



## Big picture generates big benefits for the Flex supply chain

FLEX (NASDAQ: FLEX) is a leading sketch-to-scale solutions provider that designs and builds intelligent products for a connected world. With approximately 200,000 professionals across 30 countries, the company provides innovative design, engineering, manufacturing, real-time supply chain insight, and logistics services to companies of all sizes in various industries and end-markets.

### Background

"We live in a rapidly changing world, full of disruptive events, technologies and business models," says Mike McNamara, Flex CEO. "Today's executives and innovators need to run their businesses intelligently to win, and one of the biggest challenges they face is the management of highly complex, globally-distributed supply chains."

To address this industry challenge, Flex developed Flex Pulse, a software-based real time mobile collaboration tool to provide unique levels of connected intelligence for managing global supply chains. Co-located at the Flex Innovation Center in Milpitas, California, Flex Pulse Center leverages Flex Pulse to monitor all aspects of the Flex global supply chain, while aggregating and parsing global events that might impact supply-chain efficiency.



### Products

MT Canvas®, MultiTaction iWall®



### Situation

Flex is a global operation and one business differentiator is the ability to see the whole supply chain from beginning to end in real-time. This translates into the ability to view many different systems and processes at the same time in order to facilitate supply chain management. Flex was looking for an effective collaboration space that would enable managing exceptions related to their supply chain and identify patterns which could improve velocity.

From a technology perspective, one key requirement was finding a viewing platform that could serve as a platform for collaboration between multiple users.

The Flex team was looking for a responsive supplier that could provide a technology solution that was versatile in terms of both hardware and software. In searching for this ideal platform, the Flex Pulse development team had the following key requirements:

- The ability to visualize complex data in a simple and comparable manner
- A combination of hardware and software that made it easy to manipulate and work with data
- A robust platform on which to build new applications to meet the evolving needs of the business
- Collaboration - plug in video conferencing, mobile and share information - with multiple sites

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### Solution

The Flex Pulse project team looked at all the big players in the large format display field and chose MultiTaction because of the quality of hardware and software and the potential they offered for customization. A key realization in this process was that fact that MultiTaction was not offering a regular touch display, but rather, an intelligent device that was capable of running apps on the screen.

The solution comprised of a 22-screen curved MultiTaction iWall. Sitting behind the 'intelligent surface' is the MT Canvas family of software products that help visualize big data, socialize ideas, educate clients and work collaboratively. Also of great importance was MultiTaction Cornerstone, a software development toolkit for creating bespoke applications that scale to ultrahigh resolutions and support any number of simultaneous users.

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**“In a collaborative environment you can display Flex Pulse on a laptop but on the iWall, you can open all of it together in one piece of real estate; and look from left to right, and from top to bottom, to connect the dots.”**

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### Benefits

The 22-screen curved iWall located in Flex Pulse Center monitors all aspects of the Company's global supply chain, while aggregating and parsing global events that might impact supply chain efficiency.

A unique feature of the iWall is the curvature which provides a more immersive experience and means that viewers can see both ends of the wall (and the supply chain), without moving. The MultiTaction iWall provides the human interface with Flex Pulse and the extraordinary real-time insight that it delivers for the Flex supply chain, allowing the company to reduce risk and improve the efficiency of any supply chain.

By combining the user experience of wall-to-wall touch screens and flowing data visualizations at Flex Pulse Center, Flex Pulse aggregates and interprets live streaming data from multiple sources. The resulting intelligence highlights global variables that may impact or disrupt supply chains, facilitating contingency planning and crisis preparedness and response.

The comprehensive customer supply chain view integrates various areas from customer demand to delivery. Live video feeds of global production facilities and integrated videoconferencing capabilities establish direct links with Flex sites around the world, to address issues in real time.

Crucially, MT Canvas lets all web-based applications run natively on the system. A customer doesn't have to change the back-end to engage with different data sources. And the work on the screen can be broadcast to other sites around the world enabling more effective collaboration across borders and time zones. The flexibility of the software solution was a major selling point for Flex.

The fact that a customer could further adapt and develop the solution using the SDK Cornerstone developer kit was immensely attractive given the dynamic nature of the customer's requirements and the fact that the project team often had requests from the business that could not be fulfilled with an off the peg solution. And the wall could be expanded using additional screens without loss in performance.



### Customer feedback

“The technology of being able to put different sources of data on a big wall and being able to move those windows around, bring them together, closer to one another – you can do that with a laptop but you are flipping through multiple screens on your laptop – versus seeing it open in front of you like a newspaper with all the pages open in front of you and you can read all the news in one glance and then tie it all together.”

“We have seen that by doing that it facilitates creativity and decision making. The thought process changes because the data is staring you in the face; you don't have to go looking for it.”