

*Interview with Austin Fritsch,
Director of Research Operations,
and Alecia Bjerke, Animal Facility Manager
at Marquette University*

Research and Biosafety Center
Marquette University BioDiscovery District
Milwaukee, Wisconsin, USA

In the wake of a pandemic, Austin Fritsch, Director of Research Operations at Marquette University, and Alecia Bjerke, Animal Facility Manager, talk about their experience attending their first virtual FAT, broadcast from Tecniplast Italy into their living rooms in Milwaukee, Wisconsin.

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Tecniplast Delivers Factory Acceptance Testing to the Customer’s Living Room.

Marquette is a private research university near downtown Milwaukee. The 93-acre campus is located on the former Wisconsin State Fairgrounds, in the neighborhood of University Hill. The campus includes a BioDiscovery District, Innovation Alley, a recreational and wellness facility, a residence hall, and a sports research facility. It is accredited by the Higher Learning Commission and is the largest private university in Wisconsin with a student body of about 12,000; nearly all states and 89 countries are represented.

Marquette’s Research and Biosafety Center, located in the BioDiscovery District, is a **5,000-cage rodent facility**, whose management was looking into expanding its capacity and operations. The project included **building renovations and installation of a custom-built rack washer, a cabinet washer, bedding dispensers, IVC caging housing systems for mice and rats, and changing stations. All the products had to be installed and operational by late 2020 to early 2021.**

The project was complex, there were footprint limitations, special design requirements, and challenges with how to install equipment. By mid-March, all had been sorted out, and the rack washer was ready to undergo Factory Acceptance Testing (FAT). For those who are not familiar with it, a Factory Acceptance Testing is conducted to determine quality and compliance with

the customer's specifications before the equipment is shipped and installed in the facility. This testing requires the machine to be assembled at the factory and run as it would at its final destination. The client is present during the entire session and signs off on conformity once the evaluation has been completed.

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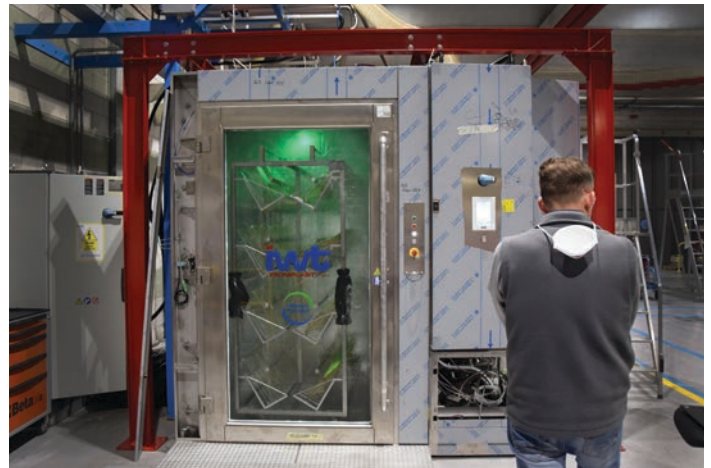
Things Get Complex

Marquette was anxious to complete the project. Their custom rack washer was ready and **the testing day they had been waiting for was here! Unfortunately, so it was COVID19...**

Tecniplast FATs are done at the factory in Italy, so attending customers get the opportunity to visit Italy, witness the FAT, tour the factory, and enjoy great hospitality. **Due to the pandemic, the borders in Europe were shut down, there were travel restrictions worldwide, meetings were prohibited, and the number of Coronavirus victims were escalating at incredible rates.** Tecniplast/IWT had a deadline and customer expectations to meet. In other words, with or without COVID19, they had to deliver!

The Big Day Arrives

By mid-March, Tecniplast confirmed to Marquette that the FAT would go on, but a few adjustments were needed to make it happen.



On March 27, Tecniplast brought the Atlantis washer FAT livestream to the customers living rooms. Tecniplast broadcast live the Factory Acceptance Test of the Atlantis customized rack washer from Italy to multiple cities in the USA where the customer, architects, design team, and project managers were located. The virtual meeting last approximately three hours.

“Wow! What a time to pivot!” – said Austin Fritsch, Director of Research Operations at Marquette University. “Amid a pandemic when people obviously can’t travel, to be able to pivot to a virtual solution and deliver. That was incredible!”

“We couldn’t believe it when you told us that you were still going to conduct the FAT, but you were going to make some adjustments on how you would do it. That shows the great company you are! - he added.

How Was This Made Possible?

Tecniplast used three video cameras. One was stationary to capture an overview of the complete installation; a second camera was on the operator who was conducting the FAT; a third camera was mobile to capture other aspects of the process as needed. The IWT project manager joined remotely to direct the process. Three people were at the factory conducting the testing. The audio-visual format and platform allowed interaction between the parties.

The Marquette team, the architects and the contractor joined the virtual FAT (eFAT) and were able to ask questions during the process.

Our Rack Washer Was Processing Cages Right in Our Living Rooms!

Alecia – I’ve heard so much about the factory in Italy, so I was looking forward to seeing it in operation. I knew, from a personal point of view, that it was going to be very interesting. When it comes to the (Atlantis) cage washer itself, I wanted to see that it was operational the way we expected it to be, especially because this one had some heavy customization. I wanted to see how it was built and how it was performing through the operations for us.

Having multiple cameras that gave us many angles and allowed us to see things as a whole. You have a fixed camera while another was moving around that almost allowed us to view it as being there physically. Another positive thing was that **this modality gave the architects and the contractors the possibility to join us and ask questions as they needed.** Having the architects and the builder with us was also beneficial.



Austin – **It was truly amazing!** Our washer is definitely not ‘out of the box’, but a heavily customized one, so we thought that having people at the factory would be beneficial. We wanted to see in person how everything would come together, knowing the requirements and limitations we had within our footprint and where this washer was going to be. But that was just the structural portion of it. Being there was not feasible due to the pandemic. We were able to see it operational in real-time and have the opportunity to ask questions.

Alecia –The eFAT also gave us the confidence that everything was going to be functional and would do what it needed to do. As Austin said, this was not a cookie-cutter type of machine. **During the virtual FAT we were able to see the same as what we would have been able to see in an in-person FAT.** **From a confidence level, this gave us that level of security.**

What did you hope to accomplish with the FAT for the Atlantis rack washer, and did the virtual FAT help you reach that goal?

Austin – Yes. It did. As I said before, our washer was not one out of the box and the scope of the project was challenging. **Tecniplast and IWT went above and beyond to make sure we were confident about this process.** From the operational point of view, the virtual FAT met our expectations at 100%. It helped us reach the goal of seeing it working, how it operates, running through cycles, how it loads and unloads, check alarms out, etc.

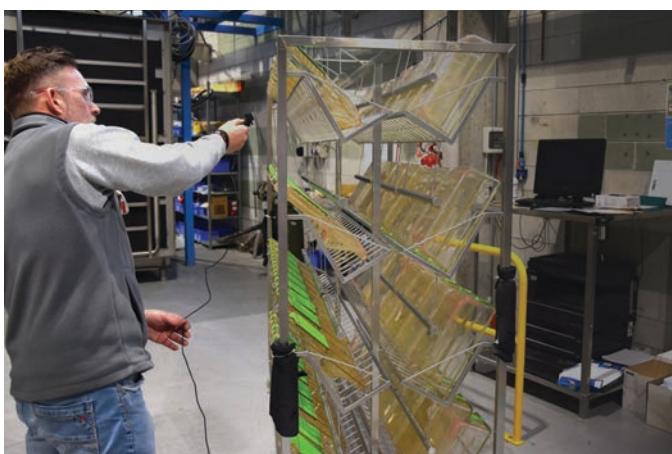
Alecia – To me, the eFAT did exactly what a standard FAT would do. In this case, it was the Atlantis, but it could be done for any other product. The project managers can be present; the operator is right there in case customers want to ask questions while the machine is operating. During our session, we were able to do some of the troubleshooting, which was beneficial. When we experienced some lag, we had to remind ourselves that we were afar. I had to take a step back and say, “Wait a minute, this is happening

in Italy right now, and we are in our living room. There was the ocean in between, and yet, we were seeing it in real-time!" - I think it was really neat.

What would you say to someone else that was considering an eFAT?

Alecia – The e-Fat is a good alternative to consider when you cannot be in person. For us, because of the way it was conducted, it gave us that level of comfortability we needed before the machine was shipped.

Austin – We valued the fact that the participation was not just limited to us, but the other team members such as the architects and the contractor were able to be present and ask questions during the process. It is definitely a good alternative.



How would you feel about product training through a similar format?

Austin – I think training using an electronic format is terrific! These days we have everything on the palm of our hand. Your customers can pull a video and learn how to change a filter, or how to replace runners. Being able to do this would be very advantageous for Marquette and other institutions as well.

Alecia – I think that is an excellent idea! At Marquette, we love having the technicians doing hands-on training, but obviously, this is an option for a situation like COVID19, or if someone's schedule might get fully

booked all of a sudden, and he or she may not be able to attend. Also, it gives people the possibility to watch it Online. You can have this recorded, and as you are using the product down the road, you can go back and reference the training to remind yourself of the recommendations. I think this would be something fully utilized, so yes, it is great to consider it.

“We were worried. You pulled the right solution within a short amount of time”

Is there anything else that you would like to say to the team at Tecniplast/IWT?

Alecia – Sure! I think we were all very appreciative. We even heard how beneficial this was to our entire team after the eFAT, the contractor, the architect, and the design team; they felt that they were all on the same page. I think everybody is very appreciative of what Tecniplast /IWT did. **COVID19 added a lot of stress to the project. We were worried about deadlines, we didn't know how this was going to work, and you were able to pull together a solution within a short amount of time**, making sure that our entire team would be comfortable with it. We greatly appreciate it.

Austin – I would say what a way to go! I want to say thank you to all of you, but especially to the people who were in Italy. We were in different time zones, and it was probably 6:00 or 7:00 PM here when we wrapped up, so we realized that they work extended hours to get this done. I want to say thank you all for being able to do that for us. From a consumer point of view, this was amazing!

Coronavirus Positive Side Effects

This pandemic accelerated the need for Tecniplast/IWT to adopt a virtual mode of conducting a FAT. Tecniplast/IWT conducted a virtual FAT, and Marquette was the first customer to be a part of it. This technology and experience opened up an array of opportunities for our customers.

The Tecniplast/IWT goal was to construct the eFat to make the clients feel as if they were present and allow interaction with our team, as if we were all together in the same location.

We delivered, and we learned. For a first time effort the eFAT proved successful for both the Marquette and Tecniplast/IWT teams.

As with our products, we continue to improve, problem-solve and innovate, to provide outstanding and current solutions for our customers, even in the wake of a pandemic.



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Positive Effects and New Ways of Engagement for the Future

- **eFATs** can widen the circle of attendance. Not just the client, but the entire team who participates in a project could have the possibility to attend a FAT. For example, even if a customer travels to the factory in Italy, a hybrid version of the FAT will allow architects, contractors, and other team members to participate. This is particularly beneficial when schedules are busy, or there are budget limitations.
- **eFATs** offer flexibility. Even though in-person, hands-on sessions are recommended, it is not always easy to accommodate work schedules. This eFat showed that remote hands-on training sessions or informative training sessions are not only do-able but are helpful as well.
- **eFATs** offer efficiency for the customer. They cut time and costs associated with travel as well as offering opportunities for an entire Service Team to be instructed at once.
- **eFATs** facilitate access to experts. Sophisticated products require the expert input of product specialists and engineers. FATs allow access to the exchange of information with those experts, when it matters the most.



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