



ALGORITHM COUNCIL

The Missing Management Piece
for Today's Companies

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“Companies need to focus on driving their business in an aggressive yet thoughtful way. Algorithms are a key ingredient in making this happen.”

**Sam Palmisano, Former Chairman and CEO, IBM and
Founder, Center for Global Enterprise**

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Chapter 1: Executive Summary

Almost every company in the world realizes the importance of developing algorithms that help run their business. And most recognize that the convergence of artificial intelligence (AI)/machine learning (ML) technologies, the explosion of data from sensors and IoT devices and new information from social media and other sources make it the right time to invest in a more integrated algorithm strategy. The importance of algorithms and the required urgency of action around them is the consensus view of the 83 companies that comprise the Digital Supply Chain Institute (DSCI). But what has been missing thus far is focus on how to manage this critical resource and the assets they produce.

It is DSCI's view that markets will be won by companies that effectively create, manage, and deploy algorithms for everything from customer demand sensing to data cleansing to inventory management. Companies that are faster and smarter at developing and managing algorithms, proprietary and public, are going to win in industry after industry.

And yet, almost all companies report difficulty in moving ahead for several reasons:

1. Lack of consensus about what algorithms are, a lack of visibility in the company about which algorithms are effective and how to utilize them across an enterprise for extended functional value (EFV).
2. Inadequate people resources that have the requisite data science skills.
3. Inadequate people resources including people that can be the bridge between business units and data scientists.
4. Insufficient technology that is capable of collecting, cleaning and analyzing the vast amount of new data companies gather every day.
5. Organizational boundaries that prevent the collection and sharing of new data inside the company and the creation of powerful algorithms that will win a market.
6. Uncertainty about whether and how to share data with customers and suppliers.

This paper will review what can, should and is being done to overcome these difficulties. We will lay out a roadmap that can help your company make rapid progress. Most importantly, we will describe what you need to do now to organize for success.

For most companies, developing an organization, culture, and process driven by algorithms requires transformational change. While Google, Amazon, and Uber are great examples of digital natives that create and use algorithms; some of the most interesting work is being done by sector-leading companies such as Dell, Colgate-Palmolive, Under Armour, Li & Fung, Corning and others.

What we discovered in our research is that there is a missing piece that must be found and developed if the company is to excel in using algorithms to drive success.

“Companies are struggling to figure out how to turn all these bits and bytes from a bothersome liability into a competitive advantage. To accomplish that, smart supply chains can help by developing innovative algorithms and creative approaches to handle those challenges.”

**Wu, L., Yue, X., Jin, A., Yen, D.
Smart supply chain management¹**

We call this piece the “Algorithm Council” and it is a cross-functional group of leaders from sales & marketing, supply chain, human resources (HR), information technology (IT), risk management, and finance. We will define why this is needed, what its role is and how it should be implemented in this paper.

But first, we need to paint a picture of what is happening now in businesses around the world. And we will start with a definition of what we have termed the “Algorithm Council.”

ALGORITHM COUNCIL

“A cross-functional decision-making team that identifies and defines specific business problems that span supply chain and other functional areas, creatively identifies the data needed to solve the problem, identifies good decision-making criteria and coordinates with the “data originating teams” to select and modify the appropriate algorithms to solve the problem. The Council then monitors the resulting performance and adjusts as needed in a continuous improvement cycle.”

“We can see growing interest in utilizing evolutionary algorithms in recent advanced supply chain management problems.”

Govindan, K. Ann, Operations Research (2016)²

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Chapter 2: Algorithms: What are They and What do They do?

All companies have rules of thumb, formulae, spreadsheets, and calculations that could be called algorithms. Sometimes these formulas are written down, sometimes they are in an Excel spreadsheet, and sometimes they are backed more by intuition than by data and analytics. Most companies have not cataloged the algorithms that they use to drive their business. And fewer still have systematically determined what current algorithms are effective. Or have holistically evaluated what is needed and how to collect the data that would give them a winning edge. As a result, few companies have cataloged their algorithms, collected the best data and used AI/ML to create solutions that get better with every transaction.

In this paper, we focus on the management process of developing algorithms that enable a company to win big in the marketplace. Algorithms that can drive a company to increase market share, grow revenue, reduce risk and fine-tune their operations to meet customer needs better than anyone else in the world.

WHAT IS AN ALGORITHM?

“An algorithm is a formula that is used to drive business success. It is designed to use data from a variety of sources, often blending public and proprietary data in a unique way. If it is using AI/ML, the algorithm gets smarter after every transaction and often replaces the need for human judgment.”

Some algorithms are **open source**, that is to say that the formula is known to all the players in an industry. For example, there is an open source algorithm for calculating the amount of stock of a consumer item that should be held in inventory. It is based on historical usage, market trends, inventory turns and target safety stock.

A company can create an advantage in the marketplace by deploying an open source algorithm with better data than the competitors. For example, Goodyear is considering installing tire sensors that monitor tire wear. The usage data that they would collect will be much more accurate than current methods used by other tire companies. They could collect the new data, approach the customer with a tire solution at exactly the right time, and potentially avoid having the customer go to a tire store to shop across other brands. They would also be able to dramatically reduce the amount of safety stock because they would have visibility into demand over the short, mid, and even long term. Some industry practitioners call this an improvement in demand forecast accuracy.

Other algorithms are **custom** or **proprietary**. They are based on a deep understanding of the market and customer using a unique formula to collect, combine and analyze data. For example, Facebook has algorithms for determining which posts made are shared with you. You will also have specific product and service offers made to you based on Facebook's proprietary algorithms. No one outside of Facebook knows the algorithms that they use. But everyone knows that they are very effective and can drive customer purchase behavior. That is why companies are spending more, and more of their marketing spend on social media. Social media giants, like Facebook or LinkedIn, offer advertisements to a specific group of people who are most likely to become your customer. Google has its own set of proprietary algorithms. It is remarkable how well Gmail seems to know everything about us and direct product and service offers to us that hit the mark. Companies around the world try to work the algorithm to get their messages out to the right set of friends, or Gmail users, and turn them into customers.

Could your company benefit from a set of algorithms that was so powerful that customers and suppliers were desperate to see how they worked? It is also important to recognize when an algorithm is generated by machine learning and then “trained” by data. That way your algorithm gets smarter every day, and you move closer and closer to winning with algorithms.

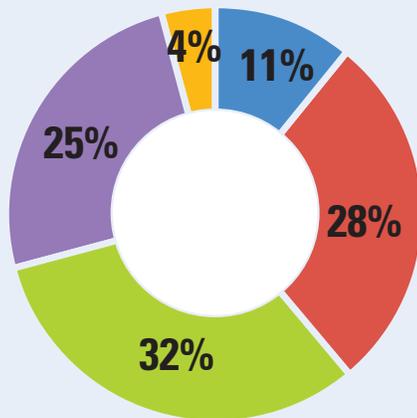
You might be thinking “But Facebook and Google are digital natives, and their techniques do not apply to a traditional business.” Not true. Traditional companies are harnessing the power of algorithms to change the course of their business.

Under Armour, a company that focuses on performance focused sportswear, has deployed a line of athletic shoes that contain sensors that record your workout in terms of time, location, pace and a variety of other crucial factors. The data is collected by the shoe and transmitted to an app that the customer uses to manage their workouts. This data enables the company to compete in the traditional retail markets in a new way. The usage data and related algorithms predict customer needs, and they are improving every day as hundreds of thousands of workouts hours are collected and analyzed. The algorithms shape recommendations on workouts that benefit the customer as well as making suggestions for additional products and services that would be of benefit. It transforms the relationship between Under Armour and their customers from a shoe/apparel company to a fitness partner.

Corning is one of the world’s leading innovators in materials science, with a 167-year track record of life-changing inventions. Corning applies its unparalleled expertise in glass science, ceramics science, and optical physics, along with its deep manufacturing and engineering capabilities, to develop category-defining products that transform industries and enhance people’s lives. Corning succeeds through sustained investment in RD&E, a unique combination of material and process innovation, and deep, trust-based relationships with customers who are global leaders in their industries.

Corning’s capabilities are versatile and synergistic, which allows the company to evolve to meet changing market needs, while also helping our customers capture new opportunities in dynamic industries. Today, Corning’s markets include optical communications, mobile consumer electronics, display technology, automotive, and life sciences vessels. Corning’s industry-leading products include damage-resistant cover glass for mobile devices; precision glass for advanced displays; optical fiber, wireless technologies, and connectivity solutions for state-of-the-art communications networks; trusted products to accelerate drug discovery and delivery; and clean-air technologies for cars and trucks.

People on-board who can Generate and Manage Algorithms



Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

In our recent survey, we asked top supply chain professionals if they have people onboard with the right skills to generate and manage algorithms. Only 39 percent of the respondents agreed or strongly agreed that they have people on-board who can create and manage algorithms.

Source: Digital Supply Chain Institute Survey 2018

We have many other examples of traditional companies creating and deploying algorithms that reshape their business. But the truth is, the rate and pace of change seem slow. Our recent survey of companies from around the world documents that most organizations are changing and improving at a much slower pace than needed. So, what is slowing things down?

“There’s no algorithm or formula that says technology will do X, so Y is sure to happen. Technology doesn’t work on its own. It’s just a tool. You are the ones who harness its power.”

Eric Schmidt, Executive Chairman, Google Inc.³

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Chapter 3: People are the Problem

If it is clear that algorithms are the key to driving growth and success, then why aren’t we making more rapid progress? Answer: people.

1. Most organizations report that they have had trouble obtaining or developing the human talent that is needed to collect lots of data, analyze it, use and develop algorithms, and make data-driven decisions. The truth is that it is very hard to find data scientists and analysts with the right set of skills. And it is even harder to find data scientists who understand a particular industry or marketplace. Data scientists need to know the details of data collection, data cleaning, analytics, and customer-focused decision-making. Further, they need to understand how the decisions would be implemented. There are not enough people like that available in the workforce.
2. Most organizations report that they have significant organizational barriers, “silos,” that prevent people from sharing data between departments within their own company. They also have problems getting data from suppliers and their customers and their customers’ customer. Do supply chain people believe the limited data they get from sales & marketing? Do retail partners fully disclose their customer data? Can partners trust your company with their data about capacity and response time?

3. Most companies report that the people who get the data have a built-in bias that influences decision-making. For example, sales & marketing people usually have a bias in favor of growth and supply chain people are typically more focused on data that drive inventory turns.

So, what can a company do to overcome these people related challenges?

Here is a “recipe” that lists the ingredients needed for people success:

Ingredient 1: Get the Right People

Data scientist skills are hard to find and recruit. But they are essential to create and manage essential algorithms. As a result, many companies are acquiring small companies that have a cadre of data scientists and data smart people. For example, Koch Industries, which operates a diverse array of businesses from ranching to chemicals to electronics, purchased a company called EFT Analytics in 2016. This brought a strong group of data scientists to Koch, and they are reshaping their business with these new resources. They are building algorithms to win in each of Koch’s marketplaces.

But sometimes an acquisition is not ideal and contracting or partnering to get the people that can create the right algorithms is the best choice. Lockheed Martin, the world’s largest defense company, is based in the US. Lockheed Martin, already home to some of the world’s best scientists and analytics experts, formed an alliance with SAS. SAS is one of the most successful analytics firms. Together, they created a variety of algorithms for weapons systems like the F-35 fighter jet. These algorithms manage everything from aiming weapons to tracking maintenance requirements..

Hiring people with new data science skills is probably a route that almost all companies will take. Recruiting individuals with the right skills and background will enable more rapid progress towards the goal of having a robust set of algorithms that drive your business.

Companies around the world are forming to train tomorrow’s data scientists for this rapidly expanding market need. One such example, Databreed, a recently formed African company, has just graduated its first cohort of new data scientists and is beginning to place them with companies based upon the premise that the global marketplace will appreciate highly skilled, lower cost talent.

Whatever path a company takes to access this much needed skill set, it is important to make sure that the new hires are respected, utilized and made part of a cross-functional team. This means making sure that the outputs of the new hire's work are used by the company to maximize customer and shareholder value. Otherwise, given the robust demand, these individuals will find opportunities elsewhere and move.

Ingredient 2: Train your People

Training is not effective in creating data scientists. But training is a prerequisite for people success in two ways. First, any data science people you bring on board will not understand your company and the marketplace. Rotate these people resources through jobs in sales, marketing, IT and the Digital Supply Chain. Second, train the organization to listen to the data, allow decisions to be made based on data, and encourage automation of many tasks.

Li & Fung is a Hong Kong-based supply chain manager that is transforming for the digital economy, putting speed, innovation, and digitalization at the core of its operations. Traditional supply chain management is undergoing massive change driven by disruptive technologies in the retail industry. In response, Li & Fung is digitalizing key processes such as product design and sampling and training its people so that they can execute with data-driven strategies across its operations.

Ingredient 3: Share the talent

Share the talent is a principle that many companies use in order to leverage the scarce data scientist resources. These companies have a centralized staff group that can be deployed to the areas that most need to develop algorithms. Sometimes the data experts are part of the strategy group and other times they report up to IT or the Digital Supply Chain function.

Regardless of the approach you choose, a proactive strategy of people leadership is essential for creating a company that has algorithms that win.

“The ability to collect, refine and analyze data – is becoming a critical skill for the next generation supply chain employee. One challenge is balancing the art and science of analytics. Talent should have both supply chain background, industry understanding and data analytics skills. People with these skills are increasingly in high demand and are critical for Digital Supply Chain transformation.”

Kurt Ravenfeld, Director, Global Supply Chain Operations, Lockheed Martin

As mentioned earlier, silos and organizational barriers create a problem for data sharing and algorithm development. Also, each workgroup has built-in data-biases that affect their decisions. We have dedicated Chapter 5 to the Algorithm Council, the most leveraging way to rebalance the organization and optimize decision-making around powerful algorithms. The Council, once constituted and underway, will be a powerful force to break silo barriers and create cross-functional collaboration that helps people do their best. But first, it's vital to learn about data, the primary factor to successful algorithms. And data is the focus of our next Chapter.

“Currently there are too many tools available for analytics. Everyone is looking for the next big technology solution to get ahead of the curve, but the challenge still lies in skills.”

- Christian Kneissl, Group CIO, ChainIQ

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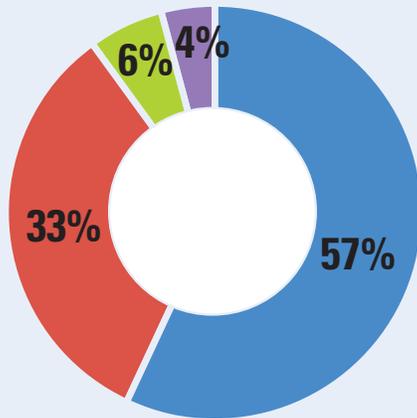
Chapter 4:

Data is a Terrible Thing to Waste

Many companies have made considerable investments in new technology, comprehensive Enterprise Resource Planning (ERP) systems, analytical tools, and carefully constructed work processes. Yet most of these companies still report that they are frustrated with their ability to collect and use the data that they have.

The idea of collecting more data, big data, sounds great but effectively using that data in applied operational ways also sounds downright impossible. The prospect of harnessing technology to create winning algorithms is attractive but difficult to execute. Our recent survey showed that 80 percent of the people felt that they were overwhelmed by even the current data feed. Furthermore, respondents agree that they need to get better at collecting, cleansing and analyzing data.

Percentage of the respondents that think that they have to get better at collecting and analyzing new data sources



90 percent of the respondents agree or strongly agree that they have to get better at collecting and analyzing new data sources.

■ Strongly Agree ■ Agree ■ Neither Agree nor Disagree ■ Disagree ■ Strongly Disagree

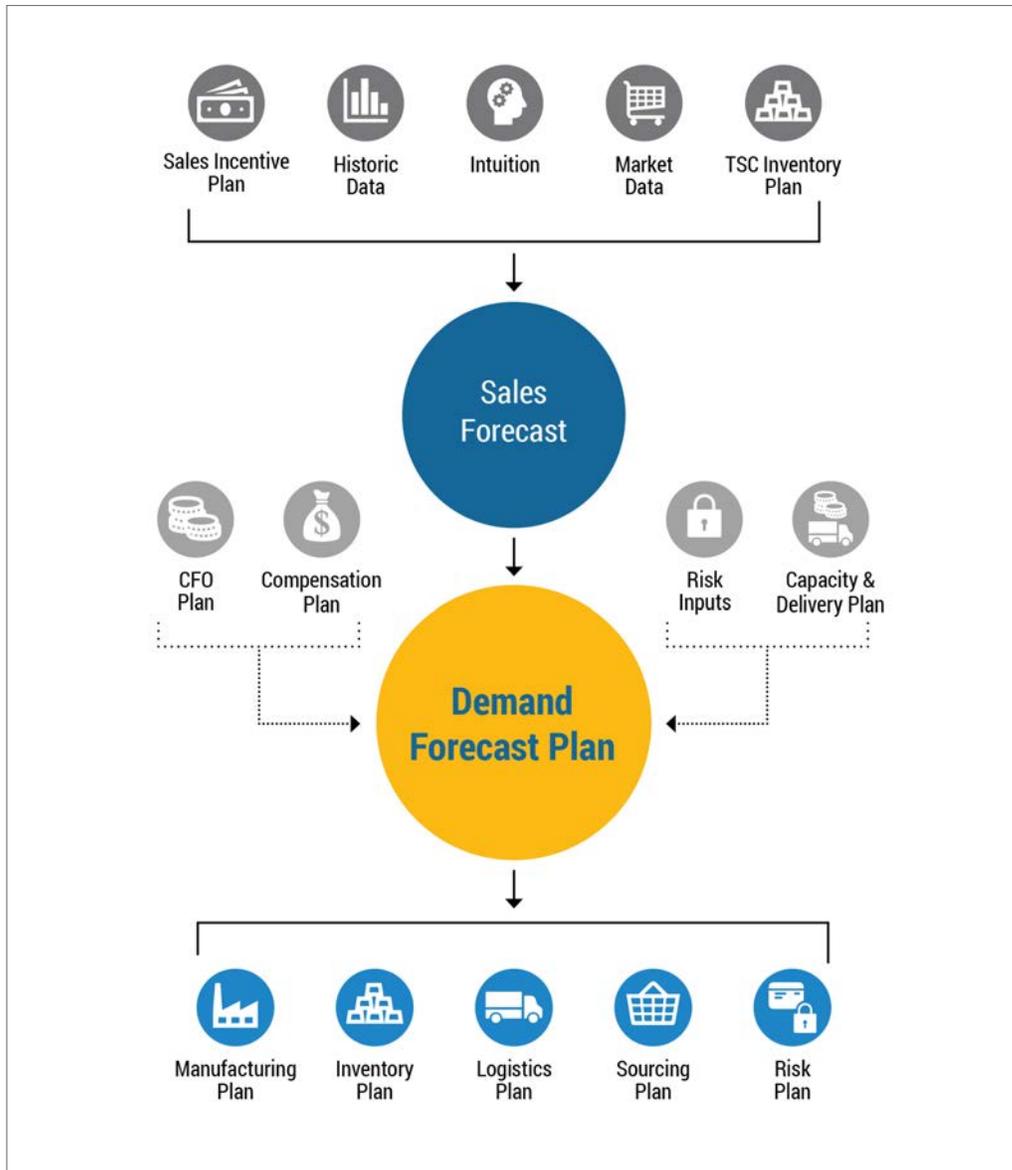
Source: Digital Supply Chain Institute Survey 2018

SAP is the world’s leading ERP systems provider. They understand the power of algorithms to reshape business. Richard Howells, the SAP leader for Supply Chain Solutions, says, “SAP systems generate and capture the big data for making winning algorithms.” He goes on to say, “It takes all types of data, structured and unstructured, to develop winning algorithms.”

The fact is that the best technology is largely useless if applied to the wrong data. There are three ways that companies can win: better data, better proprietary algorithms, or both. The traditional data model, used by most companies, is based on a supply chain planner getting sales forecasts from the sales and marketing team. The traditional data model is shown on the next page.

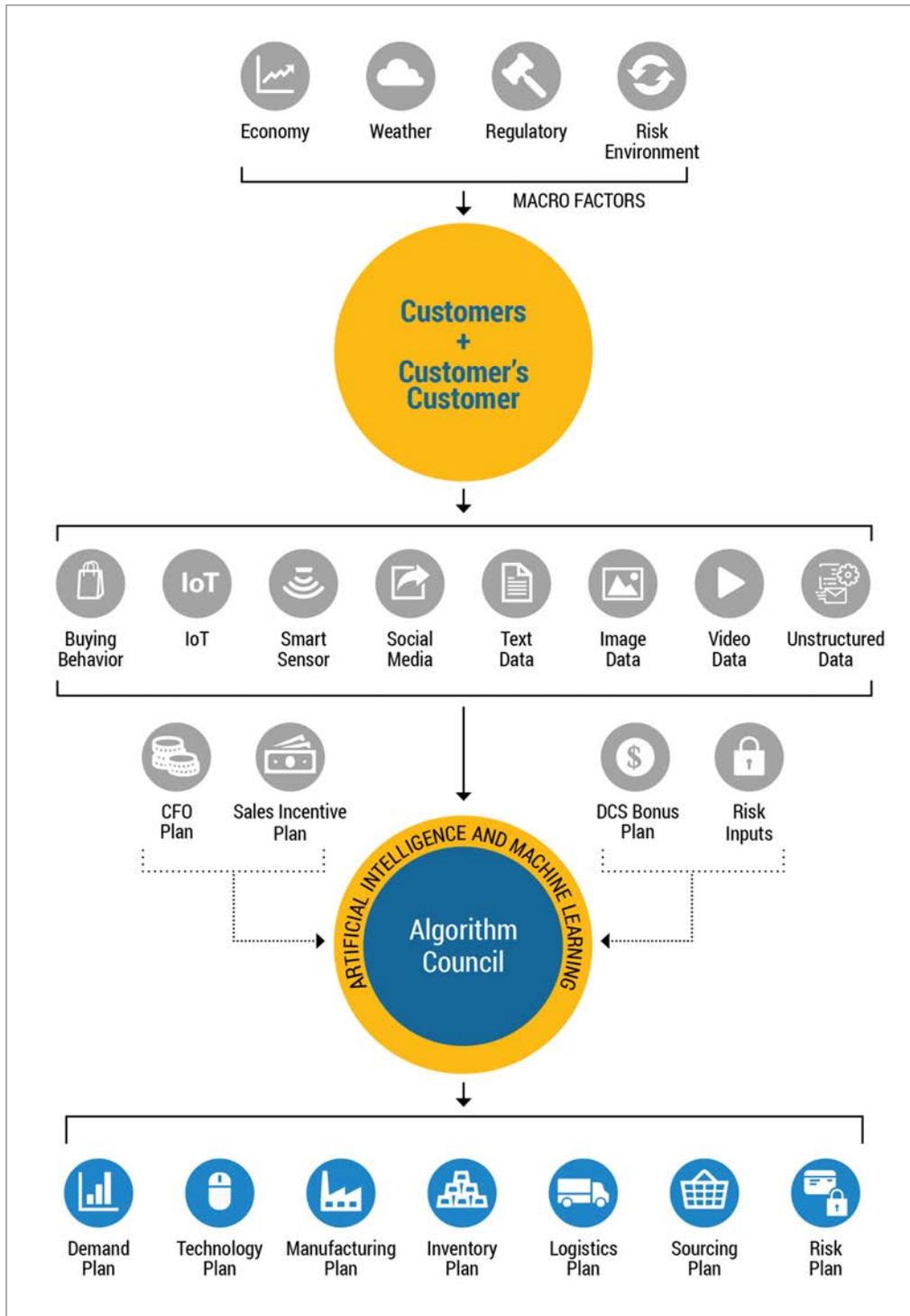
“Automating processes is important to increase efficiency, but we also want to look at the bias in the data that is either source or functional, that can affect the efficiency of the automated processes.”

Supply chain strategy leader for a global technology company



In this model, the sales & marketing team has created their demand forecast based on past customer buying behavior and current incentive plans. In most companies, the supply chain team distrusts the sales forecast. Over time, the company learns that they are very bad at “demand forecast accuracy.” Companies calculate MAPE (Mean Average Percentage Error) and look for tools to improve it. But the root causes of the problem are overlooked. Basing the demand forecast on the sales and marketing estimates and little else is a recipe for failure. For this reason, DSCI is working with companies to develop a new data model, one that is based on the customer and utilizes new data sources.

This new data model is the “Customer and Algorithm Council” data model as shown below.



First, companies seek to understand the macro factors, which drive customers to purchase goods or services. These factors can include things like the economy and even the weather. Weather dictates buyer behavior for many items, not just agriculture related.

For example, people buy more when the sun is out and shining. Weather influences what we buy, and not just for ice cream...cars, houses, apparel, and insurance are all partly driven by weather. Does weather influence your customers or your customer's customer? What other macro factors influence your market?

Second, customers create a wealth of data, much of which remains largely untapped. Customers signal who they are and what they want through social media, past purchase behavior, the signals from IoT devices and sensors and many other ways. Develop a strategy for what data tells you what your customers and customer's customers want.

Without the right process, the right data will not be gathered and used. Paul Fipps, the Chief Digital Officer for Under Armour, one of the world's top athletic brands, says "If data were oil, we would be rich! But the truth is, we don't have a refinery, so we struggle to make that oil into the useful product." Of course, Paul is actually quite far ahead of many companies and his data (especially from the three performance/work out app companies that Under Armour bought!) are great pockets of knowledge prosperity.

Micron, an amazingly successful maker of innovative memory solutions (chips), has also done a remarkable job using various statistical techniques to forecast demand and develop algorithms for managing their business. They have experienced double-digit growth in revenue while maintaining strong execution to customers' expectations. As Mike Lange, Senior Director, Digital Supply Chain states, "We gather data, analyze it, and develop algorithms that allow us to predict customer behavior and better understand our operations, and this has enabled a much more agile and responsive supply chain."

It turns out that it is not just **people** resources and **technology** that unleash the power of algorithms to reshape a company's business and create strong market **demand**. There is a third all-important factor in the trilogy that's covered next.

“The real power of data is when it is unlocked through analytics to drive insights and experiences for the consumer. This requires cross-functional teams, working in an agile way, aligned against priorities.”

Paul Fipps, Chief Digital Officer, Under Armour

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Chapter 5: Algorithm Council for the Win

“Another committee/council/meeting can’t be the answer! We need something new and better. New technology! New people!” The question is: How can we create powerful algorithms that allow us to generate new demand? How do we create powerful algorithms that span functional areas to improve enterprise-wide performance? And, as previously mentioned, people and technology matter. It turns out that even great people with excellent technology will have trouble reaching the goal of growing demand through algorithms.

Here is why it “doesn’t happen now”:

- Data is protected within silos and not freely available
- Cross-silo insight is discouraged, “stick to your swim lane!”
- Current organizational structure of many companies prevents great algorithms
- Collaboration is discouraged by compensation plans and conflicting goals
- Suppliers generally do not share their knowledge
- Customers have a vested interest that is different than ours
- Algorithms are a blind spot, we want them, but no one is in charge of them

For many reasons, companies are organized into vertical silos like sales & marketing, supply chain, finance, IT, risk management and HR. Each silo is measured by a sometimes-conflicting set of priorities. For example, sales wants to grow sales and supply chain wants to increase inventory turns and minimize excess inventory.

Of course, everyone wants to help the company succeed, but perspectives, knowledge and available data are limited in scope. We know that algorithms can successfully grow a business and get better at doing so with every transaction. But the most powerful algorithms take market data available to the sales team; combine it with operations data available to the supply chain group, and customer experience information from a variety of sources.

For example, Amazon is a supply chain play. People are loyal to the Amazon shopping, buying and fulfillment cycle. There are few barriers between operations and sales at Amazon which has a well-developed set of algorithms that dictate what products you will be interested in. Buy something on Amazon, and you will be told what other people like you also bought. The Amazon “recommendations engine” is amazingly good at generating sales, as is the Netflix application in suggesting movies. The same principles can be applied to your marketplace.

“Digital transformation needs to come from the top, and companies should designate a specific executive or executive committee to spearhead efforts.”

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014)⁴

Of course, Amazon is a digital native. But traditional companies have learned how to break down internal silos to drive growth. For example, As a global leader in Oral Care, Colgate has introduced the Colgate Connect E1 smart toothbrush, putting it at the forefront of preventative oral care and moving the company into connected health devices. The Colgate Connect E1 enables users to get real-time feedback about their brushing so they can take better care of their oral health and help prevent problems before they start.

This smart, electronic toothbrush utilizes multiple sensors, machine learning and an accompanying mobile app to track each brushing session, giving the user feedback on duration of brushing, frequency of brushing and surface coverage percentage. To date, the data is confirming users benefit from the feedback, improving the duration, frequency and surface coverage over time. Users are also able to opt into sharing of the data in order to advance oral care research conducted by Colgate and a leading university.

The key for most companies is to create an Algorithm Council that has different perspectives on the customer and his/her behavior. This council has the knowledge on what algorithms need to be developed, what data needs to be obtained and what AI/ML is required to make the company smarter after every sale.



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Chapter 6: Collaboration with a Purpose

The Algorithm Council should drive collaboration on algorithm development and management. The following leaders and the following responsibilities should be arrayed. You may not have all of these functions as separate departments, but the perspective from each function is important in the Council.

- **Digital Supply Chain:** operational knowledge of customer preferences and the ability to create a specific supply chain experience that captures the market
- **Sales & Marketing:** deep understanding of customer needs and trends
- **Info Systems:** operational knowledge of algorithm deployment and new data model collection, and AI/ML knowledge – also aware of cybersecurity implications
- **HR:** understanding of people requirements
- **Finance:** translation of algorithm development into investment and return
- **Business unit/product management:** P&L ownership and market focus
- **Risk Management:** understands the company's risk tolerance and integrated risk strategy
- **Legal:** aware of regulatory and legal issues around data sourcing and sharing
- **Compliance:** knowledge of supply chain compliance issues ranging from labor to environment to data protection to corruption
- **Compliance:** understand how to modify existing algorithms or build new ones to address the priority problem

The Algorithm Council should meet regularly for the entirety of year one to establish a management focus and cadence. The frequency of the meetings may decrease in year two as the core algorithms have been developed.

It is imperative to set a clear goal for the Algorithm Council and to hold every member accountable for that goal. Why? Because collaboration only works when there is a shared purpose. They should start by identifying business performance issues that span several departments, such as improving demand forecast accuracy to reduce stock-outs and excess inventory that requires mark-downs. Once they've agreed on a priority issue to tackle, the Council needs to inventory the related algorithms in use now and the data sources across all departments. This lays the groundwork for the new algorithms.

The Algorithm Council will need support in executing its activities and a team of data scientists and information systems people should be made available. To be truly successful, the Council should find a way to include data from suppliers and channel partners and, possibly, customers. Increasingly selective sharing of data will be important.

Under Armor decided that the Algorithm Council should be staffed by people with operational knowledge, and people with specific experience using and applying algorithms to the business. Other companies may choose a different structure. The Algorithm Council should be staffed by people who know the business and buy into the imperative for cross-functional collaboration.

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Chapter 7:

Map into Demand, People, Technology, and Risk

We have talked a lot about managing Demand, People and Technology. But we have to add one other consideration to the execution plan: **Risk**. It is essential that Risk management practices support the algorithm development process. IP and customer data must be protected, and privacy laws must be respected. All of our work on the transformation path towards a truly Digital Supply Chain points to four key success requirements:



The primary risk that must be addressed is cybersecurity and the associated data protection risk. It is imperative to protect the organization against intruders that may steal the algorithm and re-use it for their own benefit. It is also possible that intruders might “highjack” the data, steal IP, and introduce errors into the analysis.

Sony is a company that manages many complex supply chains. The one that is performing best is the supply chain for the Playstation4 (PS4). Customers have been able to buy PS4 in massive quantities. Over 80 million units have been built and sold to date, at least partly because Sony was able to manage the supply chain effectively. But what if the algorithms were hacked and the number of processors ordered for the PS4 was halved? The Sony supply chain has managed the explosive increase in customer demand and watched sales grow.

Other types of risk matter as well. For example, compliance risk is a problem if the algorithms are collecting and using customer data in a way that violates GDPR.

Performance risk is a problem if the algorithms that are managing supply do not have an embedded risk factor.



Chapter 8:

Six Steps to Success

There are six steps required for execution:



Each of the steps is logical and sequential. Each requires careful thinking and hard work.

Wes Nichols co-founded MarketShare to bring next-generation analytics to multinationals in need of data-driving decision-making. Having the right tools to make forward-looking decisions with confidence and accuracy is a game-changer and a competitor-killer.

To build a culture of fact-based decisions, you have to identify and build a taxonomy of all business drivers that truly drive revenue. The results are almost always counterintuitive and surprising. Applying these learnings to the business via algorithms is what is ultimately so effective at changing a company's competitive landscape in an industry.

Our focus in this paper is a little different because we are working across silos and aimed at a broader range of spend and return.

Pick two and go! – Do not be overwhelmed by the wealth of opportunities in front of you! Or intimidated by the obstacles that keep you from moving ahead. Algorithms will change the value your customers get, your industry and your company. Move forward so that you can get things done.

Our suggestion to accelerate your move is to use our [Digital Supply Chain Catalyst](#) program or something similar. This program breaks down complex transformation into doable chunks. It is like Agile systems development in that you take meaningful steps and accomplish them one at a time.

Form the Algorithm Council – You can even call it an experiment or trial. Select two opportunities that have promise. Work rapidly through our Six Step process over the course of 8-12 weeks. Drive results and keep going. Ski racers have a saying, “Speed is your friend.” That means that going fast helps you stay on the course. Same here. What is surprising is how often companies already have at least part of the data that they need to be successful. Some even have algorithms that are in operation and getting results. The trick is to Catalyze the change program so that an Algorithm Council can set priorities, invest in AI/ML and build industry winning algorithms.

Anastasia is a Chilean company that specializes in using AI/DL to create winning algorithms. Andres Valdivieso, Chairman, Anastasia, says, “Artificial intelligence (AI)/deep learning (DL) deployment is essential. It helps to manage the data lake of the companies. Algorithms are essential, and AI/DL is the new tool to transform data in action.”

Anastasia products are used in retail, healthcare, fintech, mining, and manufacturing. It gets significant results with major companies simply because their algorithms well understand data models strategically relevant to the direction of the companies and open data environments.

We hope that this white paper has helped organize your thinking around data-based decision-making, algorithms, and success. We hope that you form an Algorithm Council that drives collaboration with a purpose. The ultimate purpose is to improve the performance of your customers. And the missing piece for getting this done is algorithms.

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Chapter 9: **Call to Action! (Champion Needed)**

Someone has to take this on. Every company transformation starts with a leader. Your leadership is required, even if it is only to find someone else who can lead this effort. Most companies are struggling with the same set of issues that slow down progress towards a truly effective Digital Supply Chain. Make sure that your company takes the steps necessary to move ahead with the imperative to develop and deploy algorithms that differentiate a company.

You may need some external help to get this transformation accomplished. We are happy to work with you on a pilot and get that Algorithm Council established and tackle the first two algorithms.

Don't look back...your competitors are dealing with the same challenges.

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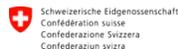


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About the Center for Global Enterprise

The Center for Global Enterprise (CGE) is a nonprofit, nonpartisan research institution devoted to the study of global management best practices, the contemporary corporation, economic integration, and their impact on society.



About the Digital Supply Chain Institute

The CGE Digital Supply Chain Institute (DSCI) is a leading-edge research institute focused on the evolution of enterprise supply chains in the digital economy and the creation and practical application of supply chain management best practices.

The DSCI's work is fielded by CGE and the Global Experts Group (GEG), a team comprising top supply chain executives from companies around the world. The GEG acts as the DSCI's principle mechanism in developing the research and applied management learning.



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