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Newsletter 07/2010

BMW North America

Last month, we talked about bringing factory efficiency to new heights with a “route train,” offering a smarter, faster, more precise way to deliver materials to the production line. This concept has come to life at BMW Manufacturing Co., where Ingenics has helped build a “material train” for parts delivery – streamlining the entire process of getting parts from the BMW warehouse and points outside the factory to the production line for unparalleled efficiency. We spoke with Christian Kuriat, BMW Project Lead Assembly Logistics, about the endeavor.

Why did BMW decide to embark on such a unique project? We recently built a new, state-of-the-art assembly hall to further expand our manufacturing capabilities in the US. We knew we wanted to achieve 100% synchronization between our logistics and our assembly sides, with no waste or waiting between the two. In the previous facility, we were using forklifts to transport materials, but with the construction of the new facility we wanted to implement a new and more efficient logistic supply system.

Why the Materials Train? We had to deal with parts coming in from multiple locations, including both our own warehouse as well as from outside plants. When it came to our own warehouse, we designed our new facility to be very long, and put the warehouse in the far corner of the building. This made sense from a storage and administration perspective, but we knew it was going to be tough for forklifts to maneuver their way through and get the parts to the production line in an efficient way. The Route Train presented a different delivery concept that was much better suited for the design of our building and the location of our warehouse.



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How did you get started? The most important first step for us is always to set clear parameters from the start, then build the structure and processes needed to support them. We brought in all of the various parties that would be impacted by this project, knowing it would require an intense collaboration between our operations, planning, and IT departments. Everyone came together for a 14-day workshop during which we fleshed out a comprehensive realization plan, taking into account all key needs and requirements and establishing a dedicated timeline for the entire project. This has truly been the key to our overall success – keeping this team working together in close collaboration throughout. We are continually reviewing our progress, meeting regularly to keep the lines of communication open, discuss lessons learned, and adapt the project to meet emerging needs.

When will the project be complete? We started development in January 2009, when our new assembly hall was nothing more than a blueprint and an open field! Ingenics helped us design the train system in conjunction with the design and building of the facility itself, so everything has been seamlessly integrated from the start. Over the last few months, we have started testing the process with some concept cars, and have already seen the incredible value of the system. We are now fine-tuning the system as we gear up to begin full production of our 2011 line of vehicles at this facility towards the end of this year. Our volume will start to really pick up then, and will peak early next year, when we will be at 100 percent utilization of our machinery.



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How does it work? It works very much like you might expect a train to work. We have 15 trains in place, each of which can handle up to six containers at one time. We put a schedule behind the trains just like any passenger train has, and synchronized it directly with the speed and timing of our production line. The parts are delivered to a central distribution point, loaded onto a train, and then sent to the line. This makes the entire process very precise. We know exactly when the parts are expected to arrive from the train, and we know exactly when we need to reorder. There's no guessing or hoping involved in the equation whatsoever.

What are the results you have seen so far? Right off the bat, the train meant that we needed less equipment and fewer resources. We have replaced 200 forklifts with just 15 trains, and eliminated the delays we were seeing in the old factory, which were 40 minutes or more to get the necessary parts. That has meant faster service, more efficient production, and much more streamlined resources, with no need to back stock items at the line side. Of course, because our environment is still one that is highly manual, we've also been diligent about training each one of our employees to make sure they are fully engaged and involved, every step of the way. This has been an important part of our success so far.

To stay updated on the progress of the BMW Materials Train, or for more information on how a similar project can work in your facility, contact us contactICA@ingenics.com



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