

The real keys to innovation: Knowledge and creativity

Technology promises to revolutionize the way supply chains are managed. However, in-depth knowledge and creative problem solving can enable significant supply chain innovations without the need for new technology.

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At a time when promising new technologies (Big Data, Internet of Things, Blockchain, to name a few) promise to revolutionize the way supply chains are managed, it is tempting to conflate the idea of supply chain innovation with new technology. However, to assume that cutting-edge technology is necessary for innovation would be a mistake; revolutionary innovation is possible without revolutionary technology. In-depth knowledge and creative problem solving can enable significant supply chain innovations without the need for new technology.

Consider the case of EuroPartners, a provider of international logistics services based in Mexico and serving hundreds of customers throughout Latin America. One of their offerings is the fast delivery of spare parts for specialized machinery. When one of EuroPartners' customers orders a spare part to repair a broken machine, one thing is certain: The customer needs the part without delay. Every day a specialized machine is out of service, hundreds or even thousands of dollars are lost by the customer. Speed, therefore, is of the essence, and EuroPartners' promise is to deliver the spare parts within 36 hours of the time an order is placed.

It is relatively straightforward to fulfill this promise when the customer is located close to an international airport with frequent direct flights from Mexico City. Using an airport-to-airport priority cargo service, called Next Flight Out (NFO), EuroPartners can easily fulfill an order overnight. For example, an order placed before noon on a Monday by a customer located in Bogotá would be delivered at Mexico City's international airport that evening, flown from Mexico to Colombia overnight, clear Customs in the morning and be ready to be picked up by the customer at Bogotá's international airport shortly after noon on Tuesday.

The challenge

Fast delivery becomes a challenge for EuroPartners when the customer is located in cities without frequent direct flights from Mexico City. In theory, using the airport-to-airport priority cargo service to serve these customers is still an option; in practice because the parcel needs to be moved from one plane in the international terminal to another plane in the domestic terminal of the airport, the total time from origin to destination increases by one or two days, which is not acceptable given EuroPartners' "under 36 hours" promise. For a customer located in Cali, an order placed before noon on a Monday—if it were delivered using the airport-to-airport priority cargo service—wouldn't be available for pickup until after noon on Wednesday at the earliest.

Using a courier service for the domestic leg of the trip is not an attractive option because domestic courier services in Latin America typically use ground transportation. In an expansive and mountainous country like Colombia, for the parcel to go from the airport to the courier's facility, then in a truck over hundreds of miles to a smaller distribution center in Cali and then in a smaller vehicle on a distribution route to the customer, usually takes two or three more days.

The only alternative left to EuroPartners to fulfill the 36 hours promise is to send an employee on a round trip flight from Mexico City to Cali. This requires the employee to go to the airport with the parcel (which usually weighs less than 30 lbs.) and fly to Bogotá, clear Customs, then take a domestic flight from Bogotá to Cali and finally a cab from the airport to the customer's location to hand deliver the parcel well within the 36-hour window. The employee would then fly back from Cali to Bogotá, sleep in a hotel near the airport and fly back home to Mexico the next day. This special service is known as On Board Courier (OBC) and is much more expensive than NFO, due to the cost of the employee's time plus the round-trip tickets and hotel expenses. OBC is an option used when customers cannot afford to wait two extra days and are willing to pay a premium to help cover the extra expense.

The innovation

This is where EuroPartners managed to introduce a clever innovation that revolutionized its deliveries to smaller cities throughout Latin America, with the crucial help of a young entrepreneur, David Hidalgo, at the time a student of MIT's GCLOG Program and currently a Ph.D. student at MIT SCALE's Zaragoza Logistics Center. From his experience as a researcher at MIT SCALE's Center for Latin America Logistics Innovation, Hidalgo developed an in-depth knowledge of local logistics in Colombia, along with a local network of trusted friends and young collaborators who, like him, were looking to take on a challenge. Working together, with some very creative problem solving, Hidalgo and EuroPartners came up with a solution that retained the speed of OBC (the "nuclear option") at about half the cost.

The new solution is called Domestic Hand Carrier (DHC), and it works as follows. EuroPartners receives an order for a spare part to be delivered fast to a customer in a city without frequent direct flights from Mexico City. For the sake of the example, let's say the customer is in Cali. EuroPartners will send the parcel using the NFO service from Mexico City to Bogota. At the same time, it will contact Hidalgo via email or phone with all of the information he needs to arrange the domestic leg of the trip. He will reach out to several on-call members of his logistics network and identify one that is ready to serve as domestic hand carrier to take the parcel from Bogota to Cali. The hand carrier picks up the parcel as soon as it has cleared customs in Bogota's airport, and proceeds to board the next available domestic flight from

Bogotá to Cali. After a short domestic flight, the hand carrier will take a cab directly to the customer's facility and hand deliver the parcel well within the 36-hour window. Then, the hand carrier flies back to Bogotá and is paid for his service.

Even though they both take approximately the same time from origin to destination, the innovative DHC solution costs 40% to 45% less than the OBC option

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because domestic flights inside Colombia are cheaper than international flights and there are almost no hotel expenses. Additionally, Hidalgo's local contacts are familiar with the cities where the deliveries are made and stay in constant contact via cellphone with both Hidalgo and the customer to provide updates about the parcel's location and its estimated time of arrival. This information contributes to the customer's peace of mind and improves their satisfaction with the service.

The lesson

The beauty of the DHC solution lies in the fact that it relied solely on Hidalgo's creativity, in-depth local knowledge of Colombian logistics, a network of friends and partners and on EuroPartners' willingness to apply new and original solutions to old problems. This innovative solution required no new technology whatsoever: a few emails and phone calls, and knowing the right people for the job is all it took. And yet, it has revolutionized the way EuroPartners distributes throughout Latin America, by allowing them to extend their 36-hour window promise to many more cities—not just capitals. Currently, their average delivery time is around 25 hours.

This is a reminder of what lies at the heart of innovation: the ability to see both the forest and the trees, of taking what already exists and using it as a foundation to build what can be, the willingness to contemplate an old problem with fresh eyes, and to connect seemingly unrelated and contradicting elements into a coherent new solution.

So, the next time you hear about some development regarding one of the many new buzzwords that promises to revolutionize your supply chain, remember that supply chain innovation can simply be about in-depth knowledge and creative thinking. ∞