EBOOK

# Built Different

The History of TrakSYS Leading the
Manufacturing Operations Industry

Discover how Parsec Automation's manufacturing execution system (MES) platform, TrakSYS, evolved from its first generation in 1994 and **continues to lead the manufacturing operations industry to new heights.**

# Where It All Began — a Brief History of MES

In today's digital world, it can be difficult to grasp just how far technological advancements have come since the early days of analog machines. While industrial and process automation took off by leveraging hardwired equipment, it was clear that maintaining that kind of technology was too complicated and costly in the long run. The invention of programmable control systems helped alleviate such concerns, and by the late 1970s and into the 1980s, manufacturers found themselves entrenched in the third industrial revolution.



With newfound programmable controls and industrial process automation, manufacturers realized there wasn't a way to manage or monitor their operations across shop floors, let alone across multiple plants. In hopes of mending this, leading manufacturers started contracting industrial automation engineers to develop and implement solutions. Still, the solutions created did not stick due to how difficult they were to extend and their inability to scale across different manufacturing process areas.

Unfortunately, the solutions and systems manufacturers were ultimately looking for (today's MES platforms) were not yet defined. The tools that would eventually grow into these sprawling systems still needed to be invented… and that's where Parsec came along.

## Purpose-Built from the Start

Manufacturing is complex. Across all industries and processes, there lies a certain level of nuance and intricacy that, when properly attended to, allows companies to create their goods and products and deliver them to our eagerly awaiting marketplaces. Understandably, these varied, unique operations can often be beset by a myriad of issues and roadblocks.

However, despite the differences that exist between companies (be it in their industry, product, or process), Parsec quickly came to see that while their customer's operations were indeed varied, their pain points—and the solutions needed to address them—were more similar than different. Though this notion was readily adopted into the Parsec ethos, the industry tools and platforms present during the early stages of the company's tenure were a far cry from enabling the creation and delivery of standardized, systematized, templatized solutions.

Starting as a systems integrator (aka a consortium of industrial automation engineers), Parsec often encountered the same issue. The solutions they would spend months designing and implementing for their customers would eventually, when it came time for the implementation to be expanded, become null and void. Broken. Defective. Time and time again, the reasons for this vicious cycle were clear: the platforms the team was designing on were "bolted together."  Rather than evolving organically, the companies behind these platforms would buy "point solutions" to address one-off issues and then do just enough work to integrate those solutions into the rest of the platform.

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Unsurprisingly, this would often result in other aspects of these disjointed platforms breaking. For Parsec, navigating the perils and pitfalls of keeping their customers happy and their previous labors intact whilst simultaneously implementing new additions that were sure to have the opposite effect, grew to be a tiresome endeavor.
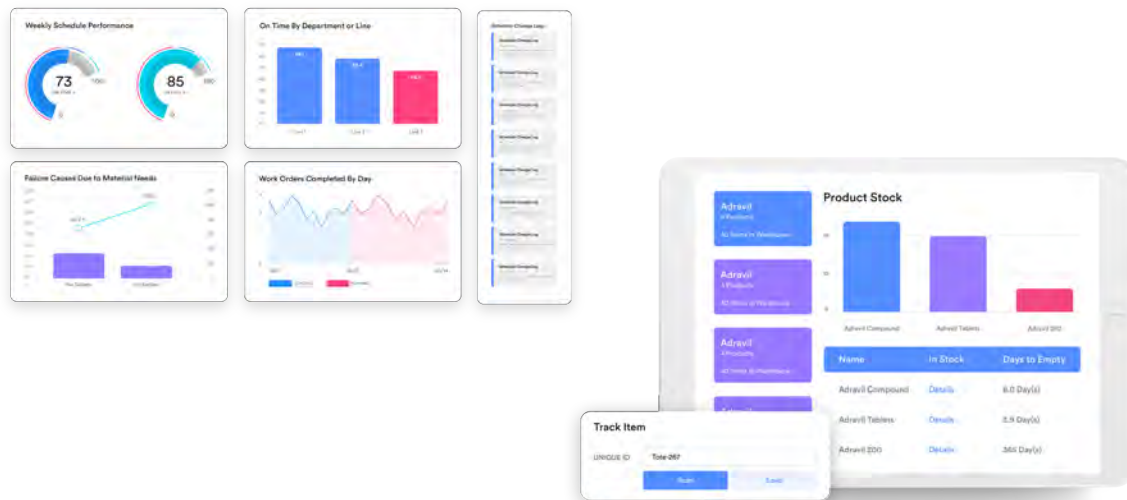


Always thinking of the customer first, Parsec realized they needed to solve their recurring problems. They needed to create a platform that would give their customers the tools and insights they needed today and allow them to readily implement new tools as their needs changed, without fear that their previous solutions would be decimated in the process. Their MES platform needed to be able to account for a customer's specific needs and offer a robust collection of standardized solutions and frameworks: a feat that would streamline solution creation and delivery.

To achieve this, Parsec created TrakSYS: an organic, modular solution platform that could seamlessly scale and evolve alongside their customer's changing needs.

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## Getting Ahead of the Curve

Introduced to the market in 1994 as a novelty, TrakSYS was the first application to enable operational visibility and KPI tracking. The platform's UI was browser-based, a rarity since most applications at the time operated on a client-server architecture.

Though the platform (albeit in its infancy) was quietly reshaping the whole of manufacturing operations, It wasn't until a decade later that companies realized that having visibility and KPI management capabilities in a holistically and natively integrated platform was critical to the future of their operations. Before widespread digitalization of manufacturing operations was commonplace, Parsec had been hard at work adding more functionality to TrakSYS. What was once a data aggregating and monitoring application had grown into a fully fledged MES platform, enabling interoperability, data aggregation, analysis, and enterprise-wide optimization.



Additionally, Parsec made it possible for system integrators to configure TrakSYS entirely through the web, thereby eliminating the need for users to have software installed on their servers during implementation.

With the fourth industrial revolution now well underway, there is no denying: TrakSYS, and its customer-centric ethos, helped shape and define MES as we know it today. With each improvement and across each generation of the platform, Parsec has continued to deliver on its mission of making the management of manufacturing operations as simple as possible.

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## 11 Generations of Growth (and Counting)

TrakSYS has always included a browser-based UI, so when HTML5 was introduced, Parsec embraced the language's capabilities, ushering in digital mobility to the manufacturing sector. As one of the first (if not the first) unified MES platforms, TrakSYS continued to trailblaze with its ability to operate on any device, regardless of the operating system and device form factor.
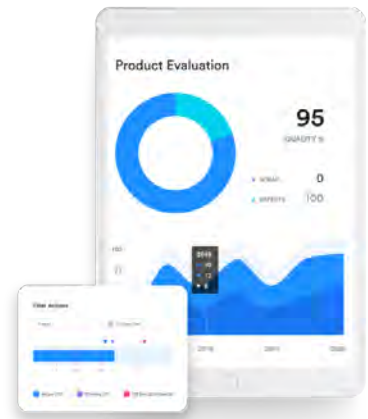
With their eye always on the needs of their customers, Parsec has expanded their cloud-based deployment methodologies in recent years. At the same time, the company has been hard at work extending the utility of TrakSYS Single Instance Multi-Site (SIMS) capabilities. Focused on enabling organization-wide visibility, knowledge, and control, SIMS has become an invaluable staple for TrakSYS users, with some managing as many as 75 sites with one instance of the platform.

No stranger to adopting and influencing the manufacturing zeitgeist, Parsec is also working artificial intelligence (AI) and machine learning (ML) into their platform. While these concepts are still very much in their ideological infancy, they are already taking shape in TrakSYS through additions like Algorithmic Production Scheduling. This innovative addition has already helped manufacturers worldwide streamline their scheduling by providing them with consistent, real-time, data-driven optimizations.

As more data is fed through TrakSYS, the AI and ML algorithms for production scheduling become more intelligent, aware, and capable of accommodating higher levels of variability. To ensure pertinent data is captured and shared with TrakSYS accurately and efficiently, many manufacturers are implementing IoT devices. Furthering their promise of making the management of manufacturing operations as simple as possible, Parsec created their own Smart Devices, which have only helped bolster IoT initiatives.

Comprised of a Smart Data Collector and a Smart Coordinator, Parsec's devices can connect to nearly any type of data source. Whether it's a camera, photo-eye, limit switch, flow meter, level indicator, barcode reader, or any other digital or analog input, the Smart Devices enable data collection, aggregation, and analysis where it may have otherwise been impossible.
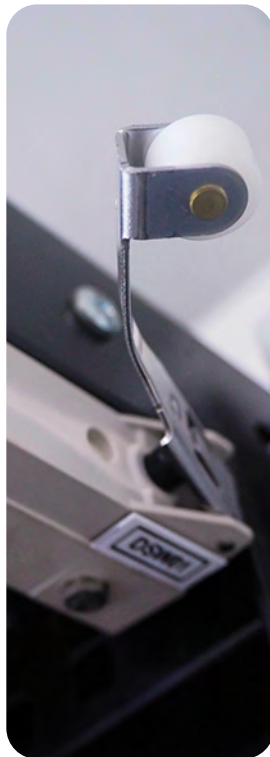
## More Innovation is on the Horizon

Looking to the future, Parsec's path forward will draw heavily on what has made them successful in the past— addressing the intrinsic needs of manufacturers worldwide and making solution delivery and operations management as simple as possible. Once again standing at the forefront of innovation (this time regarding cloud computing and the nascent potential of AI and ML), Parsec is committed to acquiring knowledge, pursuing innovation, and pushing the envelope for the betterment of their customers, their partners, and every TrakSYS user around the world.

So—what are you waiting for?

**Start optimizing your operation today with TrakSYS.**

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## About Parsec

Utilizing their 30 years of experience in manufacturing, Parsec created TrakSYS™: a best-in-class operations management software application and solution platform designed to significantly improve manufacturing operations. TrakSYS aggregates data from multiple sources to deliver real-time, actionable intelligence that helps manufacturers to reduce production costs, decrease lead time, and improve profitability. TrakSYS is deployed at thousands of factories, in over 100 different countries.

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