



# CUSTOMER SPOTLIGHT: LUX MACHINA

CONSULTING ON BARBIE AND  
HOUSE OF THE DRAGON

There are very few tentpole cinema releases or effects-based, premium TV shows that haven't been touched by Vicon technology at some point in their production cycle. Vicon counts the best effects houses in the entertainment world among its users. Even within such a high-performing group, Lux Machina Consulting stands out, thanks to its work pioneering virtual production in an LED volume on *The Mandalorian*, and more recent high-profile projects including *House of the Dragon*, *Barbie* and *Masters of the Air*.



Wyatt Bartel,  
Vice President  
of Production,  
Lux Machina



Jeptha Valcich,  
Camera Tracking  
Specialist,  
Lux Machina

We put some questions to Lux Machina's Poom Wattanapan, production specialist; Wyatt Bartel, vice president of production; India Vadher-Lowe, lead motion capture specialist; and Jeptha Valcich, camera tracking specialist, about the studio, their work, their experiences with Vicon and the future of motion capture in VFX and virtual production.



India Vadher-Lowe,  
Lead Motion  
Capture Specialist,  
Lux Machina

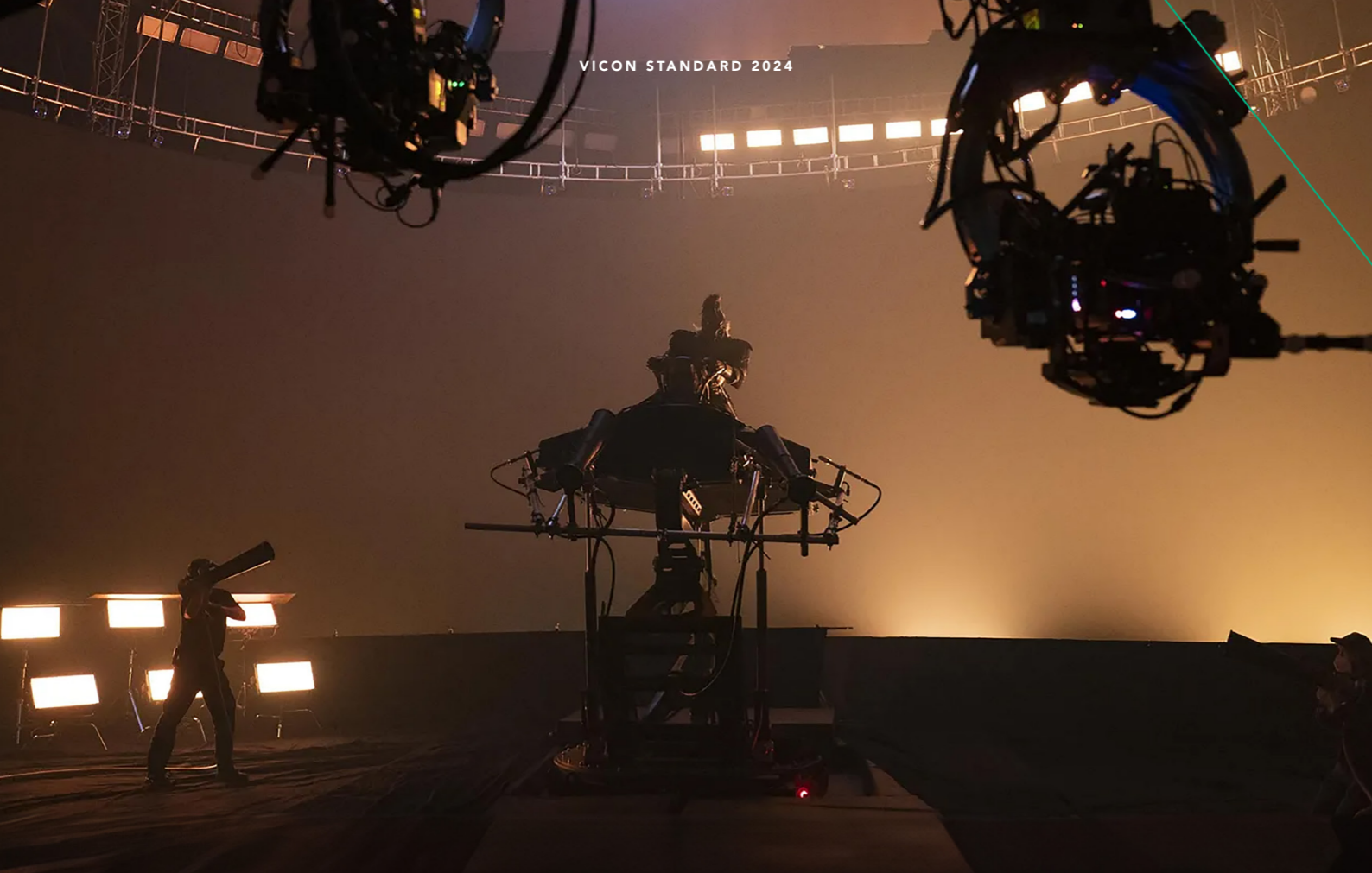


Poom Wattanapan,  
Production Specialist,  
Lux Machina

## FIRST, CAN YOU TELL US A BIT ABOUT LUX MACHINA?

**Wyatt Bartel:** Lux Machina Consulting is a design, management and technical consulting firm, specializing in virtual production, in-camera visual effects, display technologies and creative screens control for large scale productions and installations.

Since its early involvement in high-profile projects like *Oblivion*, *The Mandalorian* and *Masters of the Air*, Lux Machina has consistently led the field in integrating cutting-edge technology with creative vision. What truly sets Lux Machina apart is our commitment to in-house design and implementation of service solutions.



VICON

This approach allows us to harness the extensive, specialized expertise of our team, ensuring that each project benefits from tailored, state-of-the-art solutions.

Our ability to adapt and evolve with the industry's demands, combined with a team deeply versed in both the technical and creative aspects of virtual production, positions us uniquely among our peers. This blend of pioneering spirit, technical excellence and bespoke service offerings not only drives the industry forward but also delivers unparalleled value to our clients.

**HOW HAS LUX MACHINA'S VICON SYSTEM ENHANCED YOUR WORK?**

**Poom Wattanapan:** Throughout the course of House of the Dragon, Vicon proved to be essential in the production environment. The quality of tracking data and the reliability of the system allowed us to feel confident walking into each production day.

Over the course of my time in virtual production I have had the opportunity to work with a large variety of tracking systems. I strongly believe in using

the right tool for each job. We turn to Vicon when we need a system that offers maximum flexibility. On House of the Dragon, cameras would often shift from a technocrane to a dolly then back within a single shoot day. Using a reliable, outside-in tracking system was key in providing freedom for directors and DP to shoot scenes the way they wanted to.

**India Vadher-Lowe:** I have been very lucky to have spent most of my career working with Vicon systems. This is so important when consulting on projects, as I need to be able to advise on the right solution for the job, and not every solution will be capable. Vicon offers incredible precision and versatility on productions that require a lot of flexibility and change. Some productions require complex set builds, technically difficult shots and multiple camera rigs, so I rely on Vicon's quick lens calibrations and ease of system adaptation to minimize time taken away from the production.

**TELL US ABOUT THE V STAGE AT WARNER BROS. STUDIOS LEAVESDEN.**

**Wyatt Bartel:** Warner Bros. tasked Lux Machina with building a world class

virtual production volume at Warner Bros. Studios, Leavesden, and to fulfill our camera-tracking and object-tracking needs, we chose Vicon.

Our goal was simple: deploy a production-ready, rigid-body tracker that could track multiple cameras within an LED volume with a minimum of impact to the DP and production workflows. It had to be low-noise, low-jitter and flexible to adapt to the multiple productions that it serviced. Our goal is always to enable workflows that extend the opportunities for filmmakers rather than confining them to innovative yet rigid pipelines. Vicon allows us to move at a pace and make choices on the fly with camera rigs; Veros getting set up quickly to help extend volumes; lens profiles and quick software to keep us on pace for meeting the needs of the shoot every day.

**AND YOU RECENTLY LAUNCHED THE LUX STAGE AT TRILITH STUDIOS. WHAT CAN YOU TELL US ABOUT YOUR EXPERIENCE WORKING AT THE NEW FACILITY?**

**Jeptha Valcich:** Francis Ford Coppola's Megalopolis was the first project to

shoot on our VP stage at Trilith Studios. My goals were to do whatever I could to make Mr. Coppola enjoy his first experience on an LED volume. Vicon's optical tracking was critical in getting this project done. The tools at our disposal allowed us to move quickly and efficiently, matching the production's pace. The camera tracking remained stable even in the tightest of spaces when most of our Vantage cameras were occluded. We have a custom-built wand designed to speed up the calibration of larger spaces. It can calibrate our 91-camera system in around five minutes.

**IS THERE ANYTHING YOU CAN SHARE ABOUT HOW YOU CUSTOMIZE YOUR WORKFLOW TO FIT WITH LUX MACHINA'S NEEDS?**

**India Vadher-Lowe:** Shōgun is a great piece of software. It's easy to learn and enables you to use multiple tools to get you out of a tricky situation. Traditional film and lighting techniques aren't always best suited for an optical system as they can cause noise and occlusion. Being able to create custom filters and modify live data processing thresholds allows us to counteract any negative effects that the temporary



occlusion might cause, without having to stop to change the camera positioning.

**HOW DO YOU ANTICIPATE YOUR USE OF MOTION CAPTURE EVOLVING?**

**Poom Wattanapan:** In the future I suspect we would like to track more real-world objects as we look at how virtual production could be more efficient or interactive.

**Wyatt Bartel:** I see Lux Machina's adoption of the forthcoming Vicon markerless solution as a wonderful addition to help augment our existing pipelines and rental stock. The ability to mix and match workflows will help us enable experiences for our customers that were previously locked to the motion capture studio but will now be able to be experienced out in the wild in temporary locations.

**Jeptha Valcich:** I think the race right now for motion capture is towards markerless tracking. Once you have a system that permits actors to work free of a suit and headgear, it will be a huge game changer. I expect that as the technology becomes easier to use, it will appear more frequently during the production process. My hope is that more actors get to see themselves as the virtual characters that they become because I think it's fun for everybody.



For more on Lux Machina visit: <https://www.luxmc.com/>