

Paul Thies:

With the goal of improving environmental stewardship and economic resilience, innovators are employing new solutions to address the challenges of municipal waste management. At the forefront of concepts being explored is the circular economy model.

Paul Thies:

Hello, I'm your host, Paul Thies. And in this episode of If/When, we explored how a circular economic model can be deployed to address opportunities to advance the circular economy in the waste management sector. With guests, Eric Oddo, Environmental Engineering Program Manager, Western Placer Waste Management Authority, and Janet Goodrich, Waste Solutions Global Technology Leader at Jacobs.

Paul Thies:

Eric and Janet, it is great to be talking with both of you today about the circular economy, particularly in the context of waste management. And I'm really looking forward to diving into this topic and learning more. So thank you both so much for joining me today.

Janet Goodrich:

You're welcome.

Eric Oddo:

Yeah, my pleasure. Thanks for having us.

Paul Thies:

Absolutely, absolutely. So, Janet, let me start off with you, just so we can kind of set the table for the folks playing at home. Can you describe what is meant by the term circular economy, how it is relevant to waste management, and how it factors into the work you do for Jacobs?

Janet Goodrich:

Yeah. Thanks, Paul. It's a great question. It's really been exciting to watch the transition of the thoughts around circular economy versus linear. So we've been under a linear economy all of our lives, where we extract raw materials, we make products, we consume them and then we throw away things at the end. And what the circular economy is about is re-envisioning that, so that we maximize the material's life cycle. We keep things in the product, in the life cycle of use for as long as possible. So all raw materials. Whether they're something we take out of the earth or whether they're water or something even that we produce from that.

Janet Goodrich:

And it's exciting because waste management, we have the opportunity to be at the forefront in that and help convert things that we already use into feedstocks for the new economy, plus, we also have the opportunity to be that piece in the chain that takes and gives the space for local governments and citizens to engage and think about their products and what they use. So it's a great time to be in this business. And I know Eric and I both talked about this quite a bit. It's really exciting. It's such a different framework for us, and it's great to think about going from designing landfills and just end of life all the time to thinking of waste as part of that circular economy.

Paul Thies:

Yeah, and I've got to imagine, I mean, it's got to be revolutionary for waste management, the waste management sector and really just disruptive, but in a good way in terms of what you do and how you mitigate and remediate waste. So now, Eric, let me ask you from where you sit, what steps have you taken to connect the waste management you perform with circular economy creation and where do you see that going?

Eric Oddo:

Yeah. Well, our agency, the Western Placer Waste Management Authority, has really put its cards on the table here. And we're establishing a space to foster deciding and development of public-private partnerships with emerging and already established technologies that can take the materials that we recover from the waste stream as an input to their processes.

Eric Oddo:

And to add on to what Janet was mentioning, it really does shift the dynamic here from being a waste management operation to a resource management operation realizing that there's an enormous amount of value in the products that are in the waste stream, that heretofore have not had a ready, marketable value. And we want to change that dynamic.

Eric Oddo:

Our agency is really setting the stage to foster the development in citing these technologies, but we're also working with Sacramento State and the Carlsen Center for Innovation and Entrepreneurship to effectively deepen our bench and help us find and mentor these new industries and bring them to us because we learned that we cannot just establish a space and wait for them to come to us. We need to go out and find these entrepreneurs, these industries, these technologies, and help them come to us.

Paul Thies:

That's interesting. And I've got to think that there's got to be like a, pardon the word, ecosystem out there, right, where it's collaborative, where it's not just that you at the end of a product cycle, like Janet was saying the linear waste management, but that earlier in the chain, producers are changing how they produce things to give them longer life. Or they're reusing resources and finding ways. So then it's got to change, I guess, the volume of what you're dealing with, but what do you think, Eric, is the most significant thing that needs to happen to connect waste management to resource efficiency and the circular economy?

Eric Oddo:

Well, Paul, I think you touched on a big one right there is simply market demand and market acceptance for these materials. And to the degree that virgin materials are cheaper, somehow have the vision that they're a better product is that it's going to be hard to change that model. But I think once folks realize and industries realize that these products can be put out on the market and be just as good, if not better, than virgin products. And by really establishing a strong circular economy model, you work with those end users to provide the product that they need. So we had the ability to pull out materials and meet the spec for the next entity to create them to a product that meets the subsequent spec. And so they no longer have to rely simply on virgin materials thinking that they're better than a reused material. So that's a big one, is simply market acknowledgment and demand for these products.

Eric Oddo:

Second, is streamline permitting, and sitting here in California where permitting is the elephant in the room, we really need the regulatory agencies to realize is that if we're going to move the needle on waste and resource management, they need to be a part of this discussion as well, is how do we get these industries on the ground and working without a whole lot of red tape.

Eric Oddo:

And then finally, like anything else, it comes down to money. We need private capital investment. I don't think we can rely on government alone to pony up the money here. And I think that there's plenty of industries out there and entrepreneurs that want to put capital into these types of long-range, visionary changes.

Paul Thies:

Yeah, and I think that you're seeing that with a greater emphasis on ESG coming from the investor community, for instance, that they're going to kind of mandate that companies put their money where their mouth is. And then also, you couple that with innovations and resource management. There's a better way to produce something with less waste. And then down the chain, there's less waste for you to have to deal with.

Paul Thies:

So now, Janet, let me ask you kind of touching on that, and segue to what Eric was saying, what opportunities do you see for cross-collaboration between industry, academia, and the waste sector, private and public to combine and accelerate the circular economy?

Janet Goodrich:

Paul, that's a really great question. Eric touched on it a little bit that his agency is already working with, for example, an academic group locally that is then pulling back to the City of Phoenix RISN network, which is a great example. We also, Jacobs have had the fortunate ability to be involved with a few others globally like the Guam Zero Waste program, and this circular economy work in Scotland where we're able to help create that connection between industry, academics, as well as consulting.

Janet Goodrich:

And then like Eric mentioned, regulatory, too, is super important. I think one of the main drivers that's getting everybody to the table right now that is pretty new is, in addition to ESG forcing it from the top down, there is also a global shortage in the supply chain. And it is just going to get worse as economies blossom throughout the world. And people want products. And if we stay with the take-make-dispose economy, we don't have enough earth resources to create the products, and those innovators, those industries that are out there in the lead right now realize that.

Janet Goodrich:

And they're starting to figure out how can they partner with people like Western Placer Waste Management Authority to get materials, but that connection is hard. It's not something that exists right now, as Eric said. So his agency is trying to find ways to make the connections. I think we in the consulting world have the opportunity to make connections and that's just what we've been doing with Eric, is helping him find people to talk to, but there's a lot more to do.

Paul Thies:

So Janet, are you seeing, from your standpoint, are people reaching across and sharing best practices from communities? So maybe there's another community that's talking with Eric go "What are you doing?" Well, this is what we're doing. And they're kind of learning from each other. Is that a fair characterization?

Janet Goodrich:

It's starting. It's not as mature as we would like, but that's what happened with Eric and Western Placer is we reached out to the City of Phoenix and talked to them about what they were doing. Now, Eric already had a great vision for this prior to that, but learning from what's worked for them has been a great benefit to this project.

Paul Thies:

Now, Eric, what's next for Western Placer Waste Management Authority in terms of building upon the success you've achieved thus far with a circular economic model?

Eric Oddo:

Well, I think the big step, and Jacobs has really helped us get to this point, is conduct an EIR and master planning exercise to help streamline the process for getting these private industries to build site next to us. So as I mentioned earlier, part of this is really streamlining the red tape to make it easy and, to use an overused term, a shovel-ready environment for sites to come in and establish their industry.

Eric Oddo:

We also realize that a lot of these are emerging ideas and emerging technologies, and maybe they're not ready for primetime commercial scale yet. So we've also set up a structure where we're going to provide a landing spot for pilot technologies and pilot projects and allow these entrepreneurs to test out their ideas in essentially a real-life lab. We have the infrastructure, we had the space, we had the materials, and give them the chance to prove out their technologies and see if it can make sense on a commercial scale.

Eric Oddo:

I think that's going to be a really crucial to making this whole thing work, to have viable technologies and viable industries so that it isn't just a pipe dream. And so we already have an existing pilot study here on site. We're getting calls constantly from different entities that are interested in starting pilot studies and pilot technologies with us. And I think that that's where things are going to move over the next couple years is get a couple of these early successes under our belt. And that's going to drive more notoriety and acknowledgment across the entire sector here and draw in more interest to our site.

Paul Thies:

No, that's great. You literally are providing testing ground. Literally, that these innovators can come in and try out their ideas and put them into practice and see how they'll work and I just love that, that you're thinking, too, about the scalability and then being able to share it out to others in the waste management sector.

Paul Thies:

Janet, what best practices would you say that other organizations might learn from the partnership experience between Jacobs and Western Placer Waste Management Authority?

Janet Goodrich:

I feel like there are really three main categories that have worked well for us as a group and I'd love Eric's opinion on these two. But the first one is that Eric has really, I'll have to give him a lot of credit, for Eric has held this vision for a long time and he has kept it alive even when the market didn't really quite know what he was talking about, yet. And his agency didn't quite know what he was talking about yet, but once he got that vision and then when we came on board to help him implement it, we've been aligned and we stay aligned. Pep talk each other when we need to. We get out and talk about the project in different places because we both, and Jacobs, and Western Placer, we agree. This is a really important project for our region, for our economy.

Janet Goodrich:

Then we've gone together to carry the message in our right spaces to the elected officials. So staying on that passion but really then, at the same time, keeping the pulse where it needs to be, too, because we need to understand where our communities are willing to go right now and to help them achieve that while keeping the big vision in mind.

Janet Goodrich:

And then a third place that I think has been a best practice here is not being afraid to bring up things that might be lightning rods for criticism or just new ideas. They're places that we aren't going right now. And I think that's been key to the success of this project because as Eric and then as we've been helping him do that, bring these things up, there have been a number of people that we haven't expected even, that have caught these ideas and are really helping us take them out to the community, to the stakeholders because they believe in the vision of this project.

Paul Thies:

Oh, that's awesome. And it's having the courage of your vision and the courage of being an innovator when people don't see just yet what you see but being willing to stick with it.

Paul Thies:

And Eric, let me ask you kind of the flip side. She mentioned that you've had this vision for a long time. What would you say, just kind of in the same vein, some of the best practices from that partnership with Jacobs that you've picked up along the way, that you might impart, that other community organizations, entrepreneurs, whatnot might benefit from?

Eric Oddo:

Well, I think Janet hit it right on the head. I mean, from the get-go we've been very fortunate in that our vision has been aligned and it's really been, what is that end goal? What do we see is, what we're trying to achieve in the long run? We don't know what that journey's going to be like to get there, but we knew what the endpoint was going to be. And so really bringing the right voices together with the right experiences and be willing to make that leap and say, all right, these are the folks that we need to talk to and open up different doors that maybe, just as an individual, I would've never known. I would've never had that exposure and that experience.

Eric Oddo:

And so bringing the right voices together, the right folks with a passion for moving things in the right direction for the environment, for the economy, and for us as a civilization, as a society. It's amazing that as you start talking about this idea, the circular economy idea, and what it could result in is it's really hard to find anybody that becomes a detractor.

Eric Oddo:

But you have to find that message that appeals to them and I think that that's been extremely beneficial with the Jacobs and the Authority team, being willing to stretch a little bit and find what are those pieces that are going to resonate with the different stakeholders and make sure that they fit within the project. We're not selling our soul just to get something done, but is actually building upon and making it a stronger project. And so from that, I would just recommend to others don't be afraid. Don't be afraid to stretch. Don't be afraid to go outside the boundaries of what your normal industry is because that's how you're going to make a change.

Paul Thies:

Wise words. Wise words. Well, Eric and Janet, I want to thank you both so much for joining me today. The circular economy, it's really starting to take hold, I think, in a number of sectors. And it's really interesting, obviously with waste management, what can be done and how we can really kind of transform that sector and ultimately transform our footprint on the environment and the impact and the economy. So thank you both so much for your time today.

Janet Goodrich:

You're welcome.

Paul Thies:

Thank you. Appreciate it.

Janet Goodrich:

Thanks.