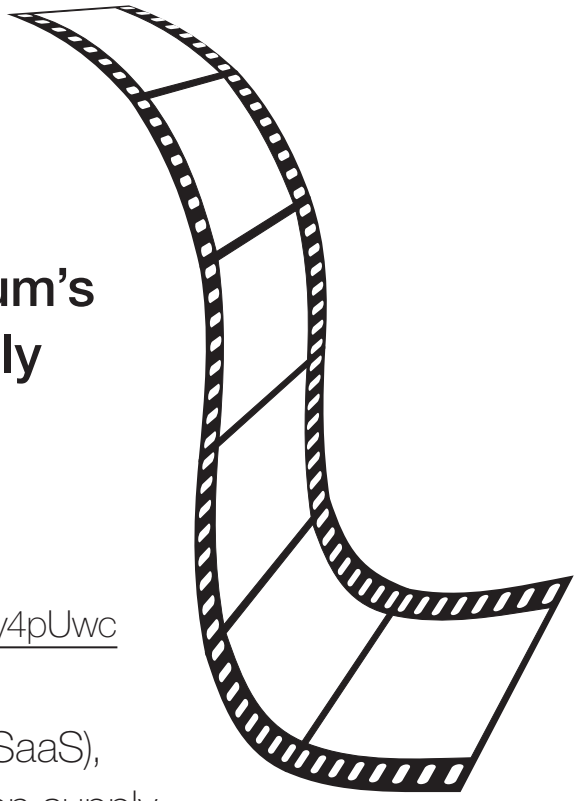
video case



chapter 12 B2B E-commerce

case 1 **Flextronics Uses Elementum's Cloud-based Mobile Supply Chain Apps**

watch the video at https://www.youtube.com/watch?v=l3Z6ay4pUwc

summary This is about software as a service (SaaS), Cloud, and Mobile, brought to bear on supply chain management. *L=2:28.*

case

Flextronics International Ltd. (Flextronics or Flex) is one of the world's largest contract manufacturers. Its business model is to design and build products for other manufacturers, as well as to provide other services. Flextronics started out in Silicon Valley in 1969 producing electronic assemblies and parts for computer manufacturing firms. Today, Flex is a global Fortune 500 company that offers design, manufacturing, distribution, and after-sale support to hundreds of manufacturers worldwide. It's customers include Hewlett Packard (HP), Cisco, Apple, Microsoft and Intel, and many other Fortune 500 manufacturers. Flex has operations in 300 countries, employs over 200,000 people, and generated $24 billion in revenue in 2013.

Flex designs and builds mostly electronic products under contract to other manufacturers, and has developed one of the world's largest and most sophisticated supply chains in order to succeed. In 2014 Flex spun off its expertise in supply chain management systems to a new company called Elementum which offers mobile, cloud-based software to a variety

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of customers (some of whom are already customers of Flex). In February 2014 Elementum received $44 million in venture funding to build its software services business.

Coordinating the flow of goods among vendors and manufacturers is an inherently difficult task simple because a single manufacturer may have a hundred primarhy suppliers, each of who has its own suppliers (tertiary suppliers), and so forth. In the end, the "supply chain" is very large collection of independent firms who do not share information systems, and typically rely on fax machines, email, and the telephone to coordinate the flow of parts and goods. The result is a kind of controlled chaos which is highly inefficient and error prone. The traditional solution for this problem was to have the primary product manufacturer, say a personal computer manufacturer, build its own proprietary, enterprise-wide supply chain management system, usually purchased from a major software firm like SAP, Oracle, IBM, HP or other business software firm. And then have all the suppliers tie into the primary firm's system. This approach has several problems not least of which is that there are hundreds of primary manufacturers each with its own proprietary supply chain system, forcing thousands of suppliers to learn many software systems. For instance, a supplier of wiring harnesses based in Malaysia may supply products to several hundred electronic component manufacturers, each with different supply chain systems. Moreover, the entire supply chain is usually not visible to the primary manufacturer who does not "see" the lower-level suppliers of components, just its largest suppliers. Many elements of the supply chain remain invisible. In addition, it's nearly impossible for one primary manufacturer to understand how its purchasing decisions are effected by the decisions of other primary manufacturers. These kinds of systems do not operate in real-time but frequently are relying on data that is weeks old. Finally, this traditional approach is poor at risk management, understanding the complexities of many different suppliers, in different parts of the world.

Elementum's approach is very different because it relies on a cloud-based software-as-a-service model. One supply chain database system is built for all firms to tie into, regardless if they are primary manufacturers or component suppliers. The world of manufacturers and their supply chain management systems has lagged behind other areas such as customer relationship management (firms like Salesforce.com Inc.), and work flow management (firms like Workday Inc.), in moving to cloud-based SaaS models.

Elementum's software has three components: Transport, Exposure, and Perspective. Each is presented to users as a mobile app for tablets or smartphones. ***Transport*** offers visibility into existing shipments and offers predictive and rules-based alerts to notify managers of any potential delays. ***Exposure*** is a supply chain risk management product that monitors various external content sources, and then based on an adverse event at a certain location, analyzes how suppliers, suppliers' suppliers, and all actors in the supply chain might be effected. ***Perspective*** offers a mobile dashboard with a variety of graphics and charts showing how suppliers are performing. Rather than create hundreds of separate databases at primary manufacturers, Elementum's goal is to build a single supply chain platform that leverages

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multiple data sources, and then to use common mobile apps to present the results to managers in a real time environment.

One of the early adopters is Dyson, the UK manufacturing firm best known for its Dyson vacuum cleaners, and other household appliances. Dyson needs to keep track of 2 billion parts, 300 suppliers, and four factories in order to manufacture eight million appliances a year. This is considered a medium size supply chain. Dyson is building a control tower at its main manufacturing facility in the UK where the supply chain is monitored 24x7 on 16 large screens by a staff of six people.

video case questions

1. Mike McNamara is the CEO of Elementum in the video. How does he characterize the changing nature of supply chains when compared to twenty years ago?
2. What does McNamara believe is the solution to highly complex and risky supply chains that we have today?
3. What's different about the Elementum approach to supply chains?
4. What are the three components of Elementum's software?