:59:05 Speaker 3

[Dutch answer]

00:59:07 Speaker 3

[Dutch answer]

00:59:12 Speaker 3

[Dutch answer]

00:59:15 Speaker 2

And to add more to the flexibility we have added a plint.

00:59:23 Speaker 2

Around the gym.

00:59:27 Speaker 1

You added plint?.

00:59:29

This one.

00:59:31 Speaker 2

Ah, which actually inside the.

00:59:34 Speaker 2

Gym which actually have the all of the data and electricity connections.

00:59:43 Speaker 1

OK, and so on.

00:59:44 Speaker 1

So you call it plint.

00:59:47 Speaker 1

Yeah, yeah, I think in English we call skirting yes.

00:59:48 Speaker 2

That's I don't know.

00:59:52 Speaker 1

So in English skirting.

00:59:53 Speaker 1

So you add those to to extend the electricity and?

01:00:00 Speaker 2

Yes, and to make it flexible for the future.

01:00:03 Speaker 1

OK.

01:00:06 Speaker 3

[Dutch answer]

01:00:08 Speaker 3

[Dutch answer]

01:00:13 Speaker 3

[Dutch answer]

01:00:16 Speaker 3

[Dutch answer]

01:00:17 Speaker 3

[Dutch answer]

01:00:30 Speaker 3

[Dutch answer]

01:00:33 Speaker 3

[Dutch answer]

01:00:34 Speaker 3

[Dutch answer]

01:00:37 Speaker 3

[Dutch answer]

01:00:39 Speaker 2

And for the circularity is back again regarding the that one the first the the wall which has multi functions that it uses materials for the acoustic functions.

01:00:59 Speaker 2

To limit the sound.

01:01:02 Speaker 2

Uh, echo in the building, but also inside we put in.

01:01:09 Speaker 2

The heating pipes.

01:01:13 Speaker 2

OK, we can the wall itself.

01:01:16 Speaker 1

Because this one I I read it, I I read it when I was reading you said like integrated panel is it?

01:01:23 Speaker 1

What is it?

01:01:23 Speaker 1

Panels or a wall system?

01:01:26 Speaker 3

[Dutch answer]

01:01:32 Speaker 3

[Dutch answer]

01:01:34 Speaker 2

Yeah, this is this is this is this panels which has heating pipes inside.

01:01:39 Speaker 1

OK.

01:01:46 Speaker 3

[Dutch answer]

01:01:48 Speaker 3

[Dutch answer]

01:01:51 Speaker 3

[Dutch answer]

01:02:00 Speaker 3

[Dutch answer]

01:02:04 Speaker 2

And the existing frame.

01:02:08 Speaker 2

From the old building was sent back into the producer so that it can be reused while the new ordered frames have been selected specifically so that 99% it can be further recycled in the future.

01:02:26 Speaker 1

OK.

01:02:37 Speaker 1

So you sent back the previous frames to the for recycling and you used the new frames are recyclable.

01:02:45 Speaker 1

Yeah yeah.

01:02:50 Speaker 3

[Dutch answer]

01:02:57 Speaker 3

[Dutch answer]

01:03:00 Speaker 3

[Dutch answer]

01:03:02 Speaker 3

[Dutch answer]

01:03:05 Speaker 3

[Dutch answer]

01:03:07 Speaker 2

Yeah the walls and the constructions was still very good so that a lot of them almost about 80% has been reused.

01:03:19 Speaker 3

[Dutch answer]

01:03:21 Speaker 1

Reused or retained?

01:03:29 Speaker 2

Yeah, so a lot of them are being maintained here or just being reused somewhere else.

01:03:35 Speaker 1

OK.

01:03:40 Speaker 1

Of the 80% of the?

01:03:44 Speaker 2

80% of the whole building.

01:03:45 Speaker 1

OK.

01:03:46 Speaker 3

[Dutch answer]

01:03:50 Speaker 2

Maybe even 5, maybe even 95%.

01:03:55 Speaker 1

OK.

01:03:58 Speaker 1

Regarding the wall panel, the old system, because when I was reading about that one so.

01:04:06 Speaker 1

The wall.

01:04:07 Speaker 1

It's for in terms of, let's say so it includes heating system.

01:04:16 Speaker 1

And it's it's also soundproofing soundproof.

01:04:20 Speaker 1

But my question is that is it also made of recyclable or it's it's? Is it recyclable from previous project?

01:04:30 Speaker 3

[Dutch answer]

01:04:34 Speaker 3

[Dutch answer]

01:04:43 Speaker 3

[Dutch answer]

01:04:49 Speaker 3

[Dutch answer]

01:04:50 Speaker 3

[Dutch answer]

01:04:55 Speaker 3

[Dutch answer]

01:05:00 Speaker 3

[Dutch answer]

01:05:05 Speaker 3

[Dutch answer]

01:05:09 Speaker 3

[Dutch answer]

01:05:12 Speaker 2

That's all the panel is basically detachable because it's and and it's still it's also uses gips which is basically recyclable but also reusable.

01:05:29 Speaker 2

And there is also still some metal.

01:05:32 Speaker 2

Still, construction and inside.

01:05:39 Speaker 2

Initially it was considered to also use wood instead of the metal.

01:05:47 Speaker 2

But then because the floor, the height of the building and the floor is very high.

01:05:55 Speaker 2

Well, well so.

01:05:58 Speaker 3

[Dutch answer]

01:06:02 Speaker 3

[Dutch answer]

01:06:10 Speaker 2

Yeah, because then.

01:06:13 Speaker 2

If you use wood for such a long distance with such height, then there is a risk about the shrinking of the materials.

01:06:23 Speaker 2

Then it's not possible to use wood.

01:06:26 Speaker 1

And the gypsum of those panels so those plants are detachable.

01:06:30 Speaker 1

So also they can be reused for.

01:06:33 Speaker 1

So for circularity it's good.

01:06:35 Speaker 1

And also for adaptability, for, for for changes, yeah?

01:06:38 Speaker 2

[Dutch translation]

01:06:39 Speaker 2

[Dutch translation]

01:06:52 Speaker 2

If you want and you can just screw it out.

01:06:55 Speaker 1

Uh, so it's for circularity.

01:06:57 Speaker 1

It's it's circular because even it's made and even for for adaptive, it's yes.

01:07:03 Speaker 1

So that's why it's easy to detach it, yeah?

01:07:07 Speaker 2

Yes, yes, you just have to screw it out.

01:07:10 Speaker 1

Ah, OK, and the gypsum just I'm curious about the gypsum that you included is.

01:07:16 Speaker 1

Recycled or reused?

01:07:19 Speaker 3

[Dutch answer]

01:07:20 Speaker 3

[Dutch answer]

01:07:25 Speaker 2

Yeah, it's new back then this new, but then because gips basically is eventual to be recycled.

01:07:34 Speaker 1

OK.

01:07:42 Speaker 3

[Dutch answer]

01:07:43 Speaker 1

OK.

01:07:45 Speaker 1

I see.

01:07:46 Speaker 1

Uh, for for, for, for other things other.

01:07:49 Speaker 1

These strategies for circularity and.

01:07:52 Speaker 1

I notice that you used kind of.

01:07:56 Speaker 1

Did you use also for power like a solar panel or something like that for this building?

01:08:05 Speaker 3

[Dutch answer]

01:08:10 Speaker 3

[Dutch answer]

01:08:11 Speaker 3

[Dutch answer]

01:08:15 Speaker 3

[Dutch answer]

01:08:18 Speaker 2

Yeah, we we.

01:08:20 Speaker 2

We do have solar cells, solar panels, but that's of course more for the the utilization phase and not really during the yeah, it's not really during the design phase.

01:08:38 Speaker 2

And we also have here electric charger for cars and that's basically make the implement, make the usage of the building itself circular.

01:08:51 Speaker 2

Well, if you want to say it like that.

01:08:57 Speaker 1

So the source of electricity is is not depend on the on the solar panel, yeah?

01:09:02 Speaker 2

Now we actually send electricity back to the grid.

01:09:07 Speaker 2

We act we actually produce more than we use in a year.

01:09:09 Speaker 1

Oh, OK.

01:09:11 Speaker 1

And through the solar panel.

01:09:19 Speaker 2

And we also have heat pumps which basically are being used to produce heating and cooling.

01:09:33 Speaker 1

And also?

01:09:34 Speaker 2

We also have heat pumps.

01:09:35 Speaker 1

Heat pump.

01:09:36 Speaker 2

Which facilitate the heating and cooling.

01:09:42 Speaker 3

No gas.

01:09:44 Speaker 1

Oh, no gas.

01:09:50 Speaker 1

And the source of electricity?

01:09:52 Speaker 1

The heat pump from the solar panel?

01:09:57 Speaker 1

So it's itself like zero energy.

01:10:02 Speaker 2

It's an ultra-energy building.

01:10:05 Speaker 2

It's a self.

01:10:06 Speaker 1

Self-generative?

01:10:11 Speaker 1

OK, so let's do this.

01:10:15 Speaker 1

So really, I I knew many many things and also adaptability, you considered the adaptability quite often here in this building.

01:10:24 Speaker 1

So for this one you call it, I call this skirting you call it plint, so the plant is also you did that for like any use for any future changes like you want to extend wiring from here, like you can do it easily from here yeah? so this one is for even adaptivity?

01:10:44 Speaker 3

[Dutch answer]

01:10:46 Speaker 3

[Dutch answer]

01:10:53 Speaker 3

[Dutch answer]

01:10:56 Speaker 2

Yeah, so then yeah, it's really for flexibility and then to be a ability adaptability in which that at the moment we don't really have room separations.

01:11:10 Speaker 2

We we don't have like another walls inside, but in the future, if there is another walls or the rooms are being separated further, then it will be easy to adjust .

01:11:25 Speaker 1

OK these guys.

01:11:29 Speaker 1

OK, and you.

01:11:30 Speaker 1

You deliberately keep the floor open here and you deliberately or like you intentionally keep the building open.

01:11:39 Speaker 2

[Dutch translation]

01:11:42 Speaker 3

[Dutch answer]

01:11:45 Speaker 3

[Dutch answer]

01:11:48 Speaker 2

Back then it was just it was indeed one of the trend to have an open space for office.

01:11:55 Speaker 1

So it wasn't like from perspective that you want to keep it flexible and for future changes or?

01:12:05 Speaker 3

[Dutch answer]

01:12:07 Speaker 2

But at the same time, it's also very flexible to have an open space.

01:12:11 Speaker 1

OK.

01:12:20 Speaker 3

[Dutch answer]

01:12:23 Speaker 3

[Dutch answer]

01:12:25 Speaker 3

[Dutch answer]

01:12:25 Speaker 3

[Dutch answer]

01:12:27 Speaker 2

And the first step to do circularity is, of course, to not use.

01:12:34 Speaker 2

To use as minimal material as possible anyway.

01:12:37 Speaker 1

OK.

01:12:45 Speaker 1

OK, I have another questions because now I listed about.

01:12:54 Speaker 1

Really 13 strategies.

01:12:55 Speaker 1

About 13 strategies and some of those strategies were for adaptability and some of them for circularity, and some of them for both.

01:13:04 Speaker 1

Like would you say like open open floor or open layout so it's for future changes but also to use this material as much as possible.

01:13:14 Speaker 1

Yeah, and.

01:13:15 Speaker 1

There are so many strategies.

01:13:16

Is it?

01:13:18 Speaker 1

But were there other strategies that you did consider, but you didn't implement?

01:13:30 Speaker 2

[Dutch translation]

01:13:38 Speaker 3

[Dutch answer]

01:13:39 Speaker 3

[Dutch answer]

01:13:40 Speaker 3

[Dutch answer]

01:13:42 Speaker 3

[Dutch answer]

01:13:45 Speaker 3

[Dutch answer]

01:13:47 Speaker 3

[Dutch answer]

01:13:49 Speaker 3

[Dutch answer]

01:14:01 Speaker 3

[Dutch answer]

01:14:04 Speaker 3

[Dutch answer]

01:14:14 Speaker 3

[Dutch answer]

01:14:18 Speaker 2

Well, one of the things the separation of the waste, which back then some of the materials was not reused and it was considered to separate the weights and send them to certain stakeholders which will be able to use it, but that's but that's actually difficult.

01:14:47 Speaker 2

Proved to be difficult to do.

01:14:49 Speaker 3

[Dutch answer]

01:14:50 Speaker 2

Back then, of course, and also another one, is that.

01:14:56 Speaker 2

Another selection that selection that we could have done back then is to implement biobased material.

01:15:04 Speaker 2

Which is at the moment at 2022 is a big thing.

01:15:09 Speaker 3

[Dutch answer]

01:15:14 Speaker 2

Yeah, for instance, instead of using metal for the extra floor that we have where we can use wood.

01:15:24 Speaker 1

So biobased material like like wood and which allows material, especially isolations, insulation materials.

01:15:36 Speaker 1

Yeah, yeah yeah.

01:15:38 Speaker 1

But when we say biobased, what do you mean by biobased?

01:15:42 Speaker 3

[Dutch answer]

01:15:43 Speaker 3

[Dutch answer]

01:15:46 Speaker 2

Renewable renewable materials.

01:15:48 Speaker 1

OK.

01:15:54 Speaker 1

So so you didn't separate the waste and also you didn't use a biobased material because at that time it wasn't easy to do that, yeah?

01:16:06 Speaker 3

[Dutch answer]

01:16:13 Speaker 3

[Dutch answer]

01:16:14 Speaker 3

[Dutch answer]

01:16:16 Speaker 2

Because back then it wasn't really a big emphasis where at that moment we focused more on the technical circularity of the building.

01:16:30 Speaker 1

Ah, so the technical flow the this one.

01:16:33 Speaker 2

Yes, less more about the bio biochemical aspect.

01:16:38 Speaker 1

OK, so within the butterfly diagram the focused on the.

01:16:43 Speaker 3

[Dutch answer]

01:16:54 Speaker 1

OK.

01:17:06 Speaker 2

Yeah, but that's also a good thing in circularity that it's expanding.

01:17:12 Speaker 1

Yeah, so it's just because in that time you didn't do both strategies because first, it wasn't easy, and it wasn't the focus.

01:17:22 Speaker 3

[Dutch answer]

01:17:33 Speaker 3

[Dutch answer]

01:17:35 Speaker 3

[Dutch answer]

01:17:37 Speaker 3

[Dutch answer]

01:17:39 Speaker 2

It was too new at that moment that there are lots of other aspects relating to regulations that might be full of risk like the fire proofing and such things.

01:17:50 Speaker 1

OK.

01:17:56 Speaker 1

OK.

01:18:06 Speaker 1

OK, so now the last two questions now.

01:18:11 Speaker 1

I knew that both strategies are like the those like you didn't do those because the the focus wasn't technical and it wasn't easy and also there was a concern about regulations.

01:18:25 Speaker 1

But now regarding the 13 or 15 strategies that you did already from materiality as sorry for circularity and for also for circularity and for adaptability, what were the strategies that you faced? Sorry, what were the enablers or the things that makes made for strategy easy to implement on the in this project?

01:18:54 Speaker 1

Like what the things that facilitated the implementation of of the 13 strategies?

01:19:01 Speaker 2

[Dutch translation]

01:19:02 Speaker 2

[Dutch translation]

01:19:04 Speaker 1

We call the enablers.

01:19:07 Speaker 1

Enablers yeah.

01:19:09 Speaker 1

The things that may that facilitate the implementation of those strategies.

01:19:20 Speaker 3

[Dutch answer]

01:19:22 Speaker 3

[Dutch answer]

01:19:26 Speaker 2

Yeah, so the three things that have been mentioned that this is that the constructions was really good.

01:19:33 Speaker 2

The building was empty, but at the same time the construction is very strong.

01:19:38 Speaker 2

It can hold sorts of weight.

01:19:42 Speaker 3

[Dutch answer]

01:19:46 Speaker 2

And then the floor, the floor you can just add extra floor.

01:19:53 Speaker 1

OK, but there is nothing also other things that makes it easier to implement like beyond the building?

01:20:01 Speaker 1

So I mean outside the building.

01:20:03 Speaker 1

Other other things. Other endeavors that facilitate the implementation of those strategies?

01:20:09 Speaker 2

[Dutch translation]

01:20:13 Speaker 3

[Dutch answer]

01:20:15 Speaker 3

[Dutch answer]

01:20:20 Speaker 3

[Dutch answer]

01:20:36 Speaker 2

Well, then, the availability of prefab materials.

01:20:41 Speaker 1

Prefab materials?

01:20:44 Speaker 2

Which can yeah, like toilet or panels or such.

01:20:53 Speaker 1

OK. There is nothing also other related to society and something like that?

01:21:00 Speaker 2

[Dutch translation]

01:21:04 Speaker 3

[Dutch answer]

01:21:05 Speaker 3

[Dutch answer]

01:21:11 Speaker 3

[Dutch answer]

01:21:14 Speaker 3

[Dutch answer]

01:21:15 Speaker 3

[Dutch answer]

01:21:22 Speaker 2

Financially, it's interesting.

01:21:23 Speaker 2

It's good to maintain to reuse the materials.

01:21:28 Speaker 1

OK.

01:21:30 Speaker 1

Yeah, exactly.

01:21:36 Speaker 1

So the cheapness of reusing the material?

01:21:39 Speaker 3

[Dutch answer]

01:21:39 Speaker 3

[Dutch answer]

01:21:43 Speaker 3

[Dutch answer]

01:21:47 Speaker 3

[Dutch answer]

01:21:51 Speaker 2

And also that you have a team which has the same goal.

01:21:58 Speaker 2

A team.

01:21:58 Speaker 1

A team, yeah.

01:22:00 Speaker 2

That that basically wants to use the building.

01:22:04 Speaker 3

[Dutch answer]

01:22:05 Speaker 3

[Dutch answer]

01:22:05 Speaker 3

[Dutch answer]

01:22:14 Speaker 3

[Dutch answer]

01:22:16 Speaker 3

[Dutch answer]

01:22:20 Speaker 2

Yeah, we did actually this in general by other projects, usually we in either renovation project, usually you encounter problems which has to be solved inside the team itself.

01:22:46 Speaker 1

Again, I didn't get it.

01:22:49 Speaker 2

[Dutch translation]

01:22:56 Speaker 3

[Dutch answer]

01:22:57 Speaker 3

[Dutch answer]

01:23:03 Speaker 3

[Dutch answer]

01:23:08 Speaker 2

Yeah, so it's just like in general the team.

01:23:12 Speaker 2

When they face when they encounter a problem or obstacle, then they they can work together to solve the problem.

01:23:20 Speaker 1

Ah, so so we can say collaboration the collaboration.

01:23:28 Speaker 1

OK, what were the what were the the obstacles? Or the barriers that you faced when you were implementing those strategies?

01:23:39 Speaker 2

[Dutch translation]

01:23:42 Speaker 3

[Dutch answer]

01:23:46 Speaker 3

[Dutch answer]

01:23:51 Speaker 3

[Dutch answer]

01:23:56 Speaker 3

[Dutch answer]

01:24:01 Speaker 3

[Dutch answer]

01:24:03 Speaker 3

[Dutch answer]

01:24:04 Speaker 3

[Dutch answer]

01:24:06 Speaker 3

[Dutch answer]

01:24:07 Speaker 3

[Dutch answer]

01:24:09 Speaker 3

[Dutch answer]

01:24:13 Speaker 2

One of them is the we use of the heating lightning heating piping which was transformed into railing, but apparently it's more costly to do that instead of buying new rail.

01:24:35 Speaker 1

So it was expensive to reuse theme?

01:24:39 Speaker 2

Reuse the heat pipes into railing for he railing.

01:24:49 Speaker 1

Railing element.

01:24:50 Speaker 2

The railing of the of the stairs.

01:25:07 Speaker 1

Other obstacles or challenges?

01:25:22 Speaker 3

[Dutch answer]

01:25:24 Speaker 3

[Dutch answer]

01:25:25 Speaker 2

Lots of lots of time it's related with the warranty of the materials performance.

01:25:33 Speaker 1

Warranty?

01:25:34 Speaker 2

In which that if you release the material and use it in other constructions, then it's not always that the warranty stays.

01:25:47 Speaker 1

OK.

01:25:51 Speaker 3

[Dutch answer]

01:25:54 Speaker 3

[Dutch answer]

01:25:59 Speaker 3

[Dutch answer]

01:25:59 Speaker 2

And also the existing installations, it still has more potential regarding circularity.

01:26:20 Speaker 1

OK, now I think we ended up with our questions, but just I want to ask just general questions, so thank you so much.

01:26:27 Speaker 1

I learned a lot a lot from this project and I'm not sure if I can take some photos. If you don't mind later.

01:26:33 Speaker 1

On yeah, but I have a question like, what is like, according to like you have been involved in circularity and both of you you are working, what do you think of the the future of circularity in the building industry or in the vastgoed market?

01:26:59 Speaker 2

[Dutch translation]

01:27:04 Speaker 2

[Dutch translation]

01:27:13 Speaker 3

[Dutch answer]

01:27:19 Speaker 3

[Dutch answer]

01:27:21 Speaker 3

[Dutch answer]

01:27:23 Speaker 3

[Dutch answer]

01:27:30 Speaker 3

[Dutch answer]

01:27:35 Speaker 2

And we we know that we are going into 2050 with the goal of having zero CO2 emissions from buildings, and that's because of this circularity will increase a lot with the importance of flexibility and also less materials usage. And what's important is actually the registrations of the materials into the database, which can be calculated for the CO2 calculations.

01:28:12 Speaker 3

[Dutch answer]

01:28:17 Speaker 3

[Dutch answer]

01:28:20 Speaker 3

[Dutch answer]

01:28:25 Speaker 3

[Dutch answer]

01:28:31 Speaker 3

[Dutch answer]

01:28:33 Speaker 3

[Dutch answer]

01:28:36 Speaker 2

Yeah, yeah well and most probably that the government will strive towards low higher requirements regarding CO2 emissions, for instance, but we for the environmental impact. It's going to be decreasing to 0.5 or even zero in 2050 and that that's what's going to help it's also the counting of the carbon price.

01:29:12 Speaker 1

So like you said there will be even more strict regulation moral.

01:29:26 Speaker 3

[Dutch answer]

01:29:29 Speaker 2

And then also a shift from the focus from the technical circularity into the environment.

01:29:39 Speaker 3

[Dutch answer]

01:29:42 Speaker 2

Less concrete and more wood.

01:29:45 Speaker 1

Yeah, is there also other other things like we'd like to add also, like you said, we said like the registration of material to calculate CO2. And the strict regulation for to cut off the CO2 and also the consideration of biobased material, other things?

01:30:09 Speaker 3

[Dutch answer]

01:30:12 Speaker 3

[Dutch answer]

01:30:14 Speaker 3

[Dutch answer]

01:30:20 Speaker 3

[Dutch answer]

01:30:22 Speaker 3

[Dutch answer]

01:30:23 Speaker 3

[Dutch answer]

01:30:28 Speaker 2

It's like the also the development of KPI for the rest value from material that can be used.

01:30:39 Speaker 2

For instance, when you basically demolish material and use it to something else that value that material basically has some value. That value should be measurable.

01:31:01 Speaker 1

Ah, so for that reason a KPI for the demolished or the.

01:31:08 Speaker 2

Reuse, reuse reason.

01:31:11 Speaker 3

[Dutch answer]

01:31:16 Speaker 3

[Dutch answer]

01:31:19 Speaker 2

So yeah, so yeah and also yeah, not only about material but also flexibility and that they produce adaptability by which, for instance, if you add more floor, that is, in a way costly, but regarding flexibility that can give actually an added value in the future, like how can this be valued or measured? Like a.

01:31:48 Speaker 3

[Dutch answer]

01:31:50 Speaker 2

To make it interesting for the property developer.

01:31:55 Speaker 1

OK, how to value or evaluate we call it how to evaluate the flexibility?

01:32:02 Speaker 2

The the the flexibility adaptability aspect but also the rest value.

01:32:09 Speaker 2

The value of the reuse materials.

01:32:15 Speaker 1

OK.

01:32:21 Speaker 1

For the real state, and yeah.

01:32:28 Speaker 1

OK, interesting yeah.

01:32:31 Speaker 1

I think we end just small questions.

01:32:35 Speaker 1

Just personally if if you don't mind if I ask this question, do you think there is other cases to study for related to circular building transformation?

01:32:45 Speaker 1

Because still in my research I'm I'm looking for other cases do you think?

01:32:50 Speaker 3

[Dutch answer]

01:32:54 Speaker 2

We also have some projects where we are working on so it's the [name of a project].

01:32:58 Speaker 1

Yeah, I mean I I'm I'm. I'm so glad I sent an e-mail for for for for some respondent.

01:33:05 Speaker 1

So do you mean because the [name of a project] I sent e-mail. Emails to different people. They didn't reply.

01:33:16 Speaker 1

So do you know anybody who I can do?

01:33:20 Speaker 3

[Dutch answer]

01:33:23 Speaker 3

[Dutch answer]

01:33:24 Speaker 3

[Dutch answer]

01:33:26 Speaker 2

Hey, I don't know who are you talking about so we. We don't know I mean like I don't know who you are sending emails to

01:33:33 Speaker 2

So I mean you can just find the part the stakeholders in the website as well.

01:33:41 Speaker 1

Yeah, but but do you know anyone from so I can interview from this or this from your organization or?

01:33:50 Speaker 3

[Dutch answer]

01:33:52 Speaker 3

[Dutch answer]

01:33:58 Speaker 3

[Dutch answer]

01:34:00 Speaker 2

Well, yeah, it's it's possible that you can maybe interview our colleague, but he is working more on the installation.

01:34:10 Speaker 3

[Dutch answer]

01:34:14 Speaker 2

That seems like it's more interesting to interview the actually the architect or the contractor

01:34:24 Speaker 3

[Dutch answer]

01:34:28 Speaker 2

Or the property developer

01:34:31 Speaker 1

Yeah, so do you have certain name or I should really look for it?

01:34:37 Speaker 2

Well, yeah, for instance, for [name of a company] is the he needs to project developer.

01:34:43 Speaker 3

[Dutch answer]

01:34:54 Speaker 1

OK this.

01:34:57 Speaker 2

Well, otherwise you can see it in the website.

01:35:00 Speaker 1

Yeah no, no worries, so really thank you so much for this because [name of a project] I found it and I think I contacted others but they didn't reply I think I'm I'm not sure, but I I need to to look it up by myself if I can find somebody to interview. But from [name of a company] I can find some.

01:35:26 Speaker 2

Then we cannot give guarantee.

01:35:28 Speaker 1

Yeah, no. I mean, I didn't say guarantee none of that.

01:35:31 Speaker 1

I said like there are potential people or organizations to contact, yeah?

01:35:35 Speaker 2

Of course, Sure, yeah.

01:35:37 Speaker 1

And I will I will. I will look at that.

01:35:41 Speaker 1

Thank you so much because it's interesting to study the circular gebouw transformatie

01:35:48 Speaker 1

So, and we had really thanks so much for the interesting anything you want to add before?

01:35:55 Speaker 3

[Dutch answer]

01:36:07 Speaker 2

I don't know when will you finish with your research, but I mean if you are done and you can send it to us like let us know.

01:36:13 Speaker 1

Yeah, yeah for sure and I will share with you my first theoretical study hopefully it's going to be published soon.

01:36:21 Speaker 1

I hope that it will be published soon, so it's about like how to integrate adaptability and circularity, and it's a theoretical study, so it's not based on on, on on case studies or on real projects, but it's based on theory so that's one it should be interesting and for sure this one we will keep in mind.

01:36:45 Speaker 1

But this one I need to include explore other cases, other projects to analyze all the practices.

01:36:54 Speaker 1

Then we can try it up and share it with you, but the sooner one is hopefully within few months.

01:37:02 Speaker 1

Yeah, so that one is going to be shared soon.

01:37:05 Speaker 1

But this one it will take maybe about maybe six months to 10 months.

01:37:12 Speaker 1

So yeah to write it because I need to.

01:37:12 Speaker 3

No worries

01:37:15 Speaker 1

To first finish the other cases, it maybe go to [name of a project] or other projects.

01:37:22 Speaker 1

Then I need to analyze the data.

01:37:24 Speaker 1

Yeah, and write up.

01:37:26 Speaker 1

So before even I need to transcribe like whatever we are recording, we'll put it in.

01:37:31 Speaker 1

The text will convert it to text.

01:37:35 Speaker 1

Then we will use other software so it needs some time, but the sooner one, yes, for sure and we will keep in touch for other because there will be probably another round.

01:37:48 Speaker 1

And this research maybe in the operation because this one is for the exploratory part.

01:37:53 Speaker 1

But for the operation part, did you get the point?

01:37:57 Speaker 3

[Dutch answer]

01:38:01 Speaker 2

It's it's OK he got the partially.

01:38:02 Speaker 1

Yeah, yeah, so we will keep in contact.

01:38:06 Speaker 1

So in this regard I will end the recording.

01:38:09 Speaker 1

Thank you so much.

01:38:11 Speaker 1

Thank you so much.

01:38:12 Speaker 1

I'm grateful to you so.

01:38:15 Speaker 1

It has already been an hour and 38 minutes, so it's supposed to be in time, but I need to stop.