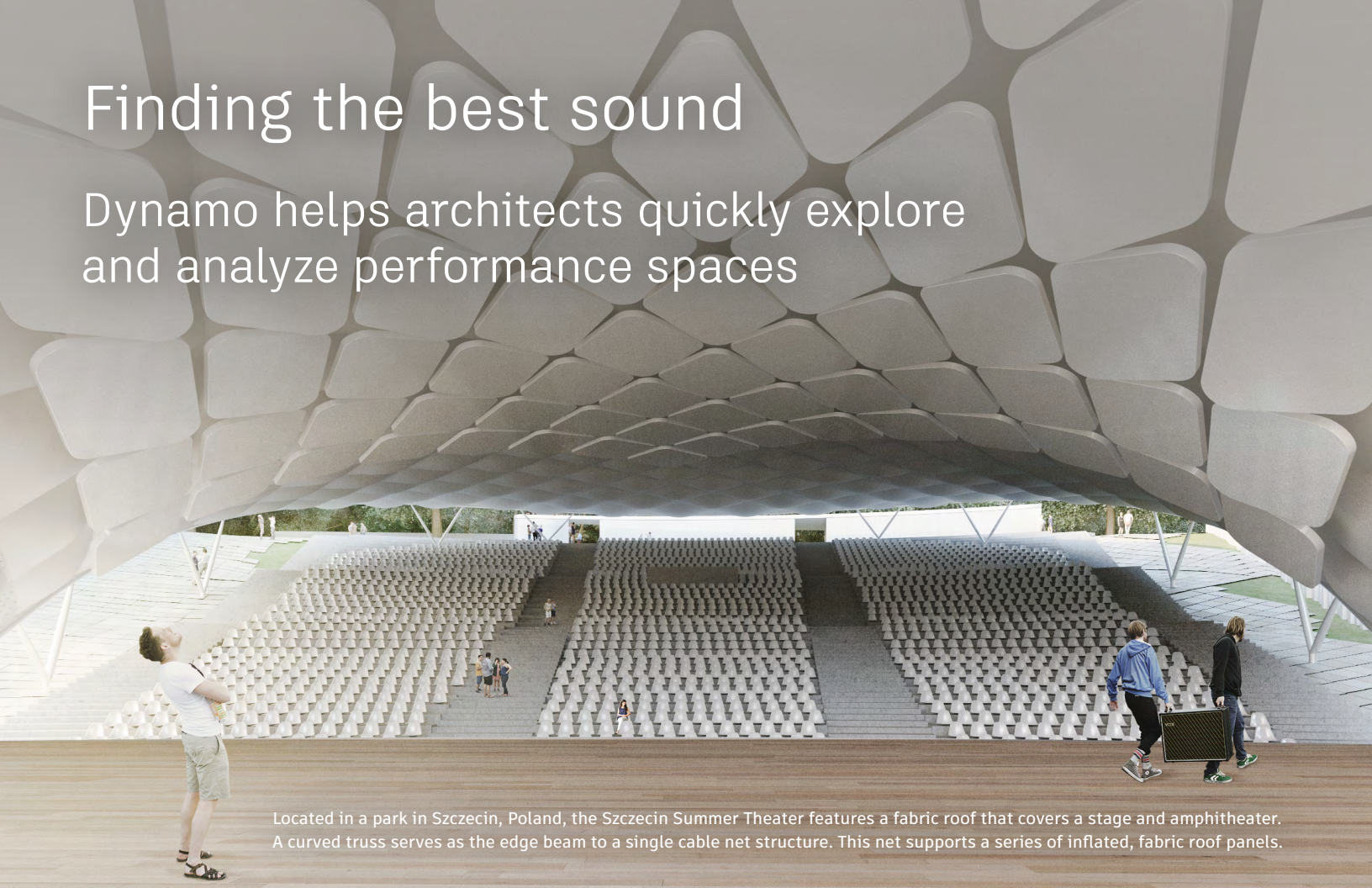


Finding the best sound

Dynamo helps architects quickly explore and analyze performance spaces



Located in a park in Szczecin, Poland, the Szczecin Summer Theater features a fabric roof that covers a stage and amphitheater. A curved truss serves as the edge beam to a single cable net structure. This net supports a series of inflated, fabric roof panels.



ABOUT THE FIRM

Flanagan Lawrence is an award-winning, London-based architecture firm that serves a broad range of public and private sectors. Its public works include performance spaces for the Royal Welsh College of Music and Drama, Royal College of Music, Sadler's Wells Theater Trust, Soundforms, and Riverside Trust. The firm was named the BUILD News Most Dynamic Architectural Firm-London for 2016.

WEDDING SOUND TO FORM

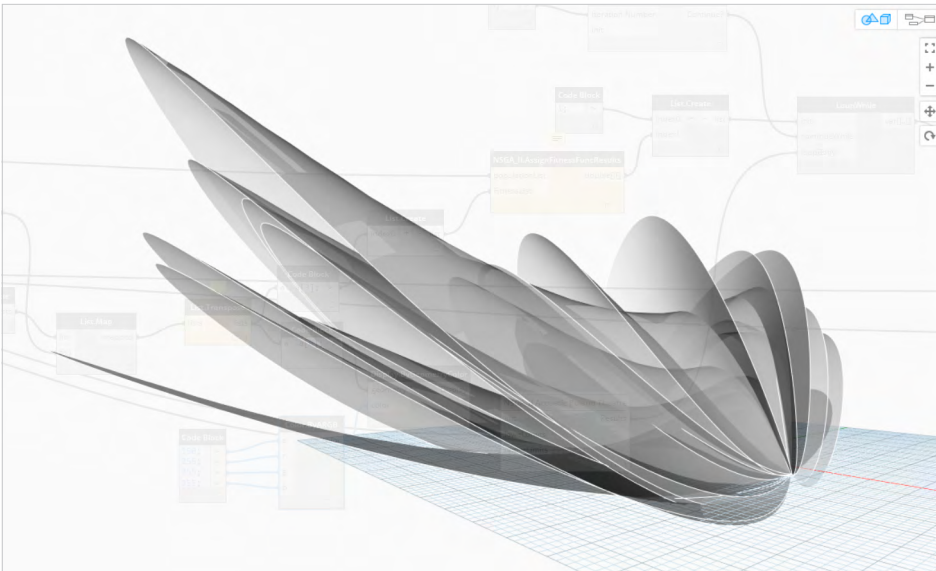
Performance spaces are among Flanagan Lawrence's specialties, with the firm's projects notable for bold designs that deliver outstanding listening experiences for audiences. The architects at the firm use the computational design power of Autodesk® Revit® with Dynamo programming environment to do more than just make these complex projects look better and come together faster. They use computational design to make them sound better, too.

Since incorporating Dynamo into their workflow, the firm's designers have been able to explore the relationship between form and sound in new and exciting ways. The Szczecin Summer Theater highlights how Dynamo helps the firm to deliver exceptional performance spaces. Using algorithms that help to account for the acoustic effects of everything from different instruments and styles of music to varying audience size, the team isolated the best options for the theater's form from the nearly infinite number of possibilities.



Dynamo captures your thought process and applies it to complex design requirements more automatically.

– MICHAEL HUDSON, associate director, Flanagan Lawrence



COMPUTATIONAL DESIGN IN ACTION

Flanagan Lawrence architects use Dynamo to create visual logic that enables them to explore conceptual designs and automate tasks. They design workflows that drive the geometry and behavior of design models. How does that really work? For the Szczecin Summer Theater, they responded to a competition brief in order to win the project. They were tasked with designing an outdoor theater that could be installed in the summer and removed in the winter, making weight an essential consideration. The shape of the theater needed to deliver exceptional acoustics too—so it had to be volumetrically stable.

The team defined the project parameters and created a basic concept. Then they used Dynamo to rapidly explore hundreds of possible iterations and zero in on a few of the best options. They came up

with a contest entry that actually proposed real solutions to the need for light weight and stability. Tangibly addressing—and resolving—the project’s challenge in their initial proposal, they won the competition.

NO PROGRAMMING EXPERIENCE NEEDED

Dynamo software delivers for Flanagan Lawrence on less groundbreaking tasks too. The architects can define the parameters of changes and then create a workflow to drive the changes automatically. So when they need to modify 700 doors on a residential complex, they can make the change in minutes instead of hours. The visual logic enables designers without programming experience to automate their own workflows. How easy is it? Only 3 people at the firm have programming experience—but more than 25 of the firm’s Revit building design software users turn to Dynamo to accelerate design tasks.



You don’t need programming experience to use Dynamo. We’ve found that people go from solving simple problems to exploring complex designs quickly. Visual logic makes it easy to capture the parameters of multidimensional designs. Depending on the complexity of the issues you’re studying, you can save hours, days, or even weeks.

– MICHAEL HUDSON
associate director
Flanagan Lawrence