

# That's Amare!

The Hague has a new multipurpose complex bringing together various art forms, necessitating a bespoke installation of stage technologies delivered by Trekwerk

Opened in September 2021, The Hague's Amare complex has already become a local landmark, building a reputation as one of the most prestigious multipurpose venues in the Netherlands. The flexible space, augmented by highly adaptable stage technologies from Trekwerk, can be used to host a whole variety of different performances.

Realising this prestigious cultural and educational centre required the design skills of multiple highly specialised companies, working together to achieve top-level acoustic, technical and creative solutions.

## Collaborative effort

The five-year construction project was handled by Cadanz with architecture partners NOAHH and JCAU. The technical installations in the theatre were designed and supervised by Theatradvies, and engineered, built and delivered by Dutch company BEO Trekwerk.

Trekwerk, BEO Staal and CueSupport are part of the BEO group, and are specialised in stage technology. The company offers design, engineering, production, installation, maintenance and 24/7 support services.

Amare is the home of the internationally renowned Nederlands Danstheater, the Residentie Orchestra and The Royal Conservatoire, bringing dance, music, theatre and art together for a large audience. The centre consists of four main halls, multiple rehearsal spaces and classrooms. The halls are acoustically separated – each with its own building foundation – so that



Another part of the Amare complex is a studio used for rehearsals and shows, which features a system of 16 chain hoists

they can all be used simultaneously without the disturbance of ambient noise.

## The art of technology

There were several important requirements for the modern stage technology; it had to meet the needs of both employees and national and international touring companies. In an all-encompassing project such as this, several professional disciplines are required to achieve ingenious stage solutions. Cooperation, transparency and knowledge sharing are

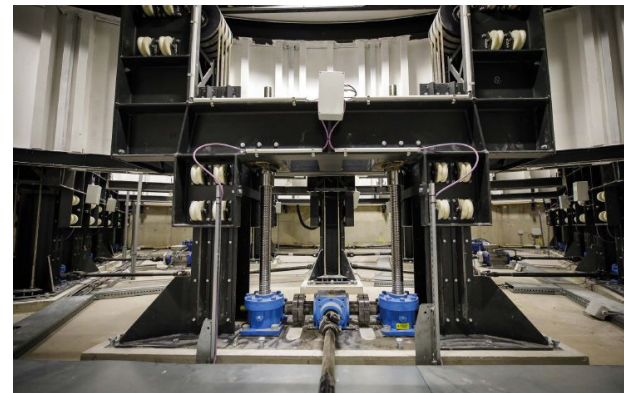
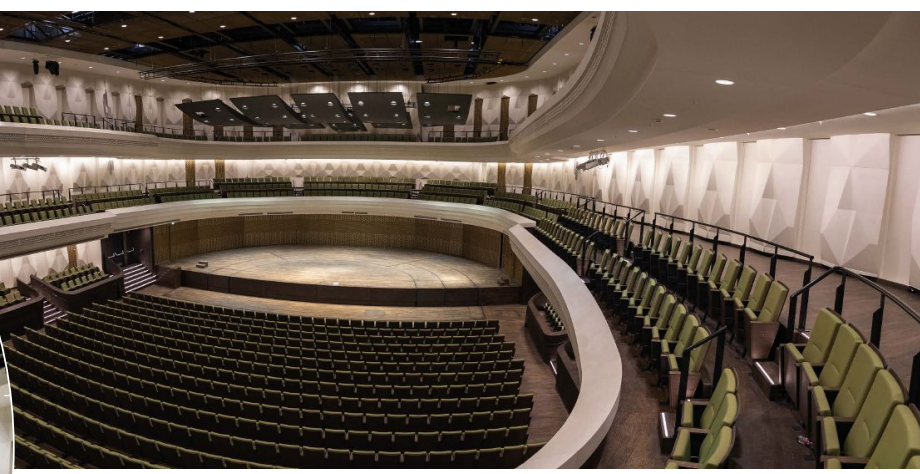
essential to realising shared ambitions.

The alignment of the consultants, general contractor and structural engineer ensured that the heavy stage equipment could find its place in the building without it compromising the architectural vision.

Trekwerk, having more than 20 years of experience in designing, manufacturing and installing the theatre machinery, was contracted by Cadanz and the city council. "The automated elevators, retractable bleachers, hoisting equipment and acoustic panels that Trekwerk made allow Amare to create an extraordinary stage experience," says Hugo van Hulst, technical director at Amare. "Trekwerk translated the theatrical design and objectives into a comprehensive set of stage machinery tailored to the building's design and the theatre's needs. Trekwerk was able to not only meet but also exceed our expectations in every way."

## The Concertzaal

Seating 1,500, the Concertzaal (Concert Hall) is the largest of Amare's main halls. Entering this hall is already an experience, thanks to the clever architecture, beautiful stage and intriguing colour scheme. Behind the scenes, a lot of work goes into designing such a hall. Each element is considered carefully to deliver the optimal sound experience. As it has to accommodate several music styles – such as classical, contemporary and pop – the hall is completely adjustable to fit the genre and audience.



Trekwerk designed the hoisting system for the 10 big acoustic ceiling panels to meet the stringent SIL3 safety level, which allows it to move while the orchestra is playing underneath. The character and direction of the sound can be adjusted to create an enchanting musical experience for the audience. Combined with the curved adjustable walls, the black acoustic panels give the hall a characteristic look, almost making the audience feel like they are on the inside of a musical instrument.

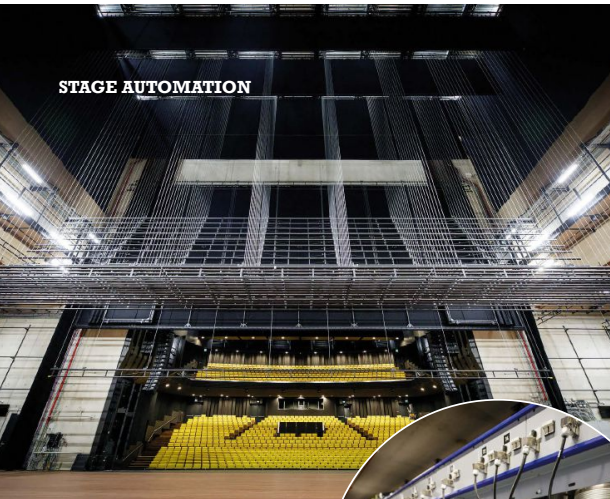
The Concertzaal's seemingly simple stage presented the biggest engineering challenge.

Left: The acoustic ceiling panels in the Concertzaal meet the SIL3 safety level

Top: The Concertzaal has 18 stage lifts for full adjustability

Above: A lifting mechanism under the Concertzaal floor

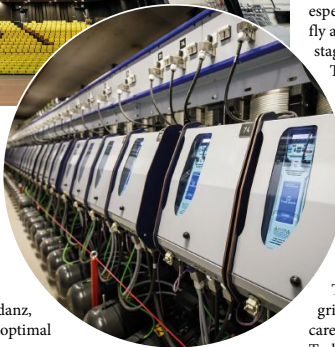
## STAGE AUTOMATION



The stage consists of 18 stage lifts, which can be fully adjusted in line with the performer's requirements. There was no space for a conventional guiding system for these lifts, so Trekwerk decided to develop a completely new lifting mechanism with an integrated guiding system. After hours of engineering, testing and consultation with Theateradvies and Cadanz, Trekwerk delivered a system that makes optimal use of the available space.

### The Danstheater

Performances in the Danstheater (dance theatre) can be enjoyed by 1,300 people. The hall can be used for a variety of theatrical and dance shows, as it is equipped with 84 theatre winches. The winches are able to move 500kg (0.5 tonne) or 1,000kg (one tonne) at 2m/s (6.6ft/s) and need to be safe, silent and reliable. Again, Trekwerk

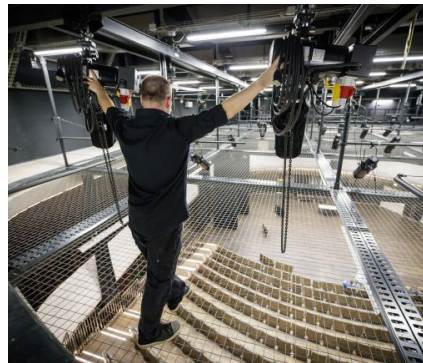


Top left: The Danstheater

Above: Drives for Amare's 1,300-seat Danstheater

Top right: A technician walks on the Conservatoire Hall's tension grid

Below: TNM is used to control the theatre technology



worked at the high SIL3 safety level. This is especially important as these heavy elements fly above people's heads. The fly loft above the stage is also home to Trekwerk's point hoists. The hoists were customised for Amare as a clever zero-fleet solution, and to enable the possibility of flying actors around the stage. Furthermore, the theatre hall is equipped with two big orchestra lifts.

### Conservatoire Hall

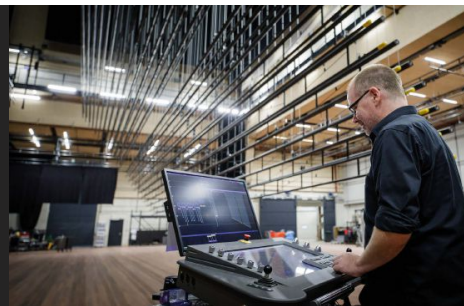
With a capacity of 600 people, the Conservatoire Hall is one of Amare's smaller halls. While it has an intimate atmosphere, it is still impressive.

Trekwerk provided a huge tension wire grid measuring over 400m<sup>2</sup> (4,306ft<sup>2</sup>). It is carefully designed and beautifully installed. Technicians can walk safely on this net of tensioned 3mm (0.12in) steel wire and the light of the theatre luminaires shines through easily. Moreover, the sound of an orchestra passes through the grid, helping towards the big acoustic volume. Above the tension grid, a crane beam system with chain hoists and six big adjustable sound panels are installed. ■

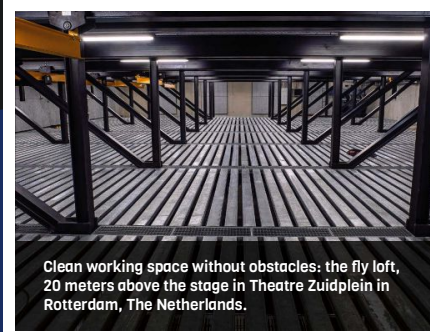
[www.trekwerk.com](http://www.trekwerk.com)

### A MULTIFUNCTIONAL SYSTEM

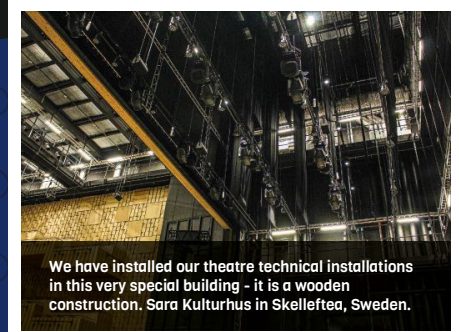
Theatre technology needs to be considered as a complete system, not in terms of separate products. The system at Amare can be compared to a huge robot extending over four different halls. This robot needs to be controlled by experts because there are strict safety regulations to consider. All of the halls at Amare can be controlled with one operating software: The New Machine (TNM). TNM is a renowned name in the international theatre industry. It serves as the heart of theatre technology. The concept is popular due to its easy-to-use operating interface. Being intuitive and easily adapted to each theatre, the TNM focuses on enhancing the communication between an artist and the operator, allowing for creative freedom. At Amare, the TNM controls the theatre technology in all four halls, allowing artists to create performances that will exceed their imagination.



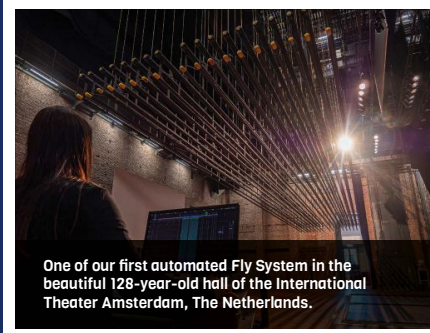
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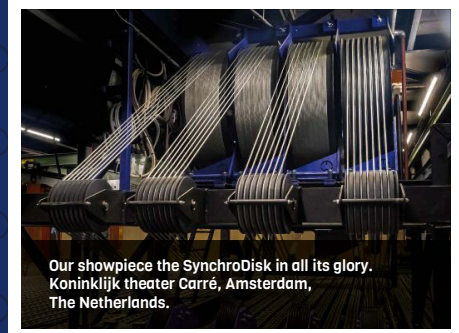
Clean working space without obstacles: the fly loft, 20 meters above the stage in Theatre Zuidplein in Rotterdam, The Netherlands.



We have installed our theatre technical installations in this very special building - it is a wooden construction. Sara Kulturhus in Skelleftea, Sweden.



One of our first automated Fly System in the beautiful 128-year-old hall of the international Theater Amsterdam, The Netherlands.



Our showpiece the SynchroDisk in all its glory. Koninklijk theater Carré, Amsterdam, The Netherlands.

## BEO TREKWERK REFERENCES

Having over 20 years of experience, this is just a selection of some of Trekwerk's (recent) projects. Having this experience, Trekwerk knows exactly how to make their client's wishes a reality, encouraging them to create beyond the limits of their imagination! For more information, check out the website.

[TREKWERK.COM](http://TREKWERK.COM)