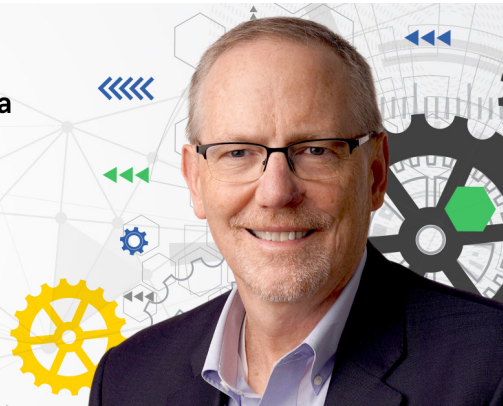






"Politically speaking, **post global** may have a negative connotation, but for the supply chain it's good news. The challenge is to develop supply chains that are more regional, without a nationalistic fever."



ONE-ON-ONE

Tom Linton, Author, Executive Advisor & Digital Supply Chain Innovator

ONE-ON-ONE PROFILE

-  **Background:** Retired as Chief Procurement and SCO at Flex in 2019. Held executive procurement positions with IBM, Agere Systems, Freescale and LG Electronics, and helped found software firm E2Open.
-  **Books Authored:** "The Living Supply Chain: The Evolving Imperative of Operating in Real Time"
-  **Honors/Recognitions:** Institute of Supply Management's J. Shipman Gold Medal, 2019; Financial Times of London Intelligent Business Award, 2018; Lifetime Achievement Award from the Procurement Leaders Organization, 2017; inducted into Chief Procurement Officers Hall of Fame, 2017
-  **Patents:** 1 granted ([US10146214B2](https://patents.google.com/patent/US10146214B2) (<https://patents.google.com/patent/US10146214B2/zh>)), 7 pending

SCN: You retired late last year after a nearly 40-year career in procurement and supply chain management. Tell us what you have been up to.

TL: I stepped down from my role as Chief Procurement and Supply Chain Officer at Flex because I wanted to support my wife. After years of my career dominating our lives, it is her turn to pursue her passion. She recently earned her doctorate in Audiology and got her license to practice in Georgia. So, we have relocated to a beautiful community outside of Atlanta. My wife is building her new career and I am settling into a different lifestyle that

includes playing a lot more golf and spending more time with my family, including my newest grandbaby.

SCN: The Covid-19 pandemic has put supply chain front and center in the minds of consumers, politicians and businesses alike. Is it hard to not be on the front line as all your former peers and colleagues are dealing with this unprecedented global event?

TL: There is no doubt that when you have done a job for as long as I have been in executive level procurement and supply chain positions, you find yourself experiencing a little bit of Stockholm syndrome when you leave. You kind of miss the fire, you miss that part of it. But I don't miss the late night phone calls or the stress of having to prepare this or that for the board of directors or for an executive discussion – I don't miss any of those things.

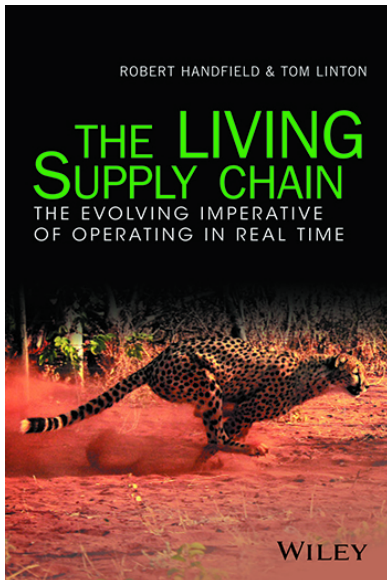
“When you have done a job for as long as I have been in executive level procurement and supply chain positions, you find yourself experiencing a little bit of Stockholm syndrome when you leave. You kind of miss the fire.”

I am fortunate that my advisory activities give me the opportunity to continue to contribute to the business world. For example, I am the executive director of the board of Resilinc; I am on a digital advisory board of GlaxoSmithKline; I am an advisor to Lutron and Chairman of Procurement Leaders. So, this keeps me busy, but I also have the freedom to spend time just thinking deeply about things, exploring new ideas and getting involved in different projects where I get to meet amazing new people.

SCN: For example?

TL: I am working on another book with my friend Rob Handfield, who co-authored “The Living Supply Chain” with me in 2017. In that book, we discussed the imperative to create greater velocity and visibility in the supply chain, and we demonstrated this by drawing a parallel to the evolution of ecosystems in the natural world. The next book is going to take that comparison even deeper, as we look at the underlying laws/rules that govern the physics of supply chain.

<http://avtsupplychain.staging.wpengine.com/wp-content/uploads/2020/04/thelivingsupplychain-cover.jpg>



Our research for the new book lead us to this professor of physics from Duke University, Adrian Bejan – an absolutely fascinating guy. He has written a couple of books about the principles of flow and friction and the concept of constructal law, which he formulated in 1996. As a supply chain person, if you want to have your mind blown, you should read his book “The Physics of Life.” He talks about how similar the patterns and flows of a river and its tributaries are to the human lung and its branches. If you then think about logistics and distribution patterns, you start to see these underlying design principles that shape so much of our existence. Once you understand that, it is clear that the smartest thing supply chain people can do is to look for those flows and embrace them, rather than trying to force things into directions that are not natural. So, I spend a lot

of time thinking about this kind of stuff.

“As a supply chain person, if you want to have your mind blown, you should read Adrian Bejan’s book “*The Physics of Life.*”

SCN: Throughout your career, you helped lead supply chain organizations through many natural disasters and economic volatility. What is your advice for supply chain leaders dealing with this pandemic response and business recovery effort?

TL: I think that one of the most important things companies can do right now to keep their supply chains in tact is to “pay it backwards.” It’s like the charitable concept of “pay it forward,” but in supply chain, it is important to pay it backward, meaning you have to take care of the suppliers that are feeding your supply chain. People need to understand just how fragile a time we are living and doing business in.

Supply chain executives should be careful to pay attention to the ability of these small players to survive a crisis like this. A lot of small companies have less than two months of cash on hand at any given time. With little to no income for weeks and months on end, it doesn’t take long for these businesses to go under. We are even seeing well-capitalized global companies struggling. For example, one of the world’s largest automotive suppliers, [Aptiv](https://ir.aptiv.com/investors/press-releases/press-release-details/2020/Aptiv-Provides-COVID-19-Re-) (<https://ir.aptiv.com/investors/press-releases/press-release-details/2020/Aptiv-Provides-COVID-19-Re->

[lated-Business-Update/default.aspx](#)), announced in late March that it would draw down its entire \$1.4 billion credit facility.

“The most important things companies can do right now to keep their supply chains in tact is to “pay it backwards” and take care of the suppliers that are feeding your supply chain.”

So, as this lockdown continues, we are going to start seeing more small and midsize businesses (SMBs) going out of business, or not being able to operate anywhere near capacity. We are looking at a potential coral reef scenario – where the failure of a small species can set off a ripple effect that destroys the whole reef. In this case, the collapse of critical SMBs could threaten the entire supply chain ecosystem.

SCN: What are some specific actions organizations can take to support their smaller partners?

TL: There are many ways that an enterprise can help make sure their suppliers remain fiscally viable. For example, in 2008 when the great recession hit, I was with LG Electronics. I was very concerned about our small second and third tier suppliers, so I convinced our CFO to put together a pool of money that we could offer to these suppliers for low or no-interest loans, like what we see the government doing today with small businesses. Similarly, I read the other day that Lockheed Martin plans to advance more than \$50 million to small and medium-size enterprises (SMEs) in its supply chain, and telecom company Vodafone committed to paying its European suppliers within 15 days.

SCN: Those are some major league efforts. Most companies are not in a position to take those kind of actions.

TL: That’s very true, but anyone can make a phone call and start the conversation. Find out what your suppliers’ capabilities are and what they need to keep afloat. The tipping point is often much closer than most leaders think. Don’t just rely on a Dun & Bradstreet report and don’t assume your direct, first-tier suppliers will take the initiative to monitor and manage critical lower-tier suppliers. I encourage chief procurement and supply chain officers to get on the phone and talk to the executives of these companies. If necessary bring the CFOs into the discussion. We don’t often think to bring CFOs into these conversations, but I think it is very important for the fiscal sustainability of your supply chains.

“Don’t assume your direct, first-tier suppliers will take the initiative to monitor and manage critical lower-tier suppliers.”

I’ll tell you now, your first-tier suppliers may not like you interacting directly with “their” suppliers. The power in the supply chain flows up. The higher you go, the more power the person or enterprise has. Some big players may not want to share that power, but you cannot let these entities create a barrier between your organization and what you need to know about your supply chain. That is something that I have always felt strongly about.

SCN: The pandemic has put a spotlight on the vulnerabilities that are inherent in a global supply chain. Some pundits say this could prompt a shift to a “post-global” economy. What are your thoughts on this?

TL: You know, last summer, well before this pandemic arose, I had stated in an interview with The Economist that I thought we were entering a “post-global” world. And, it was assumed that I was predicting this dark and menacing future, but from a supply chain standpoint, it is actually great news. One of the first laws of supply chain is that proximity matters, so the closer things are together the faster and more efficient supply chains are and the more cash flows through the supply chain.

The only reason China became a global powerhouse was because of labor arbitrage. Costs are like water, they naturally flow to the lowest point. So, if costs are equalizing around the world, then it becomes more economically viable to manage your supply chain more regionally. Politically speaking, post global may have a negative connotation, but for the supply chain it’s good news. The challenge is to develop supply chains that are more regional, without a nationalistic fever.

SCN: So, are we going to see more multinationals shifting their manufacturing out of China?

TL: Yes, and no. We have already seen, in recent years, the move to produce goods closer to the point of consumption. So, yes, companies that serve customers in North America, for example, are more likely to transfer their production capabilities out of China, rather than shipping things back and forth. But that doesn’t mean that China is going to be short shifted here. China will develop its own regional supply chains, which will benefit the companies and consumers and economy in China. And I think we will end up seeing more U.S. companies building factories in China to move closer to their Chinese customers and more Chinese companies will move closer to their U.S. customers. That is what supply chains will look like in 10 years.

SCN: How else do you think this pandemic will change business/supply chain?

TL: It is amazing how quickly supply chain has moved into the top of the national agenda. You cannot have all these people die and not seriously rethink in how we do things, including supply chain. When I heard Joe Biden say that he felt the U.S. needed a Supply Commander to coordinate distribution of critical Covid-19 treatment supplies across the 50 states, I thought, 'Wow, this is a powerful thing that is happening.'

I think we are at an era-defining moment. For example, everyone is online now. People are learning just how much we can get done doing business digitally. For the past 25 years, since the Internet/World Wide Web entered the public domain, we have been experiencing this push and pull between analog and digital worlds.

It's like the turn of the last century when we had this period of time where the horse and buggy and automobiles co-existed for a couple of decades. They shared the road and there were all kinds of disasters, until the slower, less efficient mode finally got left behind.

I wouldn't be surprised if this pandemic signals the final death knell for the analog world. I think this could be the horse and buggy moment for the supply chain, and what we are going to leave behind are all the things that are habit, but no longer essential. A very basic example is Power Point. I think Power Point presentations are a relic of a time when we did not have the ability to access and monitor supply chain information in real time. Tools like [Flex Pulse](https://flex.com/resources/how-we-make-flex-pulse-supply-chain-visualization) (<https://flex.com/resources/how-we-make-flex-pulse-supply-chain-visualization>) that integrate demand, inventory monitoring, manufacturing, quality, outbound transportation and delivery, demonstrate that it is possible to aggregate and interpret live streaming data from multiple sources throughout your supply chain. Every supply chain should have this kind of live ticker. If you are managing your supply chain with old news, then you are not a state-of-the-art, modern supply chain. We need to be prepared for these era-defining shifts.

"I think this could be a 'horse and buggy moment' for the supply chain, and what we are going to leave behind are all the things that are habit, but no longer essential."

SCN: Resilience is another hot topic in supply chain right now. You have said in the past that "resilience is just a euphemism for expensive redundancy." What do you mean by that?

TL: It is not that I am against resiliency, but to me resiliency is like buffer inventory. What supply chain organizations need is transparency. If you see everything, you don't have to

buffer your business every step of the way because you have full visibility. Transparency always trumps resiliency.

With digitization, we have the tools to make that transparency possible. Now it is just up to supply chain leaders to have the will to put it into play, because supply chain transparency requires a degree of data sharing that most companies do not want to do.

But, it is time we cross the bridge to the new, and then blow up the bridge to the old. We have got to get to the point where we recognize that our mutual success is based on the intelligence we gain from information sharing.

I think the new frontier in the next five years will be the integration of applications throughout and between enterprises. Supply chain organizations run so many different applications today. What if we could put a pipe between them and they could “talk” to each other. Then, if we apply artificial intelligence into processes like tracking lead times and setting minimum order tracking, for example, that will create the next level supply chain. The future supply chain is not about drones and robotics, it is an autonomous supply chain where the independent actions of the applications that once ran in parallel can now interact and make decisions together.

“The future supply chain is not about drones and robotics, it is an autonomous supply chain where the independent actions of the applications that once ran in parallel can now interact and make decisions together.”

SCN: Thanks so much Tom. Any final thoughts you’d like to share?

TL: As I said, I have been spending a lot of time thinking about different concepts, like a follow up to China’s Belt and Road initiative.

If we look ahead to the year 2050. A lot of the world, as it exists today, is going to be very different. There is data that indicates that there will be extraordinary changes in the demographics of the world. Countries like Pakistan and Nigeria could have larger populations than the U.S., and if global warming maintains the course it is on today, we can expect Canada to become an agricultural country. All the tundra in Canada could become arable land. The same is predicted for Russia and parts of China.

So, my thought is we need to think about where things are going to be in 2050 and start working on the supply chain design today that will fit that new world order. For example, maybe we should think more pan-American with our regional supply chains. The relationships we have with Mexico and Canada need to be rethought. The challenge for supply chain leaders is to think about what the world will look like in 2050 and then plan backwards from there, but they cannot just iterate and plan in little steps. It is going to be radically different.

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[SCN Article \(http://scnavigator.avnet.com/article/may-2017/the-living-supply-chain/\)](http://scnavigator.avnet.com/article/may-2017/the-living-supply-chain/): What Supply Chain Managers Can Learn From Wolves in Yellowstone

[The Economist \(https://www.economist.com/special-report/2019/07/11/supply-chains-are-undergoing-a-dramatic-transformation\)](https://www.economist.com/special-report/2019/07/11/supply-chains-are-undergoing-a-dramatic-transformation): Special Report – Supply Chains are Undergoing a Dramatic Transformation

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