

The last display wall you'll ever need

In these days of economic uncertainty, one of the biggest dilemmas management faces is the decision between cost-cutting and investing more for better returns. The first instinct is usually the former, but investing usually ends up more rewarding, as JAMES CHAN observes

How best to design and upgrade a Traffic Management Center's (TMC) display infrastructure is a tough decision to make. The solution to such a dilemma is to be given the ultimate option of a guaranteed smart investment that is bound to return its value over time. Imagine for a moment, that you can say this major design or upgrade for a display wall or display board is truly the last display wall you'll ever need to do.

As you modernize your TMC into the realm of true Intelligent Transportation Systems (ITS), sorting through the latest and greatest technology is more than most TMC managers signed up for, and the thought of having to do this every few years is daunting. But with display technology evolving so fast, with bigger and better systems, keeping up with everything is not just a challenge, but it is the key to staying competitive and staying ahead of the curve.

Display manufacturers recognized this dilemma and have engineered a true solution based on "scalability". Though it sounds simple, it would be impossible to do with low quality products and lack of choices. Now, new display walls using rear projection cubes incorporate modularity and take scalability to a new level by offering choices of display size, screen type, resolution, input types, light sources and maintenance access.

The days of display manufacturers deciding what options your display wall consists of are over. Newer walls that are built with modular and scalable components offer a-la-carte options for you to pick and choose how your display wall is built and equipped. With the help of experienced consultants, TMCs can now select the components to build their walls based on their specific requirements. When these requirements change or a TMC outgrows its display, an upgrade will only be on a component level and not entail an entirely new installation.

Invest and reap

A modular display wall enables flexibility and scalability. As your needs change, these choices can change with them without having to revamp the underlying infrastructure you have built. TMCs can integrate the display wall system with the framework that fits their needs best today and then later choose to upgrade to other more efficient light sources or higher resolutions or even both. This turns the display wall into an investment that can be used for multiple generations without compromise. Imagine being able to use the framework of your display wall for 10+ years of 24/7 operation and as technology grows and your needs change, the display wall stays the same, yet you can easily upgrade its internal systems to get new optical engines with more efficient light sources, higher resolutions, dual lamp systems, among many other choices.

"This turns the display way into an investment that can be used for multiple generations without compromise"

Screen + cabinet + optical engine = custom display wall

At its most simple form, a rear projection cube consists of three basic components: a screen (the display wall surface that is seen by the user), the cabinet (the metal skeleton of the display wall) and the optical engine (the projector and "brains" behind the screen that generates the display). In the past, these three pieces were so integrated that mixing and matching these components was

virtually impossible to do. They were traditionally decided by the manufacturer and the TMCs had to settle for what was available, pre-configured and built together.

Now, with modular design, these pieces can be chosen by the TMC. Factors ranging from available space, number of users, ambient lighting of the room, input connections and the TMCs inclination towards one light source or another will all impact what components are chosen, so this highly customizable display wall allows TMCs to choose the most ideal solution for their needs and budget.

Control Room Technology

Choices, choices, choices

This simple idea of modularity transfers the power of choice to the customer. Display walls now become more than simply flexible to truly customizable. From input cards and color wheels to brightness levels and maintenance access, now you can configure the display to be exactly what you need; nothing more, nothing less.

Input cards

Input cards determine the input connections that connect your cameras, data feeds, and computers to the display wall cubes. This is one of the most essential pieces of your display wall choice. If your older display wall only supports analog inputs, but your newer cameras output digital signals, signal converters may be necessary for the wall to display properly. With modular design, if you need multiple digital inputs, you choose your suitable input cards. If you need to daisy chain the displays together, you simply add on that daisy chain input card. Simply add on and take out these input cards as needed.

Color wheels

Different color wheels provide different color and brightness levels for the display wall. The color wheel is the part of the cube that literally, generates the "color" to display. Choosing the right color wheel for your display wall is crucial since vital decisions will be made off of what's being displayed, settling for the manufacturer's "standard color wheel", is no longer an accepted way of choosing options.

Brightness levels

Getting more for less is always a good way to justify upgrades and major purchases. Displays are often treated as a short-term investment because of their useful life span. With new rear projection display wall cubes where you can choose the light source, lamp type, and brightness levels to fit your needs, you have a wide option of operating times ranging from 10,000 hours to over 60,000 hours. Your TMC can go from over a year

of 24/7 operation to over six, just by changing your optical engine! That is the true beauty of modularity. You choose the components that fit your needs and reap the benefits for years to come.

Maintenance access

Depending on the size of the TMC, space inside can get cramped and trying to load big, bulky, rear projection cubes doesn't necessarily help. However, having choices between front or rear access maintenance displays can help save space.

Front access display walls can be pushed with the back of the display completely flush against the wall. The display opens from the front and virtually all of the maintenance can be performed from the front, freeing up anywhere from 2-10 feet (0.66-3.1 m) of space that would otherwise have been needed for rear access to the cubes.

In larger installations where the video wall is integrated into the architecture and structure of the building itself, rear access display cubes are typical. These displays offer the same features as front access displays, but with maintenance performed from behind the display wall.

“Getting more for less is always a good way to justify upgrades and major purchases”

State-of-the-art-within-budget

Modularity helps customers stay current with new technology without having to undergo major work. Upgrade and refresh your TMC as often as your budget permits. As new technology comes to the market, upgrades can be easily planned and budgeted for. Having to change a display wall every 5-10 years is both cumbersome and a financial nightmare. With new modular display walls, the display wall structure can stay as long as it's stable, and upgrading or changing its internal components is all that's needed. This allows your display wall to recover your investment and pay for itself long before you need a completely new one. **TH**

James Chan is Senior Director, Product Marketing at Mitsubishi Digital Electronics America's Presentation Products Division and can be contacted via email at jchan@mdea.com