

STUDIES IN SUCCESS



EXECUTIVE SUMMARY

In 2012, Transformix Engineering introduced a new automation platform which offered a disruptive advance in high-speed assembly. Over the next several years, Transformix expanded the technology's scope beyond the niche of continuous motion by applying its core principles to palletized processes. A particularly important development was the incorporation of "intelligent conveyance" into the platform. An evolution that brought an unprecedented combination of speed, flexibility, and digital control to automated assembly.

In 2017, Transformix launched the newest iteration of their platform, an initiative designed to repackage the technology into a set of configurable, plug-and-play modules. As part of this initiative, the company carried out a top-to-bottom reassessment of the platform's architecture, a key outcome of which was the decision to switch to the SuperTrak CONVEYANCE[™] platform.

ABOUT THE CLIENT

Not unlike the SuperTrak team, Transformix has a long history of innovation and continues to introduce new and exciting disruptive automation to factory floors across the globe. Transformix's patented, groundbreaking technology allows assembly systems to serve as multi-purpose, reconfigurable assets. This eliminates non-value-added losses in order to yield high-performance systems that are configurable and do not require customization. With the goal of delivering an unprecedented level of standardization and versatility, Transformix continues to push the ongoing development of their platform by sourcing the best people, partners, and products.

THE CHALLENGES

"Intelligent conveyance is essential to the end-to-end flexibility and digital control we offer," explained Peng-Sang Cau, Transformix's CEO. "But our original conveyor selection was based more on expedience and not on a thorough investigation of alternatives."

Finding the best conveyance product on the market that would support all the requirements of their platform was the main goal. The original conveyance platform being used brought challenges with high settling time, over-heating, and required frequent preventative maintenance.

Transformix's technology employs patented techniques that virtually eliminate non-value-added waste in automated assembly systems. This means work-in-process is brought in and out of the assembly workstations at rates that are often an order of magnitude faster than conventional palletized systems. This in turn places extreme demands on the intelligent conveyor, as shuttles are required to accelerate and decelerate rapidly and in quick succession, while nevertheless achieving high positional accuracy and repeatability.

"The shuttles on our original intelligent conveyor required a relatively long time to settle when stopping," said Martin Smith, Director of Electrical Engineering at Transformix. "This was problematic for us, as it added wasted time to the cycle."

Speed and accuracy were key drivers behind the success of the latest platform, however, they were not the only factors that differentiated the SuperTrak CONVEYANCE™ platform from its competitors. As Smith explained, "With our original conveyor, we were constantly facing challenges with heat dissipation. Our platform required pallets to operate at high duty cycles which caused our old conveyor to generate a lot of heat. We had to design costly means of dissipating this heat to avoid burning out the conveyor modules and to ensure a safe operating environment."

Another problem with the original conveyor was the metal wheels on its shuttles. Not only were they noisy, they required frequent lubrication to prevent rust. In industries such as cosmetics, food and beverage, and life sciences, cleanliness is essential. This meant the machine would have to be taken out of production for maintenance and in essence, lowered valuable production time.

THE SOLUTION

Peng-Sang Cau, Transformix's CEO, tasked her team to evaluate whether or not they were using the best conveyor available. Engineers quickly determined that they were not using the best conveyance platform for their application and that SuperTrak CONVEYANCE would eliminate the challenges they were experiencing with their current conveyor.

- Not only did the shuttles on the SuperTrak CONVEYANCE platform settle into position more quickly, but did so with greater accuracy and precision.
- The shuttles on the SuperTrak CONVEYANCE platform use plastic wheels which operate at clean room levels, minimize noise, and require almost zero maintenance or lubrication.
- Extensive built-in thermal monitoring allows the SuperTrak CONVEYANCE platform to run much cooler and eliminates the issue of overheating.

RESULTS

The combination of features offered by the SuperTrak CONVEYANCE platform eliminated the challenges Transformix experienced with their original platform and better aligned with their vision of increasing plant efficiency, and decreasing wasted time, space, and resources.


Phil Munroe, one of Transformix's senior mechanical engineers, prefers the SuperTrak CONVEYANCE platform due to the increased freedom it provides to overall assembly system design. "Our old conveyor had some limitations we always had to design around. As an example, its corner sections did not offer the same positional accuracy as its straight sections. We also had to be careful to avoid stopping the pallets too close to the junction between two conveyor modules. Using the SuperTrak CONVEYANCE platform has eliminated these issues."

Supported by a world leading automation company, the SuperTrak team understands the needs of a company like Transformix. The platform's refinement is evident, with a lot of built-in features and tools that make it easy to assemble, use, and service.

By aligning with a like-minded company and switching to the SuperTrak CONVEYANCE platform, Transformix was able to release a superior automation platform, allowing their customers to achieve better performance through high-speed operation, standardization, and versatility.



The SuperTrak CONVEYANCE™ platform better aligned with the vision of increasing plant efficiency, and decreasing wasted time, space, and resources.



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CONTACT

the SuperTrak team to discover how

SuperTrak CONVEYANCE™ can be used in your application.

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