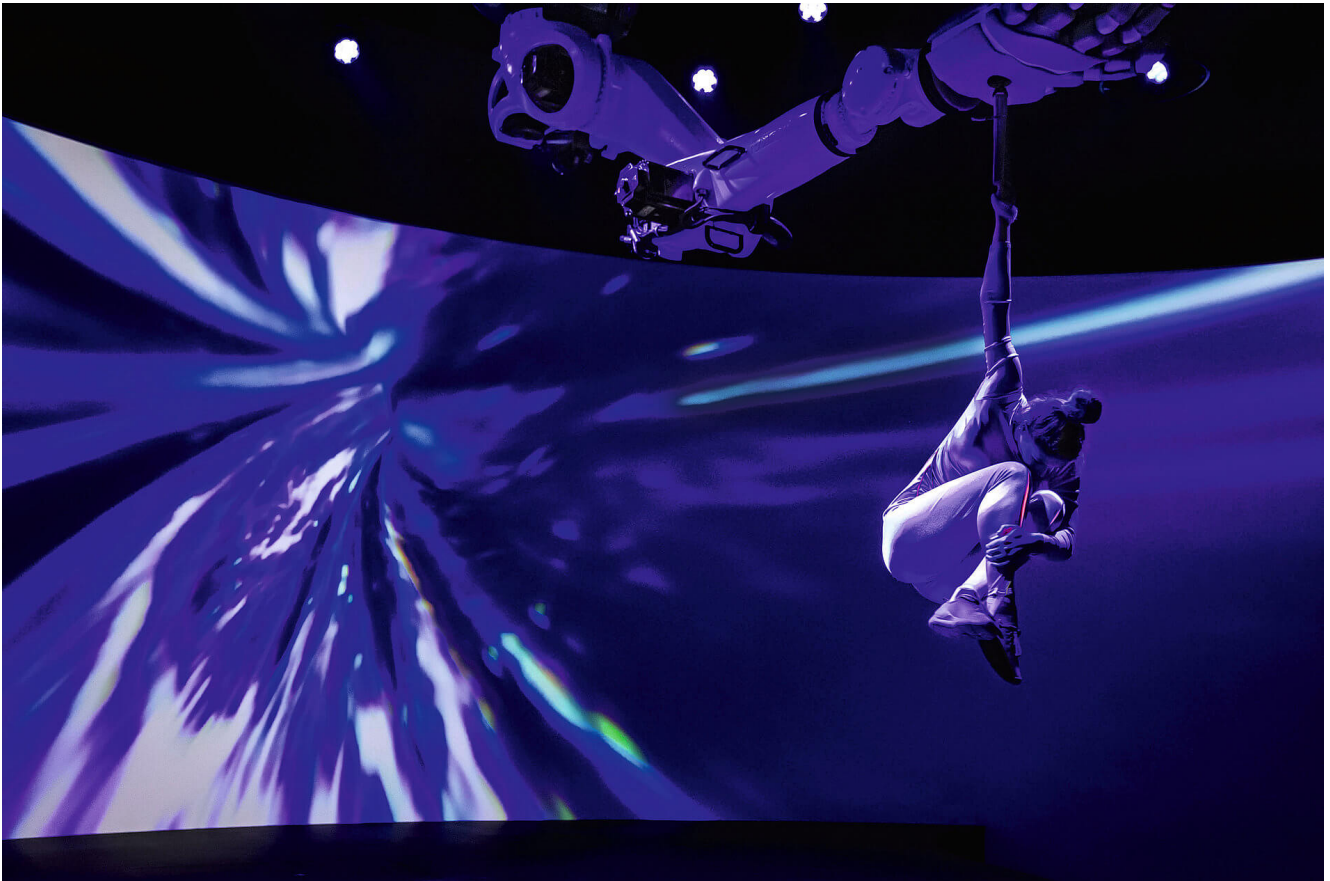


# Unlimited Space

In a groundbreaking fusion of art, technology, and human-machine interaction, the Kazakhstan Pavilion's Main Show at Expo 2020 in Dubai left a lasting imprint on the global stage. Led by Karl Singline, the project delved into the ideation, design, and production phases, showcasing the power of collaboration and cutting-edge tools like Rhino and Grasshopper.



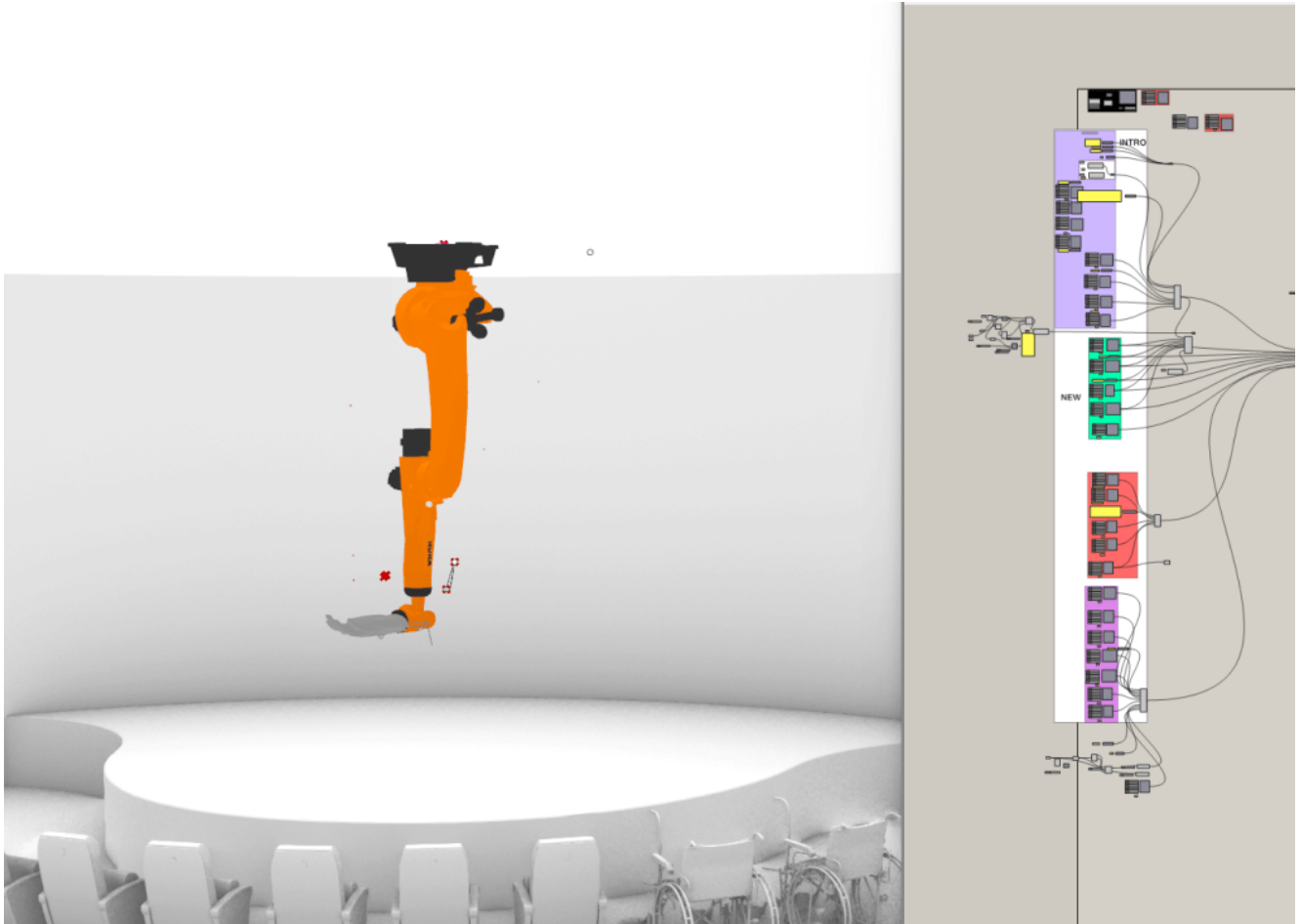
## IDEATION & DESIGN PHASE

The genesis of the Main Show was rooted in a desire to explore the delicate movements of the human hand and translate them into a captivating robotic performance. Collaborating with [Insglueck](#), a creative studio specializing in media art and exhibition design, the focus evolved into a genuine dialogue between the dancer and the robot. The choreography explored themes of tension, harmony, and the blurring of boundaries between organic and artificial life.

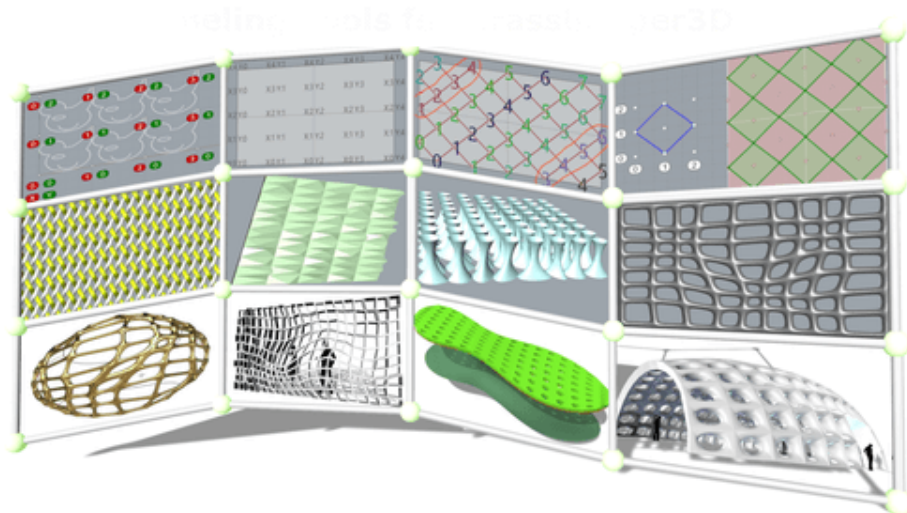


## PRODUCTION PHASE

Karl Singline's programming expertise was pivotal in bringing the Main Show to life. Using [Grasshopper](#) and [KUKA prc](#), he flawlessly translated the artistic vision into precise robotic movements.



The real-time feedback provided by KUKA prc allowed for experimentation and iteration within tight timelines. Safety was paramount, demanding meticulous programming and rigorous testing to ensure the well-being of the performer and the robot.



[See Also](#)

[PANELLING TOOLS FOR GRASSHOPPER 3D](#)

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## CHALLENGES & STRATEGIES

The project faced challenges ensuring safety, precision, and effortless collaboration between humans and machines. However, the collaborative effort of Insglueck, Nussli, Creative Robotics, and Karl Singline resulted in an award-winning Main Show. Notably, the performance was granted the Gold Award by BrandEx in the “Best Live PR, Event” category, showcasing exceptional achievement in the convergence of arts and robotics.

The use of Grasshopper and KUKA prc, among other tools, streamlined the processes, offering unparalleled flexibility and creative solutions. This prestigious recognition further underscores the groundbreaking nature of the project, exemplifying how technology and collaboration can transform the landscape of live events and performances.





In summary, the Main Show awarded Gold in the Best Live PR Event category at the [BrandEx Awards](#), was a dramaturgical highlight, presenting a visionary future where humans and machines coexist harmoniously.

The collaboration between the acrobat and the intricately programmed robot hand symbolized a transition to a shared future, perfectly encapsulating the Expo's theme of "Connecting Minds, Creating the Future." The success of this project stands as a testament to the limitless possibilities when creativity, technology, and collaboration converge.