

RESULTFOCUSED

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PRESS ON. PERSISTENCE PAYS OFF.

By Anton Nieuwoudt

How do you eat an Elephant? One bite at a time. That was the advice to me from a former manager during a complex project where I was tasked to manage various work streams along with my own deliverables. At home I was busy writing my thesis and we had also been blessed with a beautiful baby girl. The pressure was on and I was on the verge of giving up on my studies...something had to give. His council made me realise that although challenges might seem insurmountable, once one break these challenges down into manageable tasks and set specific goals and timelines, even the the most daunting moments can be overcome by simply pressing on.

For me, the midway point of a year is in many cases the toughest to stay motivated and persistent to achieving the specific goals I've set myself. Here are five tips I came across to help me stay focussed:

1. Create a realistic schedule - The key word here being realistic. It's difficult to stay on track if one hasn't written down the steps one is going to take to achieve ones goals and

when one expect to complete them by. Also, remember to be flexible: Nothing productive comes from beating oneself up for being behind schedule. There will be unexpected twists and turns to success. Revisit the schedule frequently and update it accordingly.

2. Surround oneself with like-minded people - At work and at leisure, spending time with people who have a positive outlook on life can be very inspiring. Avoid people who have a defeated attitude and are generally negative, because their perspective will impact ones own thoughts.

3. Never stop learning - When in the process of tackling a big job, there are a few books one can revisit for inspiration. Reading advice from successful people can jumpstart your enthusiasm. At the same time, it can be good to take a break and immerse yourself in another topic to help facilitate the cross-pollination of ideas. Taking a step away helps put everything into perspective, which is so important. (Don't sweat the small stuff!)

4. Carve out time - Find joy in doing something that makes one happy is almost always a good way to releave stress. Also, when stressed out and frustrated, taking time away from what's upsetting can be very helpful. Many times it also enables one to come up with effective solutions when ones head is clear and I've slowed things down. And the reality is that there are a lot of victories to be enjoyed along the way. You'll miss out on life if you're consumed by your ambitions.

5. Set more than one goal - Achieving goals in other arenas of ones life, like fitness and health, will keep you happy and give you confidence. Completing what you set out to do is always possible...It's just a matter of time! One will feel less pressure to succeed at work if one has other things working out. And what one learns about achieving ones goals in other arenas will inform ones professional aims. With that in mind, don't forget to celebrate victories...no matter how small!

"Attitude is the vanguard of your true self."
- John C. Maxwell



AMAZON WANTS TO TURN YOUR NEIGHBOUR INTO YOUR DELIVERYMAN

By Unknown
(theguardian.com, June 2015)

Amazon.com is considering recruiting the man on the street to deliver packages to the rest of his neighborhood.

The e-tailing giant is developing a mobile app that would pay participating members of the public to deliver goods, according to a report in the Wall Street Journal. The low-tech meets hi-tech move is the latest in a long list of schemes to cut the costs of one of the most expensive parts of the Amazon business model, namely doorstep delivery. Amazon has considered GPS tracking-enabled drone delivery (codenamed Bring It to Me) and sealed an exclusive deal with the Post Office to deliver boxes on Sunday.

The neighbourhood delivery program is called On My Way internally, and there are significant logistical problems to be worked out before it solidifies, such as theft prevention, protection against liability, and, of course, cost - big delivery companies and the Post Office are much more efficient than most alternatives.

Amazon is developing a mobile app that would pay participating members of the public to deliver goods, according to a report in the Wall Street Journal.

Amazon isn't the only tech company trying to find inefficiencies in the delivery market: Uber's same-day delivery program just reached its first birthday, but it, too, has had trouble. Starbucks and Apple no longer have contracts with the ride-sharing service, and talks with food-delivery services that might have used Uber have stalled, the Journal reported.

The company may also face legal challenges to any plans to outsource delivery to freelancers. Last week, FedEx [settled a case](#) (after losing the initial appeal) alleging it had misclassified more than 2,300 workers as "independent contractors" and denied them full-time employee benefits. The independent contractor classification is vital to the "sharing economy" suite of tech companies; as that class's constituent workers become savvier about how to deal with their employers, it will likely cost those employers more to retain them.

Meanwhile, Amazon is employing another strategy to offset high shipping costs: the company has begun advertising on the outsides of its boxes. The neighbor eyeing your birthday presents may actually just be really into the new Minions movie. **RF**



DRONES SET TO SOAR TO EVER GREATER SOUTH AFRICAN HEIGHTS

By Katy Chance
(bdlive.co.za, June 2015)

THE MD and founder of Aerial Monitoring Solutions, Adam Rosman — an aeronautical engineer who once designed rockets but now works in unmanned aerial system production and implementation — confirmed that he hates the word drones.

"The industry is moving away from it as much as possible. When I employ people I ask them what they think of drones, and the usual response is of some hellfire missile blowing up civilians. Now we prefer UAVs — unmanned aerial vehicles," he says.

Rosman recently addressed a packed Mensa speaker evening in Johannesburg, tracing the violent history of UAVs and their more recent commercial development. In 1849, Austria filled balloons with bombs fixed to tethered lines and released them on Venice. "This wasn't really a UAV as there

was no control system," says Rosman. "But it wasn't bad for 1849!"

Shortly after the Wright Brothers' first flight, the mechanical gyroscope was invented to control the altitude, attitude and direction of aircraft.

By 1930, there was quite a boom in the UAV market for militaries across the world, although they were still intended for one-way use — "they were essentially aerial torpedoes, so the start of cruise missiles", says Rosman.

With the advent of radio-controlled systems that relayed radio data to a controller, things really took off. The British were first to adopt the technology; they converted De Havilland Tiger Moth biplanes and named them the DH.82B — or Queen Bee, from which the term drones was derived.

It was only in the 1960s and the Vietnam War that UAVs were used for something other than destruction. Cameras were attached to them and they flew into enemy territory. In 1973, Israel created the Tadiran Mastiff, a system capable of seven-and-a-half hours of flight at 100km/h, relaying live televisual data to a ground controller.

A few things changed almost simultaneously, which catapulted UAV technology into the mainstream.

"What really helped was the brushless motor. These motors only started filtering down into the radio-controlled industry in the early to mid-2000s," says Rosman. At the same time, batteries changed to lithium polymer — the same type as found in your cellphone — which are able to dump huge amounts of power very quickly." With open-source software, "we had a way for these systems to control themselves", he adds.

The UAV market has boomed since mass production was begun, resulting in a huge decline in prices. Rosman says UAV's are going to become more widespread soon. We are only starting to touch on their applications.

"The general rule is that UAVs are good for the three Ds: dull, dirty and dangerous jobs," says Rosman, whose company has been involved with monitoring rhinos in KwaZulu-Natal, and reducing poaching.

UAVs can also be used for terrain mapping — monitoring crop health and water concentration, or differences in pH in soils; they can be used to monitor missing power lines (a dangerous job); in some countries they are used for town planning; vehicle tracking; aerial photography for the property industry; security firms have been wanting to use UAVs for years; and, given the recent Ebola horror, their utility in sending vaccines to remote areas seems obvious. All these uses are, at the moment, illegal in SA. The South African Civil Aviation Authority recently issued regulations prohibiting the use of drones within 50m of buildings or people. Rosman was on a committee that worked with the authority.

"Everyone likes to knock SA and think we're far behind in all things," he says. "The truth is that we are one of the most

progressive countries in the world in this regard.

"All countries are pushing for legislation, but only two others, besides SA, actually have something signed. The US is still bickering, and it has 50 states to contend with. Many countries have simply banned the things outright; they don't understand them and so are effectively ignoring them.

Figures released by the Association for Unmanned Vehicles International state that between now and 2025, \$82.1bn will be spent on UAVs in the US alone.

"Are the rules that come into effect on July 1 perfect? No, far from it. But it is a good and necessary start. We have something to work with, and it is important to remember that."

SA's authorities are even negotiating B-VLOS – beyond visual line of sight — the only other country acknowledging this in its (as yet unimplemented) legislation is the US.

Issues around operating licences, medical certificates and prohibitive licence costs will be bandied around vociferously, but from July 1, when things become legal albeit complicated, SA's skies "will be a bun fight".

"The aviation industry is all about safety, and it is, inevitably and everywhere in the world, driven by incident or accident. Unfortunately, it often takes a loss of life or a serious incident before regulations are altered," Rosman says.

Many smaller details of the legislation, such as what constitutes a "road" (which you are not allowed to cross); and the medical certificate to get a radio licence (which you need) being more stringent than the medical certificate you need to get a remotely piloted aircraft systems licence, still have to be fleshed out. But among the bigger "problems" with UAVs is that of payload and its deployment.

As the legislation stands, you cannot attach any payload to a UAV, which means that delivery of goods is some way off.

"This is, frankly, because they don't want to deal with the issue," Rosman says. "But it is in the legislation, which means it will be and must be addressed at some stage."

And, as he drolly points out, every single clause in the legislation has a final, fine-print comment noting that it can be "circumvented" given the right circumstances.

Amazon did, famously, try to deliver goods with UAVs, but locals worked out their flight paths and took to shooting them down with shotguns. However, Rosman does envisage a time when companies will have their "own" airspace and will be flying and delivering goods within it.

There is also the very real payoffs of UAV usage and the industry becoming regulated and, thus, flourishing (if it can be taxed, it will be encouraged).

Figures released by the Association for Unmanned Vehicles International state that between now and 2025, \$82.1bn will be spent on UAVs in the US alone. In the same period, 100,000 high-paying jobs will be developed, 70% of them in the first three years — and all of this in the civilian-commercial sector. If the US does not get its legislation in place quickly, the industry is set to lose \$10bn.

"At the moment, China is the biggest commercial UAV manufacturer and the US the biggest UAV consumer in the world," says Rosman.

"But this is expected to shift to Africa, which will be the biggest commercial UAV operator and consumer within the next few years."

All UAV eyes are on Africa as they are relatively low-tech and inexpensive to make. "Already a lot of African countries are interested in getting their own legislation in place and SA will be the hub that drives this." Africa is expected to be the first continent where UAVs fly cargo routes. Google has just bought about 15 UAV firms as they are looking to roll out Wi-Fi in Africa, for which they will need high-endurance UAVs moving around the continent." Watch this air space.

RF



FINDING AND RETAINING THE SUPPLY CHAIN WORKFORCE OF THE FUTURE

By Abe Eshkenazi
(industryweek.com, June 2015)

The supply chain management profession is experiencing rapid change and growth. Only 15 years ago the field was just emerging and not a focus of employers, university programs, or job seekers. Today the field is garnering new levels of attention and boasts one of the most rewarding and vibrant career paths for determined, college-educated, young professionals.

Technology and globalisation have changed the skillset required to be successful as a supply chain professional. Those pursuing supply chain careers need to understand not only their organisation's supply chain, but also that of their customers, vendors and suppliers. Few business functions require this vast range of expertise, and employers are making significant investments in training to keep up.

However, despite the best efforts of educators and employers, fast growth has resulted in a major talent gap. In the manufacturing industry, for example, a recent survey shows that 67% of manufacturers report a severe shortage of qualified workers. Furthermore, 56% of respondents expect that shortage to become worse in the next few years. It was also estimated that 5% of manufacturing jobs—600,000 positions nationally—go unfilled due to the lack of qualified workers.

While universities are now offering undergraduate and master's programs to fill this void, they can't keep up with the demand for supply chain talent. As a result, it's important that companies take action to find qualified individuals and retain them, a process that has become increasingly tough.

Following are action steps supply chain organisations can implement to attract fresh talent and keep employees engaged.

How to Attract the Most Qualified Talent Focus on the individual's career path.

Organisations should define and articulate the career opportunities available across their supply chain. Opportunities for career advancement in supply chain are vast and provide an atmosphere for ongoing and consistent learning. Candidates will be

engaged more easily if they can envision the career trajectory for the job they're considering.

Make recruiting a 24/7 priority. In most organisations, recruiting and networking to prospective employees is simply not a priority until there is a business need. However, if companies make searching for employees an ongoing process, it will be easier to access a pool of potential talent when a need arrives. Hiring managers should always be on the lookout for new recruits.

Align as an industry. More students should be exposed to the supply chain profession in high school and college. Many college educated students and even young professionals are unaware of the positive aspects of a career in supply chain. For example, many don't realise it is one of the highest paying jobs that doesn't require a graduate degree. To combat this lack of information, organisations should make a coordinated effort to promote the profession as a whole. A good way for businesses to get involved and collaborate is by joining a professional association.

Retaining the Best Employees

Hiring great talent is only half the battle. Keeping them engaged is just as important.

Embrace diversity. Diversity is healthy for companies because it brings people of varying points of view and backgrounds together and expands the organisation's knowledge base. Examining a company's recruitment programs may reveal opportunities to identify atypical pools of applicants. By taking the time to review retention programs, companies can improve on the existing (or non-existing) approaches to diversity. All organisations should have programs in place to foster and develop a diverse employee base.

Emphasise mentorship over managers. Whether through an official program or informal support, mentorship is key to retaining talent and encouraging individual and professional growth. Mentorship programs create a platform for collaboration and understanding between employees at different levels and career stages.

Provide generous training and learning opportunities. Encouraging employees to develop professionally—and making it easy to do so—builds employee loyalty while strengthening your workforce. Many associations offer professional certifications, topic-specific training and webinars.

Supply chain management is a very exciting field and opportunities are abundant in the long term for those who want a career in the sector. However, to ensure the profession continues to progress, the talent gap needs to shrink and companies need to be more proactive about communicating the benefits of supply chain careers. Taking steps to attract and retain employees will result in a skilled, stable and motivated staff and improved supply chain operations. **RF**

Technology and globalisation have changed the skillset required to be successful as a supply chain professional. Those pursuing supply chain careers need to understand not only their organisation's supply chain, but also that of their customers, vendors and suppliers. Few business functions require this vast range of expertise, and employers are making significant investments in training to keep up.



MISSION CRITICAL KPI'S: HOW TO KEEP A TMS IMPLEMENTATION ON TRACK

By Chris Cunnane
(logisticsviewpoints.com, July 2015)

I have been conducting a lot of research around TMS applications recently, and my colleague Steve Banker and I began to discuss how TMS providers keep their implementations on track. We determined that the providers must use a set of criteria and KPI's to make sure that the project stays on time and on budget. The big question we had, however, was "what KPI's do they use?" I recently spoke to Vivek Chhaochharia, Senior Solutions Director, Global Consulting Services at JDA about how they keep implementations on track.

Vivek informed that JDA has two main components to keeping an implementation on track. First, every implementation has a baseline set of KPI's to keep the project on track. And these KPI's are in place across the board, meaning every implementation of every project. To begin, JDA makes sure the implementation is adhering to cost, time, and resource constraints. JDA also performs a solution quality audit, to make sure the solution will meet the needs of the customer. Finally, JDA performs a program quality audit. The program quality audit is performed to make sure the customer is happy, and that business needs are being met. It also measures the quality of design of deliverables, and how is the project doing in terms of change management and risks. These audits are done every 4 months, or depending on what stage they are in, it can be more often. There are quality checks done before testing, and after every stage to make sure they are on track.

Vivek also mentioned that there are five main KPI's in place for TMS-specific implementations: overall ROI (or value), solution acceptance, planning cycle times, productivity impact, and a global template approach to deployment. Additionally, there are often customer-specific KPI's that are used to measure the program.

Below is an outline of how JDA uses each of these KPI's to keep a TMS implementation on track.

Overall ROI: At the beginning of the implementation, a modeling study is performed. This looks at the current baseline as well as the functionality needed to execute

on the business today. The company studies to see what areas they can benefit. Depending on the implementation, what the overall value could be. During design and construct, they make sure they are on track.

There are five main KPI's in place for TMS-specific implementations: overall ROI (or value), solution acceptance, planning cycle times, productivity impact, and a global template approach to deployment. Additionally, there are often customer-specific KPI's that are used to measure the program.

Communication: The key part of these KPI's is to make sure they are communicated to the customer. According to Vivek, JDA is in constant communication with their customers during the implementation process. First, the company sets a baseline with customers. They figure out what to achieve and how to achieve it. During the initial phase, they define the criteria and KPI's. The project manager and solution architect are responsible for defining both. During all phases of the implementation, feedback is communicated through a variety of means, including reports and meetings. **RF**



INVENTORY MANAGEMENT LEVERS – SUCCESS THROUGH COLLABORATION

By Paul Snell
(supplymanagement.com, May 2015)

Solution Acceptance: Here, JDA looks at the quality of planning. When the company runs an optimisation, how many are turned out as unplannable? This could be determined by missing rates, bad data, shipment windows too small, etc. The goal is to get as close to 0% as possible. The company also looks at how often the user needs to touch the results of planning. Again, the goal here is as close to 0% as possible.

Planning Cycle Times: This KPI looks at specific windows where planning cycles need to be finished. This is key for keeping the implementation on time.

Productivity Impact: JDA looks at the current size of planning team. What will the size be after implementations and what tasks will they be performing. The goal is to ensure that future productivity will not be impacted during or after the implementation.

Global Template Approach to Deployment: This KPI is designed for global rollouts of TMS application. The company designs a global template which can be customised at a later date. This makes each region faster, at about 1/3 the time of normal implementation.

So you're an inventory manager, and your CFO just asked you to reduce inventory by 10% before year end to free up some capital for next year's big investment in R&D. At first glance, it's not so bad; you've got nine months to do it. But then you look at historical trends and see that lately, your inventory has been growing by 3% each quarter. Suddenly, you need to be about 20% below your current year end plan! That's a big challenge! On top of that, you know you'd better do it without negatively impacting your customer service levels, because you can't afford to spend all your time **fighting fires** for your customer service representatives. So, what improvement levers can you pull to accomplish this goal? Do you have the authority to act on your own? Even if you don't, you can be sure that you'll be held accountable anyway!

Below are five levers that I believe should be available to an inventory manager to help them effectively plan and **manage inventory**.

Safety stock settings: Safety stock is used to achieve high customer service levels by acting as a buffer to overcome supply variability (internal and external schedule

performance), quality (internal and external) and inventory records errors. It can also be used to lower lead times for your customers and buffer against highly variable demand patterns. There are numerous ways to apply safety stock policies. They can be fixed or time-phased, they can be dynamic based on **demand forecasts**, and they can even be recommended by advanced systems using single-echelon inventory planning or multi-echelon **inventory optimisation** techniques. Whatever method you choose, just make sure it's based on more than gut instinct! Your safety stock should allow you to achieve your customer service targets without breaking the bank.

Order policies: Order policies allow you to tell your planning system how to calculate your supply requirements based on the current demand picture. The following are some key order policy modifiers that can have a major impact on the quality of your inventory. Lot size modifiers, such as minimums, multiples, and maximums, all affect the size of the orders that will be placed. They also impact the difference between your minimum and maximum inventory levels. These modifiers help improve cost efficiency through batching, but they can also increase the rigidity of the planning system. It's important to ensure that you are striking the right balance between part cost and inventory carrying costs. Cycle time buffers are the back-offs that allow your planning system to account for things like the time that it takes to place an order and dock-to-stock time (especially where there's an incoming quality inspection). Minimising these back-offs by improving the efficiency of those processes can decrease the inventory's dwell-time within your facility. Periods of supply settings impact how often you make your orders, and therefore how large your orders are. You must find the balance between total order costs (every extra order adds processing costs) and inventory carrying costs. If you can reduce your periods of supply, then you can reduce the size of your orders and tighten the band between your minimum and maximum inventory levels. Once you've exhausted the opportunities with these traditional order policy settings, you might find additional opportunities by increasing the granularity of your planning. For example, you can use your planning system to recommend splitting purchase orders to tighten your supply-demand balance, or you can try to break up bills of material that have long cycle times to ensure that your parts are arriving at the right stage of the manufacturing process. These techniques can have significant pay-offs, but they require a deep understanding of your manufacturing and supply chain processes.

Lead-time and cycle-time reduction: Long supplier lead times require you to maintain higher safety stock levels, and they often drive larger order quantities. Looking back to Vendor managed inventory programs can play a big role to reduce supplier lead times and variability by providing better information to the supplier. Combining VMI programs with a consignment program can also go a

long way to reducing total on hand inventory and cash-to-cash cycle times. Cycle time refers to how long the inventory is in house. Long and complex manufacturing processes often have long cycle times. There may be opportunities for an inventory manager to collaborate with manufacturing and industrial engineers to improve the velocity of inventory through the manufacturing process. This accelerates the rate of consumption, so inventory stays at its max level for less time.

To effectively manage inventory it is critical that inventory managers can collaborate effectively with other teams in their organisation.

Reduce variability: Variability is introduced by many different factors. Primarily, it comes from supplier lead time variability, internal cycle time variability, demand forecast variability, inventory record errors, engineering changes, and quality issues. All of these factors contribute to higher safety stock levels (the minimum inventory level in Figure 1). For an inventory manager to be successful, he needs to know these variability measurements, identify root causes, and collaborate to resolve these issues. This might mean rescheduling an engineering change, upgrading a manufacturing process, implementing a VMI program, or tightening inventory controls to improve accuracy.

Increase agility: Change is inevitable. A recent [article from APICS](#) suggests that chronic disruption impacts over 70% of supply chain managers. They identify the cause often stems from internal issues,

including lack of qualified personnel and inadequate information technology. The inventory manager should be empowered to drive significant change in their organisation to improve inventory results.

Early results of our [survey on inventory management](#) (details below) indicate that many of these levers aren't controlled by the inventory manager. This makes sense, as the changes to these levers can have significant impacts on other parts of the company. This means that to effectively manage inventory it is critical that inventory managers can collaborate effectively with other teams in their organisation. This includes material planners, buyers, business management, master schedulers, demand planners, customer service, finance, sales, and marketing. It often takes a company-wide effort to achieve success. The inventory manager should have the tools to drive this collaboration and, where needed, increase awareness of inventory issues to promote understanding. **RF**



THREE WAYS TECHNOLOGY IS TRANSFORMING SUPPLY CHAINS

By Unknown
([greenbiz.com](#), July 2015)

Over the last few years, technology quickly has become so integrated into daily life that it seems nearly impossible to imagine a normal workday without some gadget or software to help make life a little easier.

Not only have ordinary citizens adopted tech to suit their needs and desires in the form of smartphones, tablets, wearables and the various applications that exist on these platforms, but entire enterprises and departments within businesses also couldn't function in the manner we've come to expect without it.

There are few areas of life where technology hasn't made a large impact, and that seems to suit the general public just fine. Because of this close integration, [technology in and around the supply chain](#) is a vital part of company operations.

Here are a few examples of the importance of technology to supply chain, manufacturing and procurement services:

IT Leadership Meets Operations: As businesses across the world realise just how vital technology is to their operations, new

positions have been added to address the growing need for expertise. However, some enterprises are opting to put refined knowledge on the subject to use on supply chains, with chief information officers being promoted to senior operations positions. As The Wall Street Journal reported, [Cisco Systems made Rebecca Jacoby, former CIO, the senior vice president of operations](#) and put the well-being of the supply chain in her hands - a move that highlights the importance of technology in supply chain management. Cisco is not the only company to recognise the shift toward digital. Not only is management easier when leveraging applications for supply chain means, but there's far more control to be had. IT experts are not only ideal for this position because of their extensive knowledge of existing systems, but they probably are more likely to think of how they can leverage other technologies in the future.

Tech-Assisted Transparency: The best way for a supply chain to run smoothly is to have full transparency across the board. Suppliers and procurement services are more likely to fall into hot water if they shroud their transactions in secrecy related to environmental or social impacts. And these days, consumers have many questions about the origins of their food, clothing, electronics, etc., and outright transparency would be able to answer those questions with some swift moves of a finger on a smartphone screen. CoinDesk reported that developers, using technology inspired by BitCoin, [are working on an application](#) that will be able to outline and address all questions that someone may have about the supply chain of a given item. The source noted that restaurants could list the ingredients in a dish and this new applications would be able to tell the diner where the crops came from and how they were grown. Not only is this transparent, but it gives consumers a sense of control - an appealing concept for many discerning "foodies."

Keeping a Competitive Edge: As far as the technological world is concerned, providing the public with the newest software or feature is the most important key to the game. If a company can beat out a competitor by getting the product out just a few weeks before a competitor, it most likely will be seen as the front-runner and an innovator, while the business that falls behind could be seen as a copycat. The Register noted that Apple has been playing around with the idea of a [dual-lens for its camera that helps with depth-sensing technology](#). Currently, there's no patent for the sensor because there had been many issues and holdups in the supply chain back in 2010.

Of course, Apple is not the only company implementing this sort of camera; competitors such as HTC and Samsung are also looking into such tech.

As these examples demonstrate, technology is already important in and for the supply chain - and it's only going to get more integrated as time goes on. **RF**



IS APPLE CREATING “THE ULTIMATE CAR” SUPPLY CHAIN?

By Dawn Chmielewski
(supplychain247.com, June 2015)

They call him Tim Cook's Tim Cook. [Apple's operations chief Jeff Williams](#) may be less well known than some of the technology giant's other senior executives, but when he stepped on the stage at [the Code Conference](#) he demonstrated a relaxed mastery of a range of topics, from the intricacies of Apple's complex supply chain to the long-range potential of ResearchKit. As one of Cook's trusted lieutenants, Williams has played a significant role in Apple's entry into new categories, including the recent debut of the company's first smartwatch, and, before that, the mobile phone market with the launch of the iPhone. He has overseen worldwide operations for the iPhone since 2007.

Williams oversees a sprawling logistics operation that, at its peak, employs some 40,000 people to support the iPhone. Over the recent holiday quarter, Apple shipped 74 million iPhones - so many that, if stacked like pancakes, the slender mobile devices would reach the International Space Station, he notes.

Williams seemed to hint at Apple's interest in the automotive market in his response to one question about what the company plans to do with its huge cash hoard.

“The car is the ultimate mobile device,” Williams said, quickly adding. “We're exploring a lot of different markets.” Williams said that the deciding factor in choosing new businesses is not the opportunity for revenue growth, but rather “which ones are ones [in which] we think we can make a huge amount of difference.” One area with growing potential is [ResearchKit](#), software that allows Apple's iPhone to be used as a tool for medical research. Williams said the technology already is being used to aid the study of Parkinson's Disease, heart health, breast cancer and asthma.

“Usually it takes a year-plus to see results, we're seeing (it) in weeks and months,” Williams said.

Five reasons Apple is set to create a car Supply Chain

Why would Apple try to successfully operate an automotive supply chain on a

worldwide scale? Perhaps simply because it can.

With almost \$180 billion in cash reserves, the company is already on a better footing to enter the car industry than when it reinvented the smart phone market with its iPhone.

Apple has yet to announce that it is even developing an electric car, despite numerous analyst and media reports and strong indicators that it is very much indeed making sizeable investments in an electric car model it plans to produce. Apple could begin production of its car model in 2020, [according to Bloomberg](#).

But before Apple's project does become official, here are five reasons why Apple is more than ready to manage a multibillion dollar automotive supply chain.

With almost \$180 billion in cash reserves, the company is already on a better footing to enter the car industry than when it reinvented the smart phone market with its iPhone.

\$178 billion burning a hole in its pocket

The automotive business is traditionally a complex, low-margin industry usually requiring that automakers spend billions of dollars in capital expenditures in order to compete on a worldwide scale. Designing, producing, and selling cars also requires a lot of cash, with often low returns and losses depending on hard-to-predict and fickle market tastes and a myriad of other variables.

If and when Apple does launch its electric car, it almost certainly will not compete directly against the top-five automakers, such as General Motors, which is expected to see \$9 billion in capital expenditures in 2015 and sold 9.92 million cars last year. Instead, Apple would most likely compete against newcomer Tesla, which is a niche electric car maker that offers an iPad-like infotainment system in its models. Last year, Tesla sold 22,450 cars and invested close to \$1 billion in capital expenditures.

Some observers see Apple's move into the low-margin and capital-intensive automotive industry as a sign that it does not know what to do with its cash. But with \$178 billion in cash reserves, Apple can easily out produce and spend Tesla by a factor of five or

even 10. It also could, if it wanted to (but will almost certainly not), match General Motors' capital expenditures over a couple of years or more before even putting a dent in the free liquidity it has available.

A ready roster

Apple already has made hundreds of high-level hires who hail from the car industry. Within its top-level executive ranks, Apple CFO Luca Maestri has two decades of experience working for GM where he held finance- and operations-related executive positions.

Apple has recruited hundreds of other auto industry insiders to join its development team. According to the Wall Street Journal, Apple has recruited hundreds to work on its supposedly secret electric car project, many of whom hail from likely rival Tesla. Among its hires, A123 Systems, an electric car battery maker, claims in it lawsuit filed against Apple this month that Apple has illegally tapped design experts and other talent from its company. Those whom Apple has hired are also violating their employment contracts, A123 Systems claims in its lawsuit. Regardless, Apple now has acquired in-house talent it needs to develop batteries, a critical component of electric cars.

Design genius

Apple's products have transformed the PC, tablet, and smart phone industries with its minimalistic designs and ease of use that have helped make Apple one of the most recognised brands in the world. Given that cars still can make a fashion statement and how design largely determines whether a particular car model becomes a hit or a dud, the automotive industry would have a lot to gain from Apple's designers' genius. While it has been revealed above that Apple has recruited engineers to get the technology part of electric cars right, its design team certainly has the talent to make an iCar that could define mobility in a very unique and popular way as it has done in the PC, smart phone, and tablet sectors.

Different ways to slice the apple

Apple already sells electronic designs and software interfaces for automotive infotainment, while developing a car around that will only help its high-margin design licensing business, even if does not end up commercially launching its “iCar.”

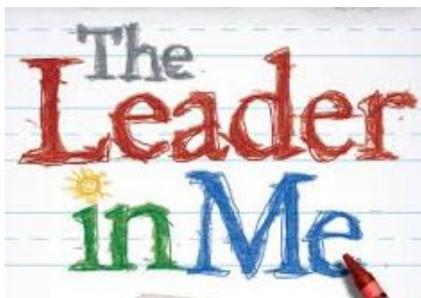
[Already, CarPlay, Apple's iOS for automotive infotainment, is available in cars.](#) Ferrari, Honda, Hyundai, Jaguar, Mercedes-Benz, and Volvo are among those carmakers that offer Apple's CarPlay as an option. The interface will eventually be available in 25 million cars by 2020, according to IHS Automotive.

Apple also has a successful history of OEM design experience, which it can apply to the development of its own car or for embedded systems for car dashboards. Its infotainment systems would likely serve as in-car extensions for its PC, iPhone, iPad, and iWatch devices.

Global business, global supply chain

Carmakers are in a tough business. They must margins out of a complex network of suppliers, production sites, and other business operations. Often spread out in different locations around the world; large automakers typically must manage regulations and laws, sourcing channels, currency values, and demand that can vary from one region to another.

Much of Apple's production is in Asia and it has been sourcing electronic components and other devices from around the world for decades. So managing supply chain operations around the world is something Apple is very good at. Apple will obviously be a newcomer to the automotive supply chain, but it already has a stellar resume when it comes to managing the complexities of worldwide production and procurement. **RF**



3 KEY DECISIONS WE MAKE EVERY MOMENT OF OUR LIVES

By Bill Carmody (inc.com, July 2015)

Every moment of every day there are three key decisions that determine the outcome of our lives. This incredible insight came at the end of Tony Robbins's book Money, Master The Game (see related article [7 Simple Steps to Financial Freedom](#)). I loved the quote that kicked off this section of his book: from Henry David Thoreau, "Wealth is the ability to fully experience life." A great quote, and you can see the application based on each of the three key decisions we make every moment:

Decision #1: What am I going to focus on?

Throughout my life, I have had many mentors, coaches, and teachers who have encouraged me to "Be Here Now." When we focus on the past, we tend to bring up feelings of regret. When we focus too much on the future, we tend to feel anxious. The only moment we can do anything about is the present. Or, as Tony Robbins puts it, "...where focus goes, energy flows. What you focus on and your pattern of focus, shape your whole life." So I ask you, where do you put your focus? Are you filled with gratitude (see related article, [The Secret to Happiness](#)), or are you obsessed by what

you don't currently have in your life? Gratitude will bring you peace and happiness, while focusing on what you don't have will bring feelings of anger, frustration, and disappointment.

Moreover, are you focused on the things you can control or the things you can't control in your life? Remember the [serenity prayer](#)? "God, grant me the serenity to accept the things I cannot change,/ The courage to change the things I can,/ And the wisdom to know the difference." When you focus on what you can't control, you cause yourself great deals of stress. For example, you can't control how someone else treats you, but you can control how you respond.

Once you decide to focus on something (regardless if it is the right thing to focus on or not), you shift immediately to the next decision.

Decision #2: What does this mean?

"Ultimately, how we feel about our lives has nothing to do with the events of our lives, or with our financial condition, or what has or has not happened to us," says Tony Robbins. "The quality of our lives is controlled by the meaning we give these things." This is an incredibly important distinction, and one that most people don't truly understand. One of my earliest black belt instructors used to tell me, "When someone pushes your buttons, you should thank them." That drove me crazy. How could this be? They are PUSHING MY BUTTONS!!! To which he would ask me, "Why, Bill, do you still have buttons others can push?" It took me some time to really understand his point, but eventually I got it.

When someone calls you out on something, your own perception gives the event meaning. Do you perceive the person as "attacking" you? Or perhaps "teaching" you? Or even "loving" you? We all have our built-in filters; how we perceive the world impacts our emotional state and how we react to the exact same event that millions of others also experience. Or, as Tony Robbins puts it, "Your life becomes whatever meaning you give it ... meaning equals emotion, and emotion equals life."

The trick is to assign powerful and empowering meaning to anything that happens in your life. Do that and you will not only grow, but also find strength and a sense of purpose in the most adverse and seemingly terrible circumstances. You cannot control all the events in your life, but you can and do control what meaning you assign to these events. If you believe that all the events in your life happen so that they make you stronger, more powerful, and more successful (even if they don't immediately feel that way in the moment), then deep meaning and purpose will saturate your life.

Decision #3: What am I going to do?

Given any event, you will decide to take some sort of action. The emotions you are feeling (given the first two decisions of Focus and Meaning) greatly impact actions you choose to take. Or as Tony Robbins puts it, "The actions we take are powerfully shaped by the emotional states we're in. If we're

angry, we're going to behave quite differently than if we're feeling playful or outrageous."

Here's the thing: If you want different outcomes in your life, you need different patterns. How you see the world and where you spend your time thinking about things shapes the first two areas of Focus and Meaning. It's incredibly difficult to take the right actions if you're in a bad place emotionally.

Here's the thing: If you want different outcomes in your life, you need different patterns.

Most of us begin our days via mobile devices. Who texted me while I was asleep? What problems await me in my e-mail inbox? What horrible tragedies will be brought to me in the news today? What five things did I think of in the shower that I now need to add to my to-do list? Sound familiar? How can we make important decisions when we start our day with negative thoughts and emotions?

An alternative approach is what psychologists call priming, and Tony Robbins and I highly recommend it after adopting this practice for the past 4 months. At its most basic level, it's about taking ten minutes each morning to complete a guided meditation. There are three focused sections:

What three things are you most grateful for? (These can be people in your life, events that you can easily visualise, or a set of circumstances you truly appreciate).

Which three people do you wish to share your blessings? (These people can be your spouse, kids, parents, friends, co-workers, mentors, or anyone who has touched your life in a meaningful way).

Envision three future events that you can celebrate now as if they have already happened. (This is about feeling the joy of a future event you're working hard to accomplish and celebrating it as if it has already happened).

If you incorporate priming into your daily morning ritual, you will start the day in an optimal emotional state and be far more likely to focus on the right things and give positive meaning to the events that occur throughout your day. This positive emotional state will lead to making the right actions and moving consciously toward your desired outcomes. In this way, you can make sure that you actualise the three key decisions we form every moment of our lives the right decisions that produce your desired outcomes (see related article, [The Secret to Happiness](#)). **RF**

Note - All credit goes to the particular author and/or publication of the articles shared in this publication.

Result focused logistics and supply chain advisory services

By Anton Nieuwoudt / Niels Rudolph

dasRESULTAT is a results focused logistics and supply chain management advisory company with greater than 30 years combined experience in various functional areas of logistics and supply chain management across diverse industries.

Our primary objective is to support our clients to reduce operational costs and increase their service offering to their clients through optimising their supply chain, by offering a wide range of services based on our own practical experience.

Leadership

dasRESULTAT stands under joint leadership of Anton Nieuwoudt and Niels Rudolph.

Anton has close to 15 years experience in logistics- and supply chain management across various industries.

Prior to co-founding dasRESULTAT as a boutique logistics and supply chain advisory company, Anton was at Accenture where he was involved in various projects in the Retail, Mining, FMCG and Energy sectors. Here he was able to expand and apply his fulfillment, supply chain management, supplier management, project management and business consulting expertise.

At DB Schenker, Anton gained experience in integrated logistics management, spare parts logistics as well as inbound- and outbound logistics solution implementation.

Anton holds a Bachelors degree in Marketing from the Rand Afrikaans University and a Masters degree in Logistics Management from the University of Johannesburg.

Niels has more than 20 years experience in logistics- and supply chain management mainly within the 3PL industry.

Prior to co-founding dasRESULTAT as a boutique logistics and supply chain advisory company Niels founded ORAscm as a specialised logistics consultancy company. He also worked at DB Schenker and PriceWaterhouseCoopers in Germany as a project consultant.

Niels spent the largest part of his career at DB Schenker in various roles in Germany, Singapore, Malaysia and South Africa. During his last role at DB Schenker in South Africa, Niels was responsible for logistics development, reporting directly to the CEO. Here he applied and expanded his knowledge to develop logistics solutions across the local automotive, high-tech and retail industries.

Niels holds a Diplom Betriebswirt (BA) from Staatliche Berufsakademie, Mannheim (Germany).

Functional experience

Our functional experience include among others warehouse design & management, transportation management, inventory management, demand planning, supply planning, supply chain planning, supplier relationship management and project management.

Industry exposure

We have had exposure to industries such as retail, automotive, consumer goods and services, petrochemical, mining and defense aerospace.

Core offerings

Through our core offerings we can support our clients to achieve strategic, tactical and operational results. These offerings cover areas such as Strategic Supply Chain Planning, Fulfillment, Sourcing & Procurement, and Project Execution.

Significance

Through our part-time lecturing commitments to the University of Johannesburg we continue to be actively involved in tertiary education and student mentoring programs to encourage excellence in up-and-coming supply chain professionals.

Credentials

Since founding the company in the fourth quarter of 2012 we've been involved in various engagements.

Our primary engagement in 2013 has been with a leading global third party logistics company. Here we've been instrumental in the turn-around of their contract logistics department, transportation management strategy and operating model design, Africa business development strategy, and procurement strategy development.

Secondary engagements during our first year of operations included a warehouse performance assessment at the Cape Town operations of a global apparel company, supporting a logistics service transition at a German automotive manufacturer, and providing warehouse implementation support for an agricultural equipment manufacturer.

We continue to support a transportation consulting company with project management and subject matter advisory at a South African FMCG company. With this client we have since May 2014 also embarked on a journey to evaluate and redesign their Import-Export service provider landscape which has flowed into a full blown group level RFQ process for carrier and clearing services. Along with the client we were able to unlock an overall 15% saving in their annual freight spend and associated landside and finance charges.

At a Kwazulu-Natal based manufacturer of engineered wood products, we continue to provide subject matter support for various logistics cost saving and process efficiency improvement initiatives. **RF**

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dasRESULTAT is a results focused logistics and supply chain management advisory company.

We partner with our clients to identify and unlock practical and sustainable supply chain solutions.



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