



THE TRANSPORTATION AND LOGISTICS LEADER'S GUIDE TO

Building vs. Buying When Modernizing Software & Unlocking Data

How to determine the right
approach for scalability and
increased profits



While 2020 was the year that sent the world reeling from the impacts of the COVID-19 pandemic, it's becoming clear that 2021 is a year beset by stressed supply chains and global shortages as a result. Businesses are being impacted by record steel and lumber prices, ever-increasing home prices, and shortages of big ticket items like vehicle chips for automobiles – even shipping containers are incredibly scarce.

Business survival is dependent on making smarter decisions with the resources and data you have *right now*. According to research from McKinsey, the recovery time from the COVID-19 pandemic for freight and logistics companies will be an estimated three to five years.

As a result of these factors, organizations in the transportation and logistics space are being forced to consider change. Digital transformation is the key to moving forward, but in an industry that is historically slow to modernize, transportation and logistics companies come to a fork in the road where their existing data solutions are outdated, or they've been outgrown, and it's time to consider off-the-shelf (OTS) data solutions or completely custom data solutions.

It can be difficult for most leaders to know where to begin, but it's necessary to find the right approach for your particular enterprise, team structure, and data needs – and implement it well. In a year fraught with global shortages and logistical challenges, the companies that can innovate better than their peers will be the ones to shine and drive impact at every level of their business.



01- Signs Your Current Solution Isn't Meeting Needs



Thirty-seven percent of T&L companies globally say that legacy technology has prevented them from sufficiently up-scaling during the COVID-19 crisis, while 36% of all companies globally agreed their organization would benefit from having improved real-time support for mobile devices during times of crisis.

– Facility Management



Why assessing your current tech is essential to deciding on building vs. buying

- Makes clear whether your current system is antiquated
- Helps to identify pitfalls or silos of your current internal or OTS solution
- Facilitates understanding of whether certain approaches are feasible or not

See the signs of when your internally-built solution is inadequate

It's time for organizations across the T&L industry to modernize, but before you determine next steps on your efforts to transform your digital solution, you need to assess whether your current technology is adequately meeting your needs, and if it isn't sufficient, you need to understand not only why it falls short, but also how it can be addressed and improved with a new build or buy approach, or some other model. There are a variety of common roadblocks and other issues organizations can encounter when they rigidly adhere to their own internally built digital solution – so let's jump into them.



One of the most problematic issues a team with an internally built solution can face is that there may be one expert in your organization that knows the solution inside and out, but when they're out of the office or they move on to another organization, you and your team are suddenly in the dark with processes and functions of your own internal technology. Without additional internal resources or adequate talent to provide upkeep for your current system, this "gatekeeper" can pose considerable challenges when they are unavailable.

Disparate data can also pose a challenge with your internal solution. Systems can't connect and effectively talk to each other; your teams will have differing aims with this disparate data – making silos a more common occurrence.

By that same token, the daily demands of your transportation and logistics business won't be able to be supported with an internal system that's antiquated, outdated, or outgrown. This issue and others like it can require a fair amount of internal maintenance on your systems – which can come with a considerable cost to your business.



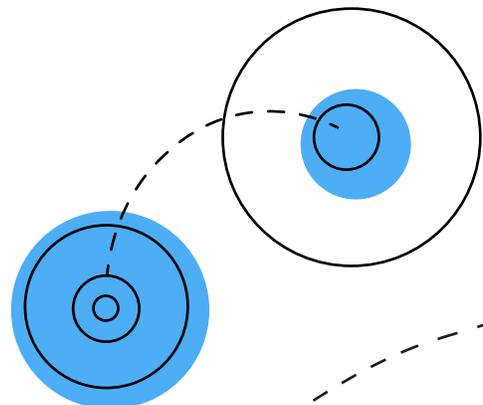
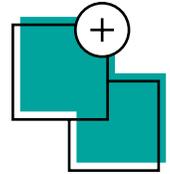
Know when your current off-the-shelf solution becomes an obstacle

Current off-the-shelf and SaaS solutions can be susceptible to problems as well. In some cases, they simply don't provide all of the data that an organization may need – making it feel like just another disparate, out-of-date system. There's also the misconception that off-the-shelf solutions can be simply applied and should serve as a "quick fix". The reality is they often aren't, and companies end up having to splice together multiple systems or create imperfect workarounds.

Continued licensing fees also present a problem to transportation and logistics companies currently using off-the-shelf solutions. If the given solution isn't adequately serving your needs, or the vendor providing it is unwilling or unable to customize it to the needs of your business, it certainly can be difficult to justify the recurring costs if you may have just as much success by bringing your solution in house.

For its part, RevUnit worked with a multibillion-dollar freight and logistics solutions provider once one of their SaaS companies was sunseting its product. They quickly needed to assess what kind of custom solution they needed to fill the void.

Similarly, it's up to you and your teams to quickly and effectively identify whether your current system is affected by these issues, and seek to address them by creating an improved internal solution, seek out a different off-the-shelf solution (OTS) that better suits your organization, or devise some custom approach that satisfies your business needs.



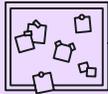
02- Find Your Spot in the Build-to-Buy Spectrum



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A single, off-the-shelf solution doesn't typically solve challenges, and even if it does, organizations still struggle with disparate systems and redundant data/processes.

– Chaz Gugino, RevUnit, Program Manager



Why choosing the right approach is critical to the success of your business

- Provides your business with a better foundation for continued scalability
- Optimizes your current resources instead of wasting them or requiring new ones
- Provides your teams with a more competitive advantage moving forward

Best circumstances for off-the-shelf (OTS) data solutions

If your business checks certain boxes (or doesn't) it can make the process of determining whether you are better suited for an off-the-shelf solution, one that's built in house, or a hybrid format far easier. By identifying these key circumstances, you can make a far more informed decision as to what kind of approach will set your business up for long-term success and not create additional silos or waste resources.

Typically, off-the-shelf and SaaS data solutions are optimal for businesses that completely lack a data team or department. Many mid-market organizations often fall into this category, as they usually don't have the available resources to complete a custom build. These mid-market organizations rely on OTS solutions to get them close enough to what they need – solutions like Salesforce, for example.



On the other end of the spectrum, OTS solutions are also particularly well-suited for businesses with very large tech ecosystems, in addition to companies capable of building out a team with the ability to internally customize their chosen solution.

Also, similarly to how mid-market organizations can rely on OTS when they don't need a fully-customized solution, businesses can also implement a solution with a large enough SaaS company to the point where they have integration partners (Oracle, Salesforce, etc.) to help them along the way.

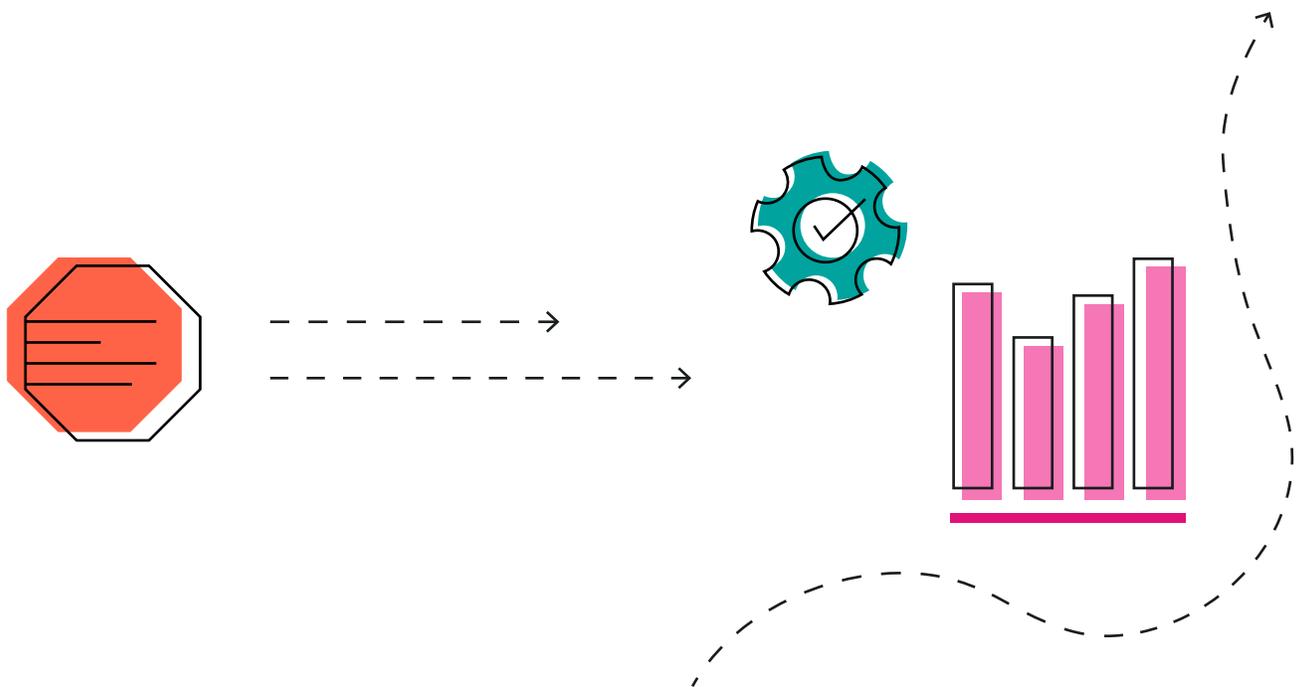
Pitfalls

Unfortunately, buying software off-the-shelf is never just that. Organizations afterward are often forced to choose between retraining their staff to conform to the new software, rewriting procedures so that they are in line with the software's functions, and ultimately becoming subservient to the processes laid out by the software they just bought. Your organization will have far less autonomy when you choose to buy instead of build – your organization will only be as flexible as the system that you purchase.

A single, off-the-shelf solution doesn't typically solve challenges, and even if it does, organizations still struggle with disparate systems and redundant data and processes.

When purchasing support and services is required to bring the generic software you bought into line with your specific processes and procedures, your organization can become tied to purchasing support from the selling organization itself, or a set of certified partners — you are rarely allowed to adapt the software yourself.

Another important concern – will the company you partner with for SaaS exist in 10 years? Even large companies such as Microsoft and Google may exist 'forever', but can capture or kill platforms you may depend on. When deciding on a completely off-the-shelf solution, you should expect to have to strictly adhere to its specific processes if your business doesn't possess the necessary customization capabilities in house.



Best circumstances for data solution built in-house

To understand the ideal conditions for choosing to build your own data solution in house, you first need to have a deep, nuanced understanding of your company's needs, the capabilities of your data team, and whether they are equipped to address those needs.

Obviously you will experience fewer dependencies with your own software as opposed to relying on others, and you will always have more autonomy and added decision-making capabilities around the technology or tools that you create yourself. It also provides your respective team with the space to innovate, fine tune, and push the edge with their solution (like exploring IoT), as opposed to attempting to leverage an existing system. If you're interested in innovation, you simply won't find it off-the-shelf.

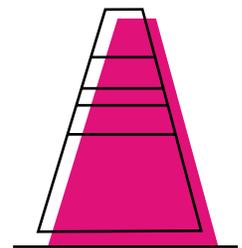
This drive for innovation also allows for "first-to-market" opportunities, allowing businesses who take this approach the chance to have an edge over their competitors, who may still be choosing to operate with a SaaS business or off-the-shelf solution themselves.

Pitfalls

The advantages of build over buy are quite apparent – building affords your business more control, maintenance fees can be brought in house, and software development can be capitalized on as a tax writeoff. Unfortunately, the common challenge here is that most internal teams are not equipped for this type of large-scale software undertaking all on their own.

This is the first question you need to ask of your organization – do you have the team to build the solution you want? If not, is your organization able to invest both the necessary time and money to establish such a team?

Essentially, building a completely custom data solution in house is only really useful (and even possible) for organizations that are large enough and already have a designated technology team to tackle the challenge. If you are a mid-market organization or smaller enterprise, the costs of identifying and capturing the talent required will likely be too great. If you choose to go this route, you will want to perform a thorough analysis of your data team's capabilities to ensure you can even get this approach off the ground.





03- When to Consider a Hybrid Model with a Partner



Without a doubt, the introduction of advanced technology into [the T&L] industry has given them the ability to adapt to recent imperatives such as constant innovations, customer centricity, and agility. And if they choose to not adopt this technological approach, the weight of these old approaches may hold them back from the advancements that technologies bring.

– Michael Gorman, SupplyChain247



How creating a bespoke data solution benefits organizations and their users

- Helps data teams make their own tech decisions, increasing flexibility and autonomy
- Upskills your own internal teams in key areas through a teach-and-do model
- Aids scalability by providing a solution internal data teams can't maintain themselves

When it's clear neither 'build' or 'buy' will suffice

With SaaS companies vying to provide you with their solution (at a cost) and building in-house being a potentially cost-effective option (but only if you have the necessary infrastructure already in place) it can feel that build vs. buy is a moot argument if neither effectively addresses the data needs of your organization. The fact is you have more options than just build or buy — bespoke solutions that combine the best of both worlds on the spectrum of build-to-buy.

Some organizations you can partner with provide access to a “packaged core” that can be tailored specifically to your business. If you opted to try building in-house on your own and discovered technology talent is what's keeping you from this, you can find a partner with the bandwidth and expertise to supplement your teams with the required talent. These same experts can also carry out a teach-and-do model,



in which this outside partner is responsible for upskilling your own teams, working quickly to bring best practices (with which they've already seen success) to those same internal teams. With this approach, your partner doesn't just leave you with a solution you can't maintain.

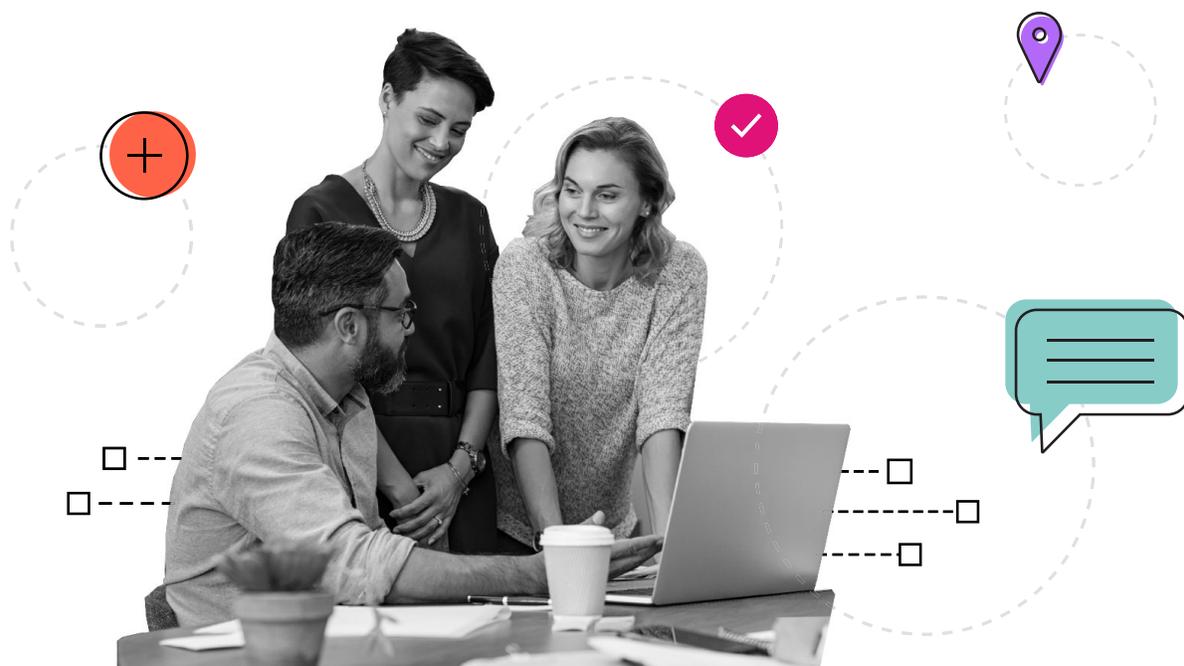
Through this hybrid partnership dynamic, your teams are able to make their own tech decisions without being dependent on third party software. With this autonomy also comes increased flexibility, as you can more easily respond to the changing demands of your business, your customers, and the market.

RevUnit's work in this space

RevUnit's approach to assisting organizations with modernizing their data systems focuses on natural integration into existing workflows – no SaaS tool here. We integrate semi-custom or fully custom solutions into client's existing systems with a data-first approach so we can help our clients build a strong foundation that will continue to scale.

Naturally, we are big proponents of a teach-and-do approach. We don't just build our clients a solution that their data teams can't maintain alone. We work in partnership with enterprise businesses, bringing clients along with us and embedding ourselves within their teams in order to bring over skills they don't possess internally. This way we build exactly what they need and craft our solution so it can plug into a larger system or be expanded upon for continued scalability.

RevUnit also has significant experience implementing hybrid data system modernization with multiple companies who are leaders within the transportation and logistics industry – we've provided some examples below.



EXAMPLES OF THE HYBRID MODEL FROM REVUNIT

In RevUnit's work with the multibillion-dollar freight and logistics solutions provider we mentioned earlier, we found that this organization was pulling static tables from servers. In response, RevUnit created a prototype with improved UI that provided the business with the ability to instantaneously update records, gain more visibility, manage data, and get real-time information up to the second of where transportation currently is. Now, team members no longer need to go to person X in their data group and have them pull a table that they then provide in a few hours or the next day – no more gatekeepers.

Another business had looked at OTS solutions, but found that vendors didn't have the technical depth or aptitude to be able to work with all the intricate integrations required for plugging into a complex system. The OTS teams weren't great at customizing, especially when trying to work in a complex and unfamiliar software ecosystem with a lot of business functions all tied together and unique to the business. Off-the-shelf solutions didn't work, but the business also didn't have a large enough tech department to bring the issue in house – so they brought in RevUnit to help accomplish what they needed with their tech with a bespoke solution specific to their needs.

A leading transportation and logistics company reached out to RevUnit to work alongside them to pilot a carrier and lanes recommendation engine after they encountered challenges getting their solution off the ground internally. They had an established ML/AI team, but lacked the additional resources to take on the task themselves. More specifically, they couldn't get their prospective solution to fit within their existing systems. With RevUnit incorporating the necessary individuals within the data teams of this organization, we were able to build something in line with their vision. More importantly though, through the teach-and-do model, our solution could be easily implemented into their larger system – providing for a more competitive advantage and room for scalability with a brand new, innovative product.





Wrapping Up

It's up to you and your data teams to determine what kind of approach is most fitting in order to modernize your current data systems, but you also need to make an accurate assessment of whether your organization is set up to succeed with your particular choice of building, buying, or calling on a partner to create a hybrid data solution at all.

Customization is essential to adapting a generic product to your specific needs – is your team capable of this? When you will be dependent on people who know the inner workings of your business, will you want them to be in-house or working for a SaaS company?

A source of truth for both day-to-day operations as well as overall performance is crucial for transportation organizations. The challenge comes when off-the-shelf solutions don't meet the needs of the business, and internal teams lack the resources to create a single custom, scalable solution. Good approaches exist for both large and small transportation and logistics organizations, but to avoid issues inherent to certain approaches, you need to adequately determine which one is right for your business based on your available resources and team capabilities.



ARTICLE

ILLUMINATING THE TRUTH FROM TRANSPORTATION & LOGISTICS DATA

RevUnit CEO Michael Paladino recently sat down with Matthew Harding, SVP of Data Science at Transplace, for a dynamic conversation around data integration.

[Read the highlights](#) →



GUIDE

UNDERSTANDING & IMPLEMENTING RECOMMENDATION ENGINES

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GUIDE

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REVUNIT

RevUnit is a data technology studio that helps retail, transportation, and logistics organizations create change with their data — faster. Through disruptive thinking, RevUnit has helped Fortune 500 companies like Walmart, Tyson, and J.B. Hunt reimagine their data systems to improve operations.

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