

Media & Learning Congress 2024

20 June 2024

SHAPING THE FUTURE OF EDUCATION

Leveraging Innovative Technologies - Case Studies

Panasonic Connect Europe

Hilmar Salac

Panasonic
CONNECT



MEETING EQUITY

at Technological University Dublin



Why Should Organizations Prioritize Meeting Equity?

- **Meeting Equity** ensures that all teachers/students, regardless of location or working arrangements, have equal access to relevant and productive meetings and can participate easily and freely.
- It promotes a **diverse culture** by creating an atmosphere that makes both remote and in-person employees feel valued and included.



IMPROVE COMMUNICATION & COLLABORATION

BOOST CREATIVITY & PROBLEM-SOLVING

IMPROVE DECISION-MAKING

GENERATE MORE ENGAGEMENT

INCREASE STUDENTS/TEACHERS RETENTION

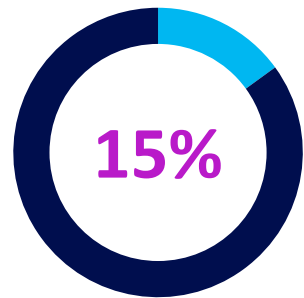
IMPROVE CAMPUS CULTURE



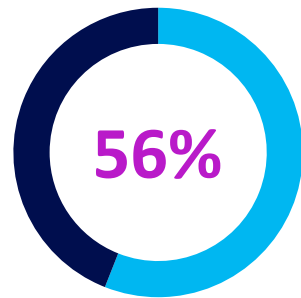
A lack of Meeting Equity

According to our polls, the biggest frustration is not being able to **see and hear everyone clearly**, followed by a feeling of not being heard and connection issues.

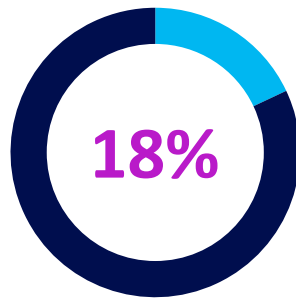
WHAT FRUSTRATES YOU MOST ABOUT ATTENDING HYBRID MEETINGS ONLINE?



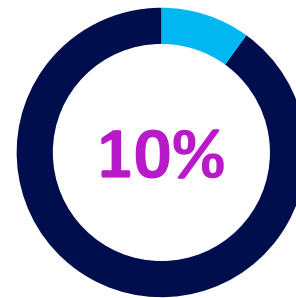
CONNECTING TO THE MEETING



NOT ABLE TO SEE/HEAR EVERYONE

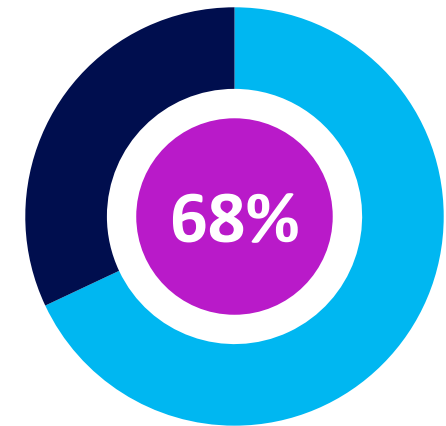


NOT BEING HEARD



OTHER

These frustrations also lead to people not fully contributing – with:



SAYING THEY PARTICIPATE LESS

Challenge

- Address the immediate economic and social damage caused by the pandemic and prepare for a **post-Covid Europe** that is greener, more digital, more resilient, and ready to face the future.
- **Foster collaboration** and ensure no student feels left out, whether in group sessions or participating from home, by using digital tools to facilitate communication and equal participation.



Requests

- Use the **technology** both in classrooms and meeting spaces for groups of 10-15 students.
- Enable teaching staff to give classes from **any suitable space** on campus, regardless of its current technology setup.
- Develop an approach that provides the necessary deliverables while prioritizing **user-friendliness** and minimal support needs.
- Ensure that **Microsoft Surface Pro** devices are used, and require Microsoft Teams certification for optimal compatibility.



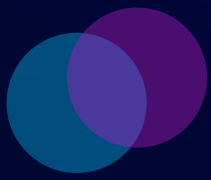
Technological solution

- Implementation of 55x **PressIT360**'s across campus.
- PressIT360 – 360° degree camera that make sure to give remote participants the **feeling like being in the room**.
- **4** cameras and **7** microphones.
- **5** different camera modes depending on your needs.
- **Microsoft Teams** Certified.

Why PressIT360?

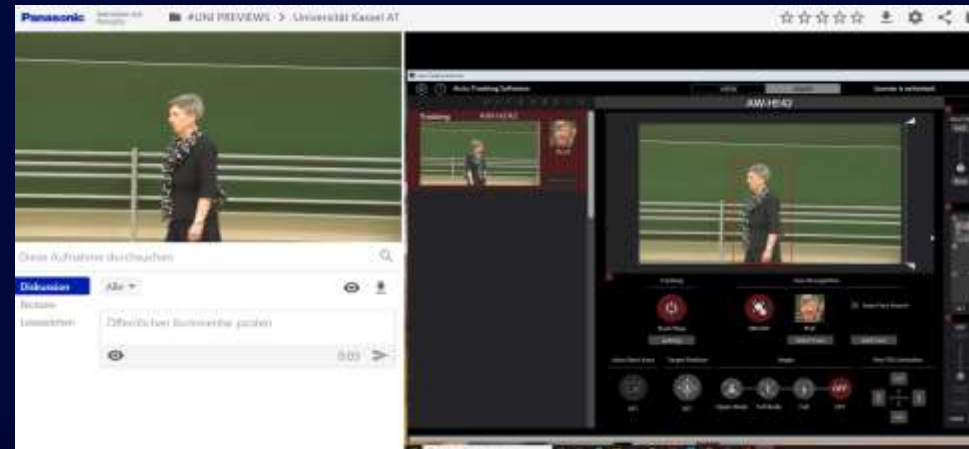
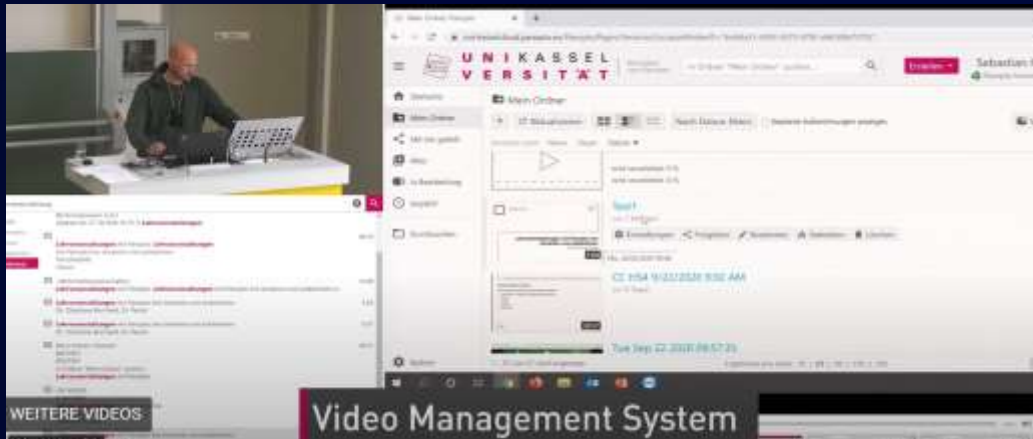
PressIT360 preformed best due to its **Plug and Play** nature.





Uni Kassel – Panopto and „Glass to Glass“ solution

- Fully integrated workflow
- Panasonic „glass-to-glass“ solution
- 50 Panasonic PTZ cameras (NDI)
- Panasonic Auto Tracking AW-SF200
- 25 Panasonic laser projectors
- Matrox MaeveX 6020 Remote Recorder
- Panopto VCMS solution



<https://youtu.be/snUgqWkHIUA>



AVOIP

and Mälardalen University Sweden



What is AVOIP?

Audio-Visual over Internet Protocol (AVoIP) refers to the transmission of audio and video signals via network infrastructure.

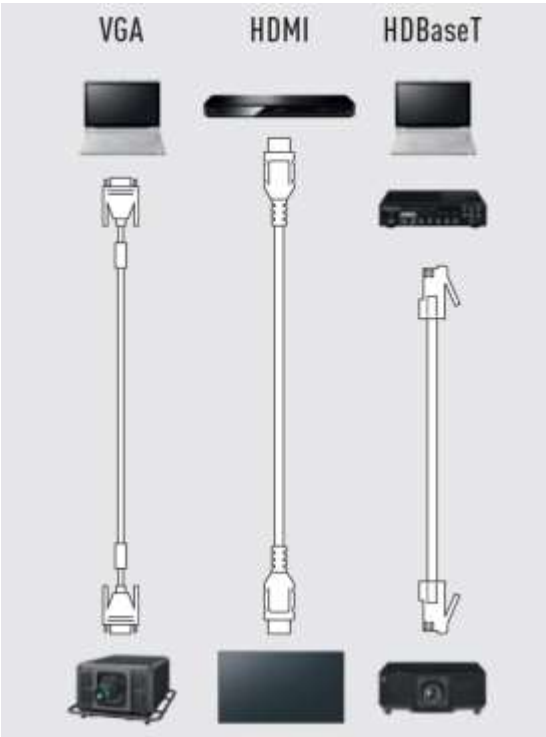
- This technology extends the capabilities of traditional **AV systems**, enabling easy, scalable, and flexible communication across devices and networks.
- AVoIP replaces proprietary solutions with standardized protocols, increasing **interoperability**, brings benefits in maintenance and opens up opportunities for AV system analysis.



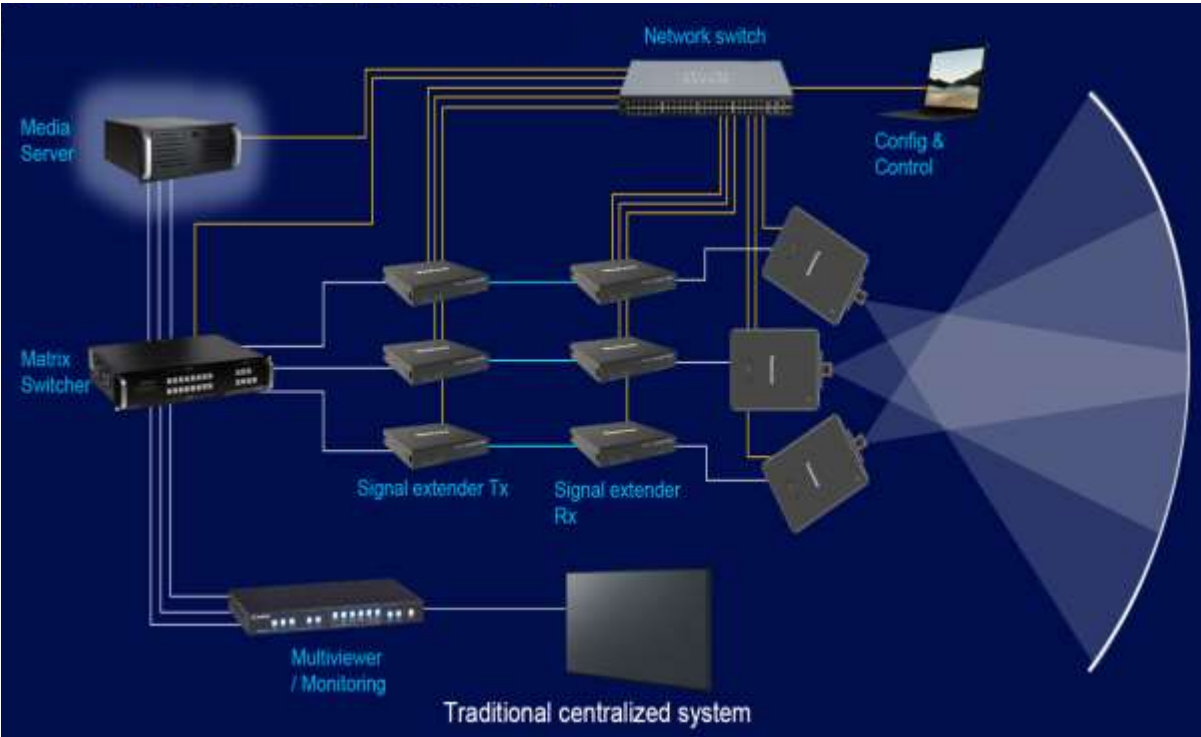


System complexity hindering flexibility

AV: TRADITIONALLY P2P



CONTENT DISTRIBUTION TRADITIONAL



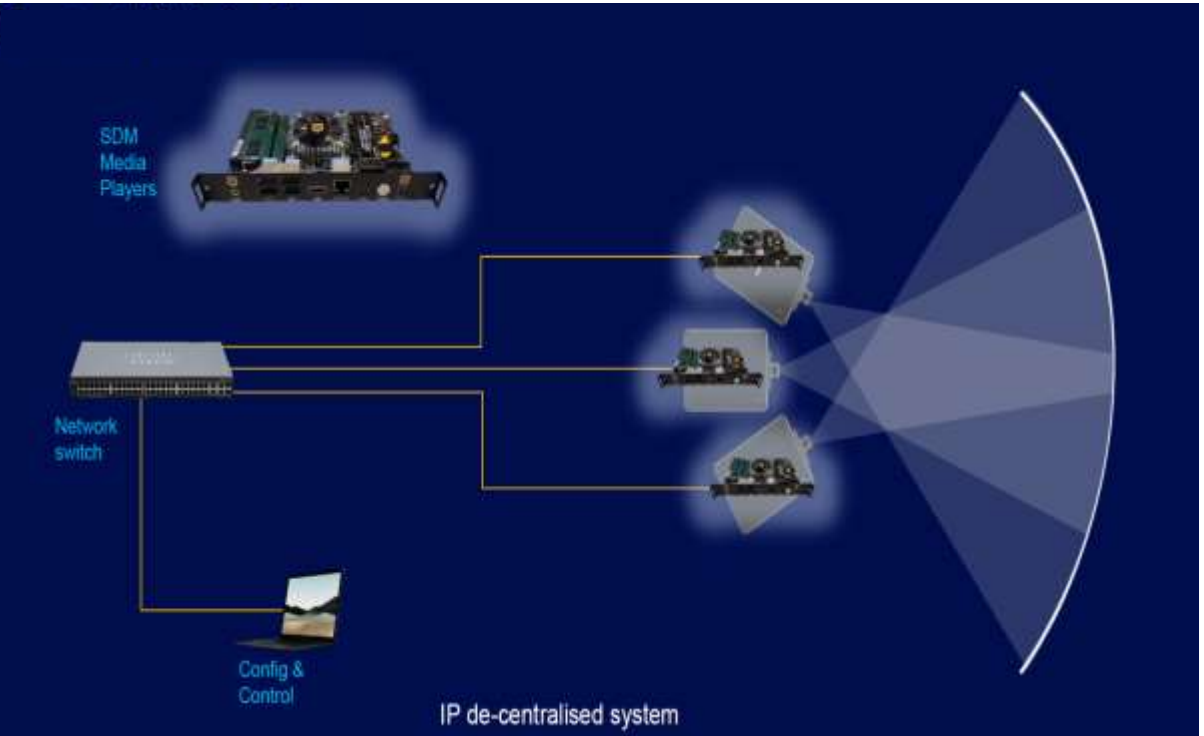


Free flow of content from anywhere to everywhere

IT: MULTI X MULTI CONNECTED



CONTENT DISTRIBUTION



The benefits of neat integration

- **UNPARALLELED FLEXIBILITY IN CONNECTIONS**

Eliminates the physical limitations of traditional AV setups, offering unmatched flexibility in connecting sources to displays.

- **UTILISATION OF EXISTING NETWORKS**

Leveraging existing network infrastructures eliminates the need for costly dedicated AV hardware and cabling - reducing upfront investment.

- **SIGNIFICANT REDUCTION IN SETUP COSTS**

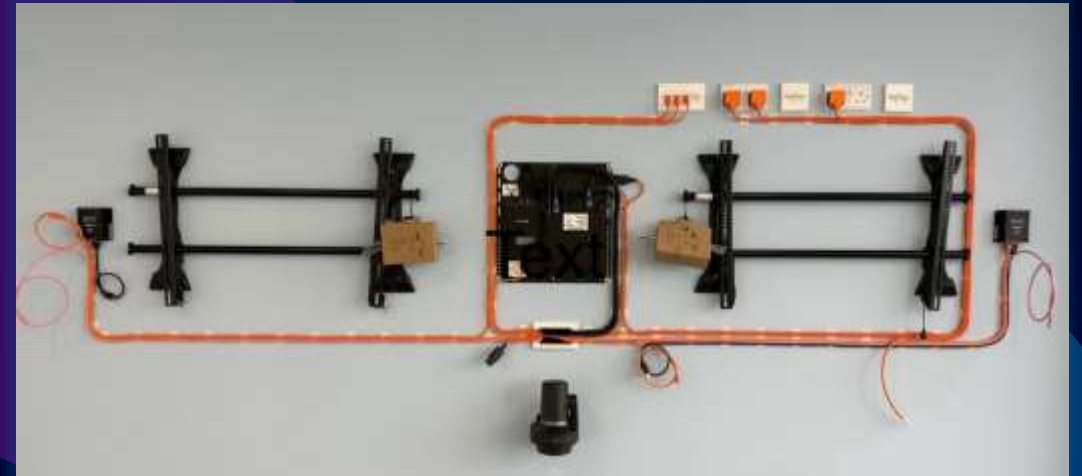
The ability to use pre-existing networks streamlines the setup process, significantly reducing the costs associated with labour and materials.

- **LIMITLESS TRANSMISSION CAPABILITIES**

AVoIP enables the limitless transmission of image and audio content, ensuring high-quality AV experiences can be delivered anytime and anywhere.

- **ENHANCED OPERATIONAL EFFICIENCY**

Transforming how events are delivered and experienced with the scalability to accommodate events of any size.



- Mälardalen University (MDH) is one of Sweden's largest Higher Education Institutions.
- It has almost 17,000 students enrolled in courses and programmes.
- MDH specializes in Business, Health, Engineering, and Education.
- The university is known for its internationally recognized research facilities.



Challenge

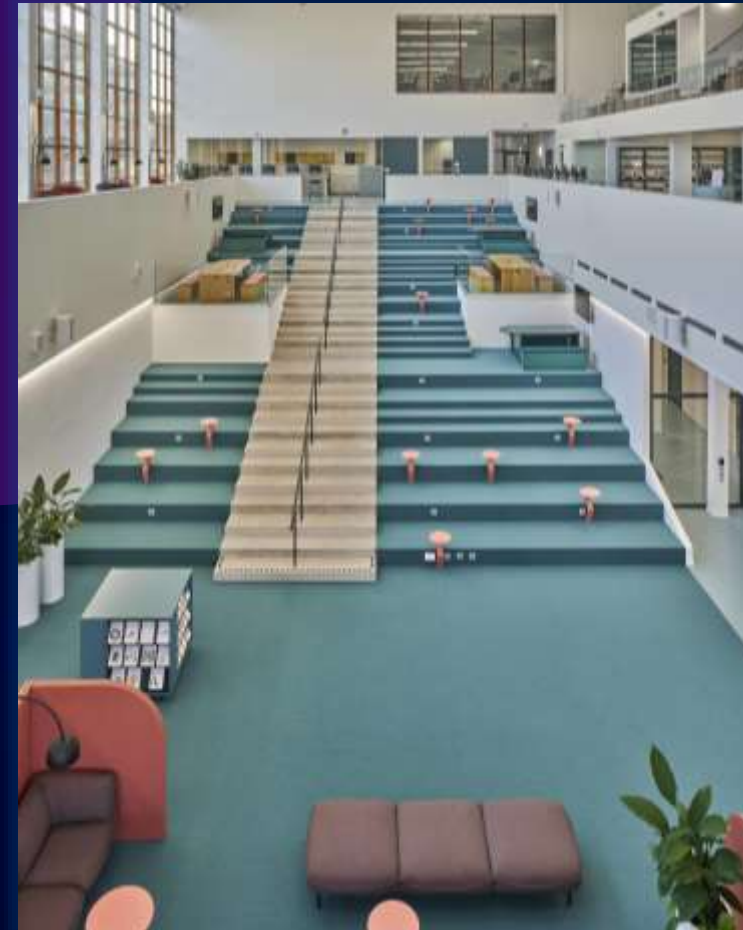
- MDH planned to bring together its **two existing locations** into one purpose-designed super campus.
- The facility would be new and designed to cater for the future needs of education with a **forward-thinking approach**.
- The new infrastructure has around **140 classrooms** and meeting rooms.
- These include five large auditoriums, traditional classrooms, Active Learning Classrooms, computer rooms, group rooms, and meeting and conference rooms.



Solution

AVoIP as key technology

- A future-proof solution was implemented: a **single AV-over-IP** network.
- This network is based on **Crestron** and its **DM-NVX** technology.
- It carries all **equipment signals** for image, sound, and control over a single network.
- This approach avoids the need for **extensive cabling** throughout the facility.



Blended Learning & with full control

- **Blended learning** combining in-room presence with Zoom access.
- All **AV equipped** hooked and controlled on the network.
- IT support team can monitor remotely **2000+ IP** connected devices.
- **Proactively identifying** issues and implementing solutions.



REMOTE MONITORING
and **Goethe-University Frankfurt**



What is Panasonic's Early Warning Software?

Monitors projectors and displays through intranet and detects or predicts abnormality or symptoms of trouble. Minimizes downtime and saves time and costs.

KEY FEATURES

- Up to **2048 devices** can be monitored remotely from PC or tablet web browser.
- **Record the operating conditions** of each device and, based on the operating hours, it can predict when consumable parts will be required, regular periodic cleaning will be necessary, and non-consumable parts will need to be replaced.
- Advance notice of **required maintenance**.
- **AI and big data** based prediction of potential future failure.
- **Proactive response** before an issue happens – manage uptime vs. handling downtime.



**ENSURE UNDISTURBED
LECTURE AND CLASSES**



Challenge

- **Challenge back then:** How to monitor lamp based projectors and their lamp runtime, temperature etc.
- **Now** with switch to laser projectors the replacement cycle needs to be maintained and monitoring of 450 rooms in case of failure and replacement of projectors.
- Already using the Software since **10 years**.



Solution

Early warning software
for easy maintenance and
report of replacement.



IMMERSIVE MEETING ROOM

and and LIFE Campus / Denmark/Science on a Sphere



Benefits on immersive room

Enhances Learning Experience



+70%

Of the time achieving higher scores in training.

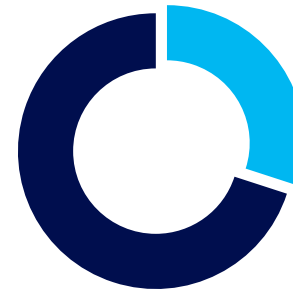
Higher Retention with Multisensory Learning



+10 / 15%

Improve in knowledge retention.

Promotes Collaboration and Communication



+30%

Boost in employee productivity.

Improve Engagement with Personalized and Adaptive Learning



+30%

Higher employee satisfaction.

Benefits on immersive room in education

Vs VR headsets

- **Immersive rooms** can accommodate multiple users simultaneously, fostering collaborative experiences and social interactions.
- Unlike VR headsets, immersive rooms eliminate the **risk of motion sickness** or **disorientation** due to the stationary physical environment.



LIFE Campus / Denmark

- LIFE Campus is a **visionary national learning center** in an impressive new building nestled in the old hunting grounds in Lyngby, north of Copenhagen. A building designed specifically to promote children's interest in the natural sciences.
- In the heart of LIFE Campus you will find northern Europe's **largest 360-degree auditorium**, equipped with 11 Projectors.
- Fully immersive space with **360-degree projection** on all walls.

Christine Antorini, CEO of the LIFE Foundation, explains:

"We can show children and young people scientific phenomena in completely new ways - from extreme weather as a consequence of climate change to atoms or lunar landscapes. The multi-room gives us absolutely extraordinary opportunities to support our teaching process visually and auditorily."



<https://www.inavateonthenet.net/case-studies/article/the-campus-thats-changing-how-stem-subjects-are-taught-in-denmark>
<https://www.archdaily.com/1005669/life-campus-vilhelm-lauritzen-architects>



Science on a Sphere

- **NOAA's Science On a Sphere®**: is a room-sized, global display system that projects visualizations of planetary data onto a six foot diameter sphere to help illustrate Earth System science to people of all ages.
- NOAA's Science On a Sphere® uses **computers and projectors** to display visualizations of planetary data on a sphere, analogous to a giant, animated globe.
- Powerful tool for **understanding climate change** and it's impacts to European schools, science centres and enviromental education.
- **Explore** real-time global and cosmic events.



Science on a Sphere



- SOS has significantly increased student **engagement and participation** in class.
- **Deeper understanding** of complex scientific concepts such as climate change, ocean currents, and planetary movements.
- **Facilitated collaborative learning** and group projects. Its interactive nature encourages students to work together to analyze data and solve problems.
- It aids in achieving **educational objectives** related to data literacy, critical thinking, and spatial reasoning.
- Enhanced **comprehension and retention of information** among students.
- Many students report that SOS makes learning feel more **real and tangible**, helping them to better understand and remember the material compared to conventional methods.

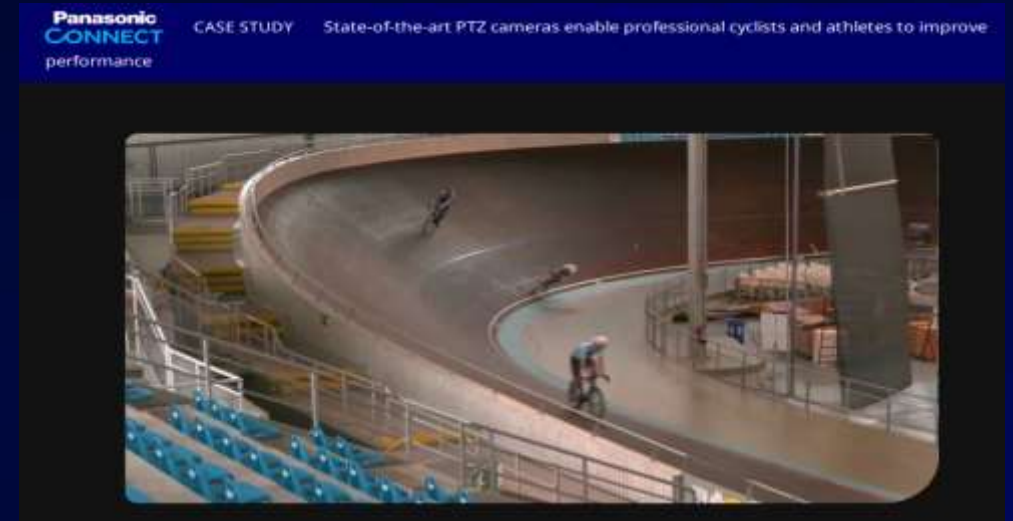


Challenge:

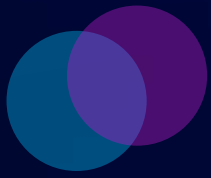
Lack of robust cameras and resources for high-quality athlete performance footage. Insufficient additional manpower and tools for coaches. PTZ cameras enable high-quality, high-speed footage through automated processes.

Solution:

Panasonic 4K AW-UE150 and AW-UE100 PTZ cameras were chosen for their adaptability and precise control. These cameras can be rotated horizontally (pan) and vertically (tilt) to cover different areas. The size of objects in the video frame can be controlled by adjusting focal distance and zoom.



State-of-the-art PTZ cameras enable professional cyclists and athletes to improve performance | Panasonic Connect



Challenge:

a lively and comprehensible image of the lecture.

The university's existing system included a tracking solution and a camera from another manufacturer.

Control was limited to a touchpad, lacking intelligent tracking functions.

The system failed to provide a lively and comprehensible image of the lecture.

Solution:

Gendo GmbH installed Panasonic's AW-UE40 PTZ camera with Tracking Master's intelligent camera tracking.

This setup enables the university to record lectures in high quality.

The solution meets current standards of hybrid teaching.



Presenter



- Hilmar Salac - Higher Education Business Development Manager
hilmar.salac@eu.panasonic.com
- <https://www.linkedin.com/in/hilmarsalac/>

Panasonic
CONNECT

THANK YOU

Media & Learning Congress

2024

June 20 2024

Panasonic Connect Europe

Hilmar Salac