

MDTP Introduction using Real Life Examples

MADTECH has developed a new technology called the MADTECH Digital Twin Platform or (MDTP). In a week, one MADTECH employee can create a digital twin of a 400,000 square foot poultry plant (it could be any facility) in virtual reality that can be entered into by individuals or groups. The digital twin is dimensionally accurate to 1/2 inch and can be made accurate to less than one tenth of an inch or less if needed. One real life example of use: Engineers and management in three different geographical locations, put on customized VR goggles and hand controllers. They then go into a staging area in the MDTP virtual world and enter into a chicken plant in DE. Together they engineer and plan a project by measuring, simulating construction/movement of things, and placing virtual twins made of various equipment options in different locations. They do this "will it work" "will it fit" engineering in a couple of days versus months if not years it would take to do this using conventional means. The MDTP is a great engineering, planning, and management of facilities and land tool. It saves time and money. It is a huge cost avoidance tool as well (picking right equipment, showing where construction is to happen and how... do everything virtually to avoid doing it wrong in real life. The MDTP also supports virtual meetings with people together. So much more... MDTP is inclusive of both land and facilities. Huge Green Tool to accelerate fight against climate change!

The problems that the MDTP solves for customers are many. Primarily, the customer's employees can remotely and virtually enter into a facility to take measurements, evaluate, etc... without leaving office. For instance, the engineering office for one company is in Maryland, but the company has factories in ten states and a corporate office in another country. The engineer, factory manager, and corporate manager can get together virtually to measure, look, create simulations, so much more... They do not have to make repeated visits to plant, saving months of travel time, exponentially increasing accuracy, and geometrically increasing productivity. Another example is a contractor estimating a project. Normally, you would have to have on-site walk throughs with customer. Now customer can walk contractors through plant virtually to show what work is desired to be done, and contractors can estimate and bid work without going to plant. The customer can now solicit more companies to do work for them, reducing costs, because contractors that might not have time to do job walk, due to distance to site, can estimate and bid work. The other huge problem that the MDTP solves is missing engineering drawings or not up to date drawings. The MDTP can be updated with changes to facilities in hours... The MDTP can produce 2D and 3D CAD inputs to make 2D and 3D drawings.

MADTECH's MDTP is unique because: No one has ever created a digital twin of an entire factory or facility. No one has made a digital twin accessible virtually from anywhere using a 24/7 internet accessible host. No one has ever made it possible to take measurements and do simulations in a virtual plant by individuals or groups of people working together. Customers want the MDTP because it is a gigantic step change in efficiency, cost avoidance, and making sure you made the right decisions. It opens the door to possibilities that no one thought were possible and were afraid to try. In virtual world, an engineering or project mistake costs you nothing... MDTP also opens the door to handicap people to become engineers and join the engineering community because in the MDTP; a person is no longer in a wheel chair or constrained otherwise. Everyone is equal and a Super Person with the ability to move and fly anywhere in a facility without any constraints or restrictions.

Using MDTP, the time and cost to engineer, evaluate, work through various possible solutions, and facilitating people in different locations coming together quickly to make decisions is greatly reduced. Paybacks for doing Green Energy projects and other positive environmental projects are reduced, making them more likely to happen. MDTP makes easy what was hard and expensive to put together.