

The Engineer's Present

whitepaper & case study



Murata Machinery USA has installed over 3,000 automated storage and retrieval systems (ASRS) for industries as diverse and complex as aerospace, automotive, and electronics.

But Murata was looking for more. Specifically, the company wanted an impactful and influential way to present the value of their integrated ASRS systems to prospects with a significant “wow” factor.

Introduction

It's no secret that many engineering and operations teams dislike creating a "dog and pony show" to get initiatives funded. However, one of the great frustrations technical teams continually face is finding a way to translate important technical ideas and concepts effectively, particularly when they are presenting to an audience that doesn't live in the technical world.

Concepts such as integration and symmetry, which may be absolutely critical to receiving approval or funding, risk being misunderstood, or worse, dismissed as unworthy corporate speak when they are not communicated well.

Murata Machinery USA, which has installed over 3,000 automated storage and retrieval systems (ASRS) for industries as diverse and complex as aerospace, automotive, and electronics, wanted a more impactful and influential way to present the value of their ASRS systems to prospects. The options included:

1. AutoCAD, Single-line Images
2. Static "Paper Doll"
3. 3-D video illustration

Getting Visual

It was a given that the Murata project team would use attractive visuals to present their case for a multiple warehouse and distribution system to a prospective customer. The team could certainly create engaging four-color illustrations and 3D images.

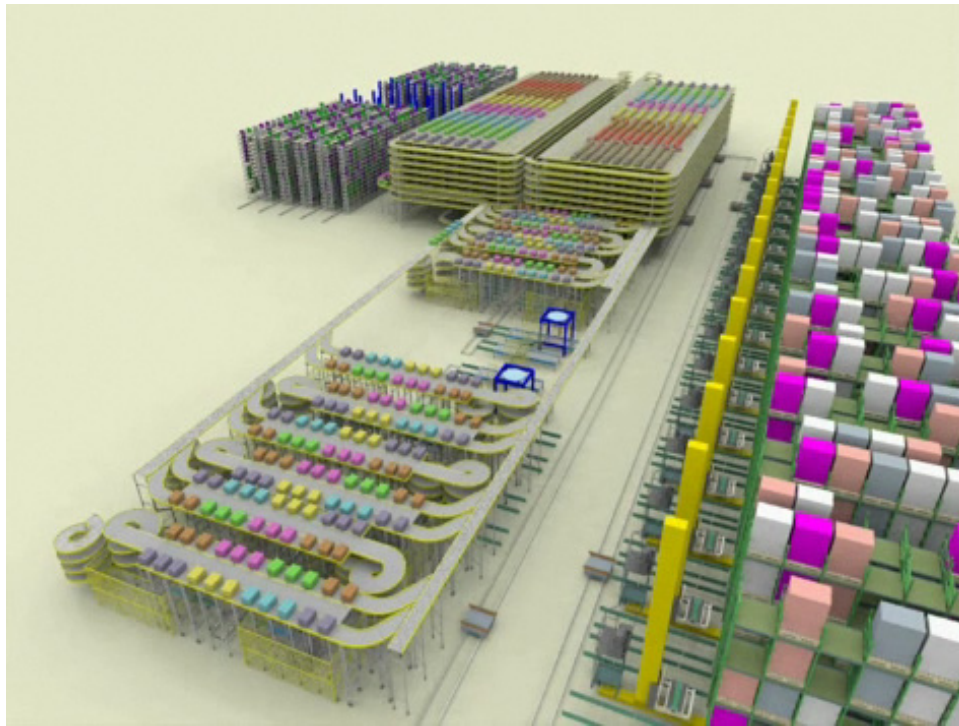


FIGURE 1: HOW DO YOU VISUALLY REPRESENT A 6-STAGE, INTEGRATED ASRS OPERATION?

All in the Integration

Paper Dolls and 2D layouts certainly have their applications. However, the true value the Murata team wanted to communicate was the seamless integration of six complicated subsystems working together.

One possibility was to create a storyboard of connected images, but the team found that approach lacking. The decision was made to place a premium on moving parts in 3D not only to capture the integration value but to create a real “wow” factor for viewers.

A Star Wars/Lucas Films Effect

When George Lucas wanted to capture the drama of the spacecraft like the Millennium Falcon for *Star Wars*, he flew a camera past a fully-built 3D model to capture details and movement. In the process, realistically-scaled images were created that thrilled audiences.

Murata called on the E²M/Polytron team to use Demo3D to create their own brand of drama with the same impact.

In this case, instead of imperial fighter craft, the team created tracks, pallets, and models of all ASRS systems and equipment in a virtual space which was filmed with a virtual camera.

Is This Real?

The effect was a comprehensive, fully-automated representation of an integrated ASRS operation. The system included receiving and storage of palletized loads -

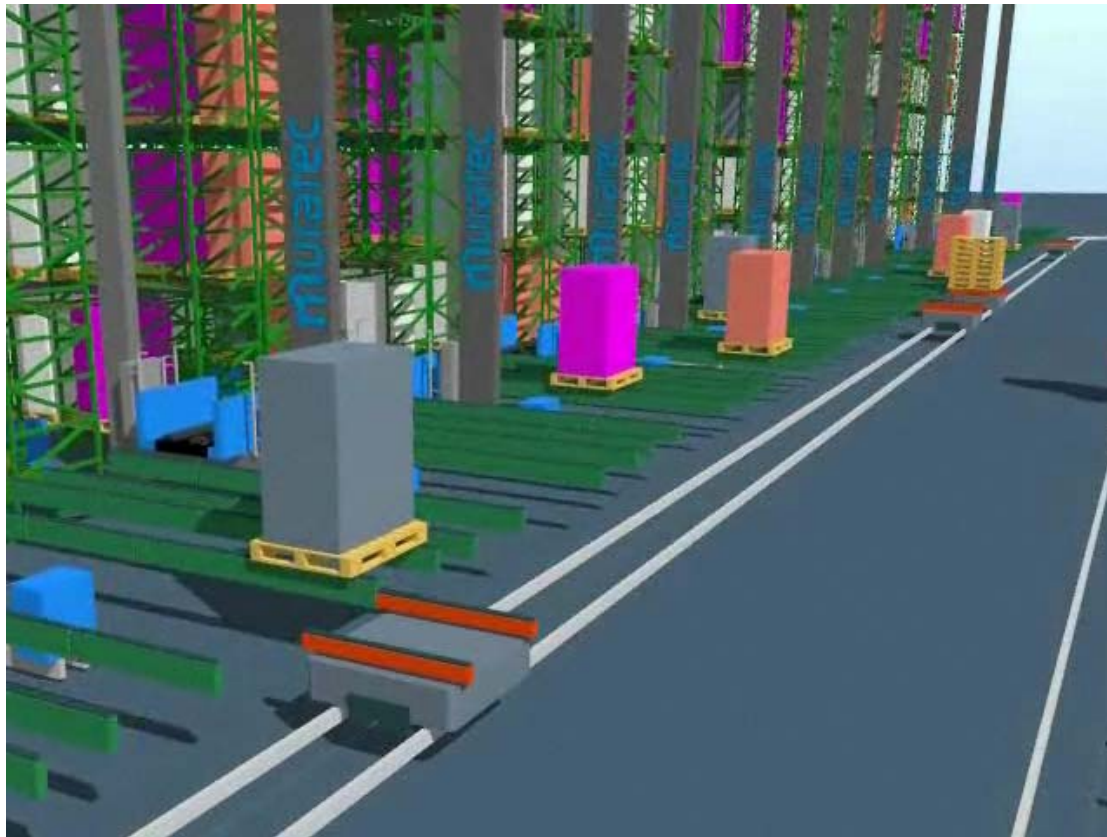


FIGURE 2-FULL LOAD RECEIVING, STORAGE AND HANDLING

...through fully automated storage and retrieval of individual loads -

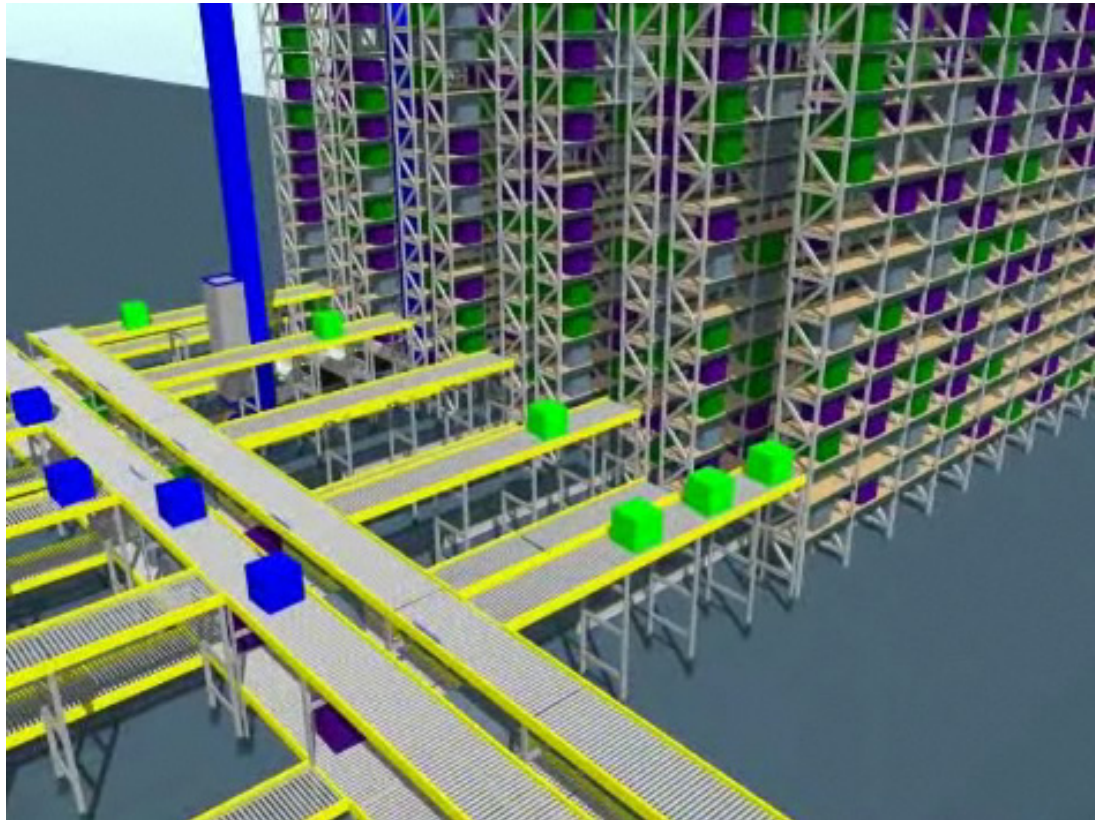


FIGURE 3: "MINI-LOAD" AUTOMATED STORAGE AND RETRIEVAL

...and palletizing of new shipments.

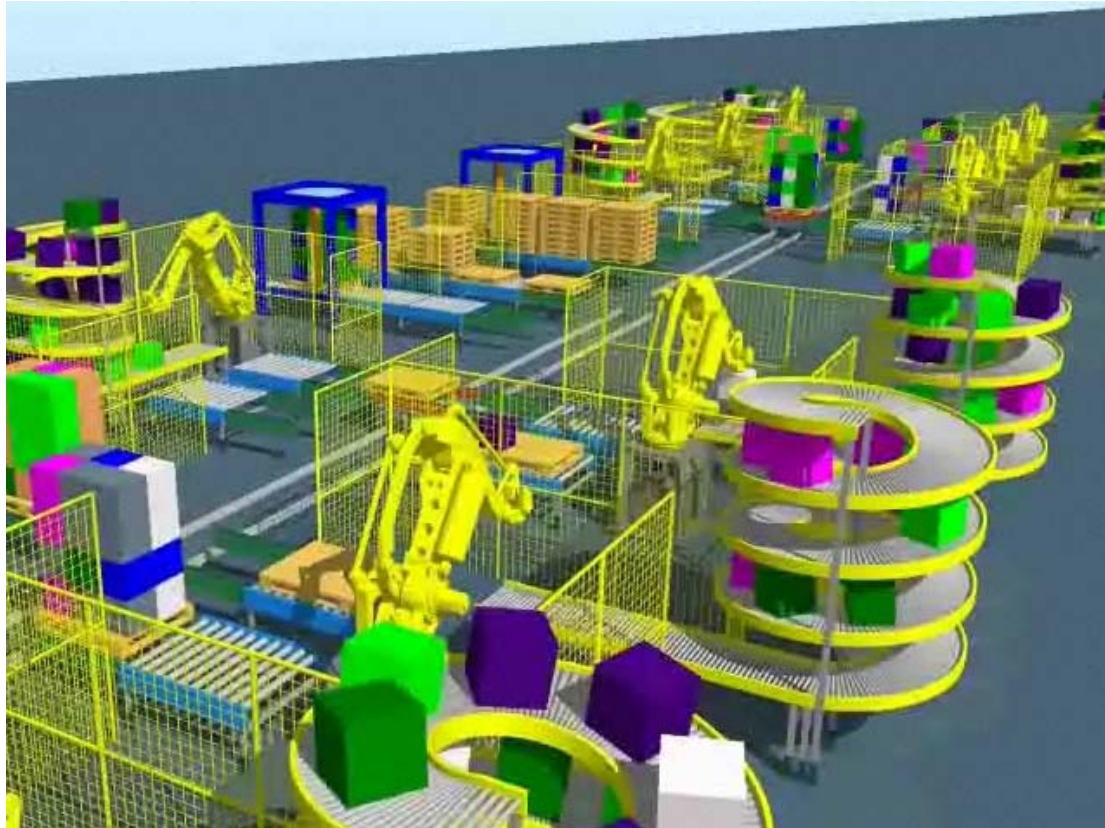


FIGURE 4: FLYING CAMERA ANGLES AND 3D PERSPECTIVE COMMUNICATES THE SYSTEMS VALUE

Concepts Delivered

The results were that the concept took a “real life” appearance for technology transfer to sponsors outside the project team. The demonstration creates an effective pre-sales presentation that does double duty to educate decision makers on the value of what the system is about and, upon acceptance of the proposal, internal team alignment is stronger. And, this only took a few weeks to create for the team.

Literally, teams have a concrete, 3D vision of what is to be accomplished and can move forward with a uniformity of purpose.

As one viewer pronounced, **“I didn’t understand the system the way I do now, after seeing that video.”**



Click on this icon to see the video of the model created for Murata.



Muratec Machinery USA, Inc. is a world leader in manufacturing automated material handling systems, machine tool technology and textile machinery.



provides services for model development, consulting and training, in addition to the Demo3D software.



Demo3D is an industry leading software used for modeling of industrial and material handling systems with compelling results.