

Smart spaces for a sustainable future

A guide to designing learning environments
around hybrid AV-technology

HOMEWORK

△ p. 30-32
○ CHAPTER 2
□





Introduction

The professional landscape has changed permanently as the world moved into a new chapter in hybrid working solutions. Working and learning in the 2020's has become less and less dependent of time and place. Hybrid learning brings new kind of requirements to the technology used in schools. Not only does it need to be simple and efficient to use today, but it should be able live up to the coming challenges of tomorrow.

This new era challenges students and teachers in new ways as the traditional classrooms are slowly but surely transforming into multifunctional spaces that support remote learning. Traditional face-to-face meetings are being complemented with an ever increasing amount of interactive communications. This is why flexible and futureproof solutions are no longer only desirable, they are vital.

The value of efficient study time

Imagine spending 5 minutes of every 45 min lecture struggling with technology. It's not only frustrating, but it significantly reduces the actual time spent on learning. If this was to occur every day, then we could be in a situation where a 9th grader would have studied some 10% less than their peers, simply due to inefficient communication technology. Over the duration of a student's studies this could equate to almost an entire year's worth of missed study time.

Over 10% of valuable studying time can be lost when using non-efficient communication technology



Evolved AV solutions and data sharing

When talking about information technology in general, the way we provide, process and share information and data has changed dramatically. Information is shared in a myriad of ways and accessed instantly.

We are on the verge of knowledge all the time

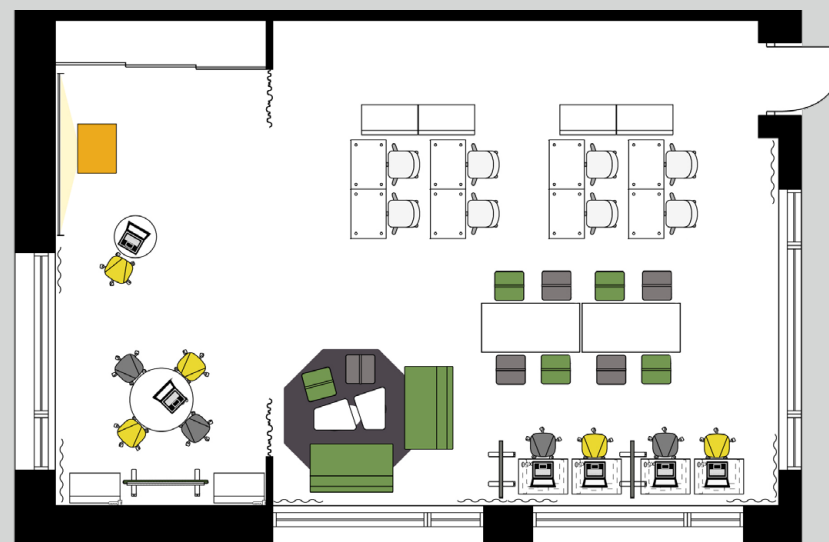
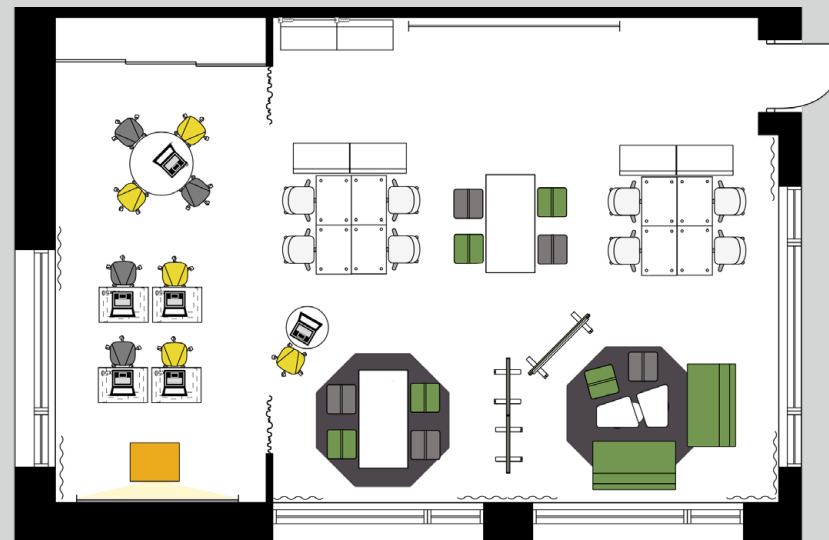
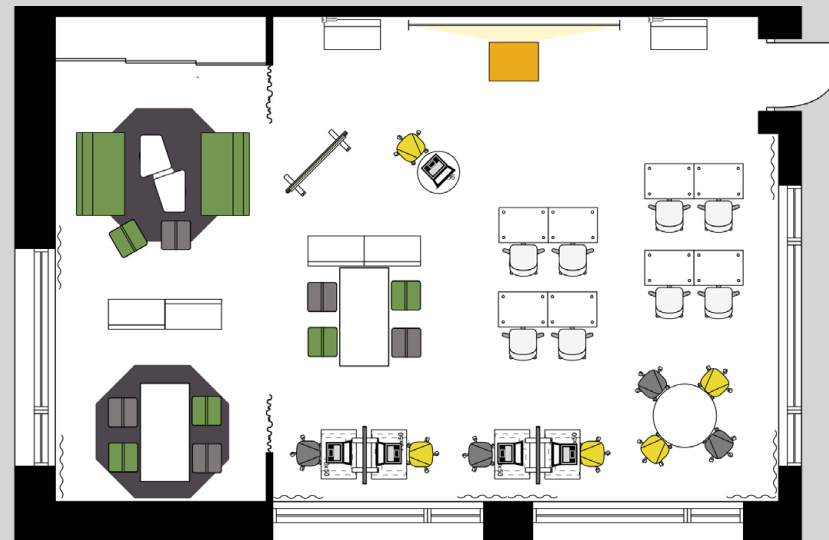
This has naturally created new demands for AV solutions as well. In order for modern AV products to keep up with the times, it's imperative for them to be capable of enabling hybrid working.

The education sector is already familiar with the ideology of designing spaces specifically for information sharing. When designing school buildings, architects must be able to identify the spatial solutions that support the pedagogical objectives. As knowledge sharing is the main function of these spaces, traditionally one of the key challenges facing designers has been how to successfully integrate AV-technology into the structures and rooms. However, with the evolving times the adaptable and flexible use of these spaces is more important than ever before, and fixed AV solutions are becoming a hindrance or straight out obsolete.





Same space, three different layouts



The benefits of adaptable technology

As a viable alternative movable AV-technology frees designers from the time-consuming process and constrictions-in-design caused by installation and cabling planning. Movable AV solutions and products have the added benefit of increasing the utilization rates of individual spaces. For instance, presentations and AV dependent meetings are no longer limited to a single room or space – instead, movable AV-technology can transform any space into an efficient working environment with up-to-date and simple data sharing and teleconferencing capabilities.

Movable AV products can vastly improve the utilization rate of a given space

Movable AV products should be flexible, cost effective and upgradable. This obviously is a tall order and sets new and stringent requirements for this new-gen AV-technology. To ensure the usability of new tech it must also be easy-to-use, and its appeal should not be limited to the innovators or early adopters, but rather be something that can be learned in an instant and is integrated into daily use by all adopter categories. Also, when dealing with divergent interfaces, the technology must support any device without additional software installation or troublesome docking stations.



The Finnish company:
H&M Architects



H&M Architects was founded in 1994 when the two well established architects, Seppo Markku and Anneli Hellsten combined their considerable experience in their first joint project of designing a school. It was an instant match as both parties were stout advocates of space design based on the changing ways we share and process knowledge and how to design buildings that support these needs.

Their innovative approach was an instant success and perhaps partly responsible for some of Finland's success in the international PISA tests in the years to come. At present, the company employs 10-15 designers and specializes in school design and creating spaces that focus on activities for young people and children.

**Flexible technological solutions are desperately needed
in order to enable dynamic learning environments**

Throughout their journey they have come to understand that school buildings of today are no longer the unchangeable cradles of knowledge, but rather dynamic learning environments, which must evolve at breakneck speeds. Schools are places, that not only teach and share information, but rather innovate and generate new data and practices, which is shared globally.



CASE Kailas Tallo:

A place to support imaginative learning and living for the generations to come

Kailas tallo is a new kind of community centre located in the heart of the City of Heinola, Finland. The centre consists of a pre-school and a primary school for a total of some 400 students, and a day care centre for 80 children, a commercial foodservice kitchen and a multifunctional community sports centre.

The key philosophies in planning the Kailas-tallo were conversion flexibility and the ideology to support communication and effective e-learning. Modern schools face new kind of challenge that comes from rapidly changing group sizes as this often means there are insufficient capabilities of efficiently supporting the needs of distance or hybrid learning models in the available spaces. Where a certain space may be perfect for a hundred students this week, with its fixed AV-technology installed, but how effective is that same space in a month when there are three cohorts of thirty students each learning a different topic?

Kailas Tallo is planned to serve children and people in general during their entire lifespan regardless of age. It is constructed with walls and structures that can be dismantled and rebuilt to match the changing needs. Movable technology enables data and knowledge sharing audio-visually in any space with a flat light-coloured surface.

Case: Helsinki Education Hub

Learning without borders

If you had your teacher and classmates on the other side of the world, would you consider an efficient learning experience to simply be somewhat of a mission impossible? We don't and neither does the curious and innovative people of Helsinki Education Hub. With the help of technology and open-minded students and teachers, learning and interactive communications are possible, even from Helsinki to Beijing.

"How much do we use Artome M10? All the time! It is so simple to use with remote or on-location meetings. We had a pop-up school here related to Beijing Design Week in September 2021 and the teachers of course came a bit early to see how the technology works and does it need any additional downloads or software to support presenting. They were surprised on how easy it was - just plug a HDMI-cable to the laptop and you are good to go."

- Ulla Hemminki-Reijonen, Community Manager of Helsinki Education Hub.

The ease of use was experienced by 8th graders of a primary school in Helsinki. The students were able to meet and greet their partner school's students in Beijing. Artome M10 enabled a flexible experience for remote and live communication with an integrated camera and wireless microphone. The tomorrow of agile communications is already here.



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