

Fulfillment **iQ**

How to build a
supply chain solution from

Idea to MVP
...

BE THE DISRUPTOR



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INTRODUCTION

Long overdue was the realization of the how important a company's supply chain is to the growth of their organization. For the past several years or decades, supply chain professionals and their budgets usually took a backseat during annual planning or were first in line when cost saving measures required reduction of expenses. That has completely shifted to supply chain execution being a top priority in organizations of all sizes. Not only from getting materials and goods from point A to point B, but how to utilize supply chain to be a differentiator. To disrupt your market and competitors with a compelling customer experience only an efficient and optimized supply chain can deliver.

In this white paper learn the concepts and hear from industry peers on how to build a transformative supply chain strategy and solution that solves for today and the requirements of the future.

We wish you the best on your journey to becoming a supply chain disruptor and taking your innovative ideas from concept to MVP.

Sincerely,



Ninaad Acharya
CEO, CPO & Co-founder



Dan Coll
Partner & CRO



SUPPLY CHAIN DISRUPTION IS THE NEW NORMAL



If you were designing the perfect event to expose modern supply chains, a global pandemic would be an excellent starting point. With national borders closed and factory production slowed, 2020 laid bare the glaring weaknesses of Just-in-time (JIT) delivery and complex outsourced manufacturing for the whole world to see.

At the pandemic's peak, more than 3,000 force majeure were invoked by Chinese suppliers,¹ and widespread fears of food shortages induced panic buying across the globe.²

According to CIPS, **the total cost of supply chain delays was \$4 trillion in 2020**, with nearly half of all businesses reporting "significant" disruption.³ And reports suggest the effects of these disruptions will continue to ripple throughout 2022 and beyond.⁴

This has put logistics in the spotlight like never before, with some outlets even declaring a "supply chain crisis"⁵. But as any savvy business person knows, every crisis is also an opportunity.

1 <https://www.ft.com/content/bca84ad8-5860-11ea-a528-dd0f971feb9c>

2 <https://www.economist.com/leaders/2020/05/09/the-global-food-supply-chain-is-passing-a-severe-test>

3 <https://www.cips.org/supply-management/news/2021/march/total-cost-of-supply-chain-disruption-in-2020-was-4trn/>

4 <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/retailers-to-face-continued-pandemic-induced-supply-chain-pain-well-into-2021-61981889>

5 <https://www.businessoffashion.com/briefings/retail/the-supply-chain-crisis-what-brands-are-doing-about-it>



REBUILDING WITH BETTER TOOLS

While existing supply chains continue to be disrupted, there is a growing market for smart, agile alternatives built for the new commercial landscape we're emerging into.

US eCommerce sales grew by a staggering 44%⁶ in 2020, demanding new infrastructures and strategic approaches to enable faster fulfillment and better customer service.

At the same time, Artificial Intelligence (AI) and the Internet of Things (IoT) are creating unprecedented possibilities for efficiency; and data is fundamentally altering what is possible in manufacturing and distribution.⁵ All of which may help to explain why **supply chain technology investment exceeded \$7.7 billion in Q1 2021, up 355.1% YoY compared to 2020.**⁶

Leaders around the world are at work to 'build back better' post-pandemic. In such a time, disruptive thinkers who craft genuinely innovative supply chain solutions will benefit from a market hungry for new ideas and novel approaches.

And in this whitepaper, we're going to walk through every step in the process of building a supply chain solution - so you can be that disruptor, and reap those benefits.

6 <https://www.digitalcommerce360.com/article/us-e-commerce-sales/>

7 <https://www.economist.com/special-report/2021/03/11/how-to-know-what-customers-want>

8 <https://www.forbes.com/sites/columbiabusinessschool/2021/07/01/the-future-of-supply-chain-tech-drivers-trends-and-opportunities/?sh=3ad7e65a73c6>



If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask. For once I know the proper question, I can solve the problem in less than five minutes.

-Albert Einstein

Good solutions start with interesting problems. While it can be tempting to push forward with the first idea you think of, truly successful products stem from a deeper, more creative approach.

Let's take a concrete example: **eCommerce**

Clearly, there are a whole host of challenges the industry faces - from fulfillment infrastructure to warehousing and inventory. But simply plucking one of these problems out of the air is hardly going to help you build a successful business.

Instead, you need to formulate the problem in a way that opens up possibilities. This is often done best using questions:



Why is warehousing so difficult?



What would an ideal inventory system look like?



How will consumer behavior change in the next five years?

By reframing the problem this way, you will begin to see the problem as multiple problems, depending on the perspective you take on it. You will also start to develop a more original take on the problem - and that increases the chances of the solution you produce being original, too.



THE SOLUTION IS ALREADY IN THE PROBLEM

The main reason this discovery stage is so vital is general problems limit your thinking. Most current supply chain problems started life as solutions: JIT manufacturing was conceived as a means of improving efficiency at Toshiba factories in the 1960s. But today, the risk exposure it creates is considered a problem.

According to one survey, **85% of executives believe their organization is bad at problem diagnosis**⁹, and this is exactly where you - the disruptor - can take the lead. By challenging the existing paradigms and assumptions about what's possible from the start, you will set yourself up to produce more disruptive, creative, and exciting products.

⁹ <https://hbr.org/2017/01/are-you-solving-the-right-problems>



Our Customer Story

Made by Mary

Made By Mary is an exciting eCommerce business, selling handcrafted jewelry designed to tell a personal story for every customer. The only problem was, they were growing far faster than their fulfillment strategy could handle.

In order to process and ship personalized orders quickly, they needed a far more dynamic, efficient logistics system than the one they initially built. And that's what they came to Fulfillment IQ (FIQ) for.

We worked with them to break down their challenges and get to the fundamental problems they faced - ultimately leading their logistics team to completely rethink how their systems operate. And we ensured they had a clear roadmap for the development of a scalable logistics system, helping them prioritize the phases of that development.

The result? More efficient, effective fulfillment, with fewer bottlenecks. And the company has been able to consistently adapt to their increasing demand - all whilst slowly building a more robust logistics infrastructure for the future.

“Working with FIQ changed the way we think about fulfillment. Our business couldn't have grown in the way we have without the shift in perspective- and technical assistance- that they gave us ”



Tylor Moody
COO & Cofounder
Made by Mary





Research is just formalized curiosity

-Zora Neale Hurston



Having discovered your direction, you need to corroborate your premise. However disruptive your thinking, there are plenty of reasons you may need to reconsider: maybe the problem isn't big enough to really make an impact, or someone's got there first.

The research and analysis phase is really about testing your thinking and establishing a baseline of expertise in the area you're looking to enter. You may find the problems you discovered in the first phase to be evolving as you research - and that's exactly the point.

While some of this falls under the traditional banner of 'market research', it's important to conceptualize it as a much broader form of analysis. Most supply chain problems could be solved in a number of ways, and that means your understanding of 'the market' needs to be as wide-ranging and imaginative as possible.

Technologies, for example, can be applied in a wide range of ways; just because the Internet of Things isn't being used in your area doesn't mean it won't be, and you need to be aware of that threat (or possibility) as early as possible.

Don't be afraid to go back to the drawing board

The most essential factor in the research phase is openness. Too often, we see teams get stuck in the quicksand of a promising idea. And if that's you, research can be deadly.

Without openness, you'll end up ignoring information that points you in a better direction and wasting a lot of time in the process. To quote David Ogilvy, you'll end up using data 'like a drunkard uses a lamppost - for support rather than illumination'.



Five questions you should know the answer to

- 1 Why is the that problem you solve important?
- 2 Who are you building the solution for?
- 3 How big is the market for a solution?
- 4 Where is your most direct competition?
- 5 What are the key attributes a solution requires?



If I have a thousand ideas and only one turns out to be good, I am satisfied

-Alfred Bernhard Nobel

Having determined your problem and nailed the research, you are ready to start imagining ways of turning them into a solution. This can be both the most exciting and the most frustrating part of the process.

There is no short cut here - if there was, we'd all be building billion-dollar businesses. However, there is a simple approach to generating ideas that may prove helpful in getting your creative juices flowing.

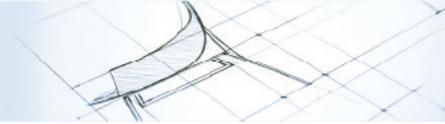


Ideas are connections

Ultimately, ideas are just combinations of existing things: robot-driven micro-fulfillment centers are a transformative concept for eCommerce brands. But at its core, it's really just the combination of robotics and warehousing.

We often mythologize the creative process, as if Steve Jobs or Elon Musk were otherworldly prophets. But the truth is, every great idea - no matter how disruptive or brilliant - is a simple connection between two things. And taking the mystique away from them is vital to allowing you the freedom to explore the possibilities of your product without feeling intimidated.

This is the beauty of the structured approach to product development we're taking: you should now be armed with both a compelling set of problems (phase one) and a robust knowledge of the industry and technologies (phase two). So generating ideas is as simple as experimenting with combinations.



Testing leads to failure, and failure leads to understanding.

-Burt Rutan

Now that you have your idea, it's time to start really putting it to the test. Prototyping is all about building a sample or model of your solution in order to see how it functions and discover weaknesses - or ways it could become stronger.

There are a number of different approaches to prototyping, so it's important to determine which is best suited to your solution. If, for example, you are looking to improve the User Experience of reverse logistics, a 'paper prototype' will likely enable you to glean valuable insights without incurring great expense.

However, many solutions will require more time and resources to build a prototype - and will likely cost even more than the final product to build. If this is the case - as it would be, for example, if your solution involves hardware - you need to try and ensure you get the greatest value from the process.

Start the process with clear expectations

To get the most out of prototyping, you need to have a clear understanding of what you will and won't be able to learn from the process. Too often, prototypes are built with an expectation that doing so will inherently improve the product. But the reality is, you need to continually be challenging the prototype in order to get real value from it.

This is why bringing multiple stakeholders into the process is so vital: by engaging them with a real product they can interact with, you will both build enthusiasm and receive new perspectives on the idea. These can be the most valuable insights because supply chain solutions are generally highly complex - and therefore smaller teams have a harder time seeing every angle of them.



Our Customer Story

Warehouse Anywhere

Warehouse Anywhere is a pioneering logistics company, developing mini-distribution centers in urban environments that use predictive analytics to enable enterprise businesses to keep up with consumer demand for ever-faster fulfillment.

FIQ was brought in to help reduce friction during the onboarding process; the legacy systems they had in place meant it took 6 months to onboard a single customer. But as we began our engagement, it became clear that there was far more that FIQ could help with.

During our initial due diligence, we uncovered a serious lack of agility within the legacy systems. Such rigidity would create unnecessary bottlenecks, and redirecting the systems' development would free the business to accelerate its growth. So as the scope of the project grew, so did the potential for improvements.

We introduced Agile development to the business, helping them overhaul their legacy tech systems and develop a far more flexible, modern logistics architecture. And because the business had limited resources to develop, we helped them design a phased development approach that would make the best possible use of those resources.

The results? Onboarding time was radically reduced, with new customers now being onboarded in less than 30 days. But more than that, we've helped the business begin a powerful digital transformation that has seen them grow exponentially throughout the last year.

FIQ has been instrumental to our entire development cycle. It's not just the tech stack itself they helped with - it's the entire development architecture as a whole.



Steven Ciemcioch
President
Warehouse Anywhere





So you've developed your idea and built a prototype to refine it. But this is all for nothing if real people don't respond to your solution - which is exactly why you need to run rigorous pilots to see how people experience the product.

This is a well-established element of the design process, but it tends to be far more difficult to do with supply chain solutions. By their nature, these are likely to be complex products designed to work at scale - which means piloting will be highly risky and expensive.

Gartner, the world's largest research company, estimates the piloting process for a new supply chain solution will take anywhere from 2 weeks to 6 months, depending on the approach vendors take.¹⁰ However, by opting for what they term a 'Lightweight Customer Demo', you can gain much of the information you need without the extreme cost or time commitment.

Enough to build on

In essence, a 'Lightweight Customer Demo' means providing a demo of the solution, and allowing businesses to use real-life data to project how it would fit into their existing system. This will begin to expose your solution to real-world supply chain dynamics and will provide vital insight into how supply chain managers will actually perceive what you're building.

This should be enough to build on: by analyzing this feedback, you should be able to iterate and refine your solution to the point where you're ready to build a fully-fledged solution and start truly taking off.

The power of pivoting

Just as during the research phase, it's vital that you stay open to negative feedback. Never become too attached to the vision you started with that you can't see its failings - because those failings are vital information about how you can succeed.

Starbucks started out making espresso machines, Nokia began as a paper mill and Blackberry - once synonymous with cell phones - has become a major player in cybersecurity.

So never overlook the power of the pivot; that's exactly what this phase of the process is for!



¹⁰ <https://emtemp.gcom.cloud/ngw/globalassets/en/supply-chain/documents/trends/piloting-supply-chain-technology.pdf>



This is what it's all been working towards, bringing your solution to life. The Minimum Viable Product (MVP) is essentially the bare bones of your solution, enabling you to launch it into the real world and see how it fares.

Finding the right 'early adopters' to use your MVP first is crucial here, especially given the complexity of supply chains. You need businesses with exacting standards that will help you develop better features and confront weaknesses others might simply let slide.

But it's also vital that you don't pretend this is just another round of prototyping.

You've got to play for keeps

Our most essential piece of advice regarding your MVP is this: don't launch it until you're ready. Despite the clear benefits of the lean methodology, research suggests that launching an MVP too soon actually harms many brands.¹¹

So while iteration will surely continue, and you'll doubtless receive plenty of actionable feedback, the MVP marks the clear transition from being in development to operating a bona fide supply chain solution.

Ultimately, this final process should be considered an official 'launch'. Yes, you'll continue to iterate and improve your product, but at the most basic level, once your MVP is in the hands of real supply chain managers - your journey from concept to completion is done.

¹¹ <https://knowledge.wharton.upenn.edu/article/the-limitations-of-lean-startup-principles/>





Our Customer Story

G2 Reverse Logistics

G2 Reverse Logistics (G2RL) is a company creating reverse logistics solutions, founded by the very many that coined the phrase 'reverse logistics'. With eCommerce's extraordinary growth and increased interest in sustainability, businesses were waking up to the power of strong reverse logistics. And G2RL offers an end-to-end, tech-first solution.

We were initially brought in to simply help them improve their data systems, but our scope quickly grew to help them radically expand their business's range. We helped them build systems to integrate 3rd Party Logistics platforms, unlocking a whole new branch of customers. And we helped them develop a rules-based platform that fundamentally improved the quality and efficiency of their offering.

The results? The company was able to accelerate its launch by 3 months, at a time when competition in the space was heating up. And by improving the efficiency of their systems, Fulfillment IQ saved the business \$500,000.

"The expertise and continued support that FIQ has provided us has been invaluable. From improving the speed of our launch to improving the product's efficiency, their input has transformed our offering. Every business needs supply chain partners, and you won't find a better one than FIQ."



Julian Mitchell
CIO & Cofounder
G2 Reverse Logistics



COMPANY PROFILE:

Fulfillment IQ

www.fulfillmentiq.com 

www.linkedin.com/company/fulfillment-iq 

www.twitter.com/fulfillment_iq 

Comprehensive solutions to help you revolutionize your supply chain.

FIQ provides supply chain-focused solutions that span strategy, platform builds, optimization, scaling, and implementation. We combine our strong domain knowledge with a disciplined engineering mindset, innovative data analytics, AI, and cloud ops with a keen focus on customer experience to build smarter processes, solutions, and supply chains.

After decades of experience, we've dug deep roots in the supply chain industry through positions in operations, technology, project and product management, solution design, customer support, customer onboarding, and business development.

Plan the most effective way to take your idea to MVP with Fulfillment IQ's expertise. Get the guidance and set yourself up for success.

Let's work together

