



THE 2019 GUIDE TO

Tech Stack Management

AirStack™



In the beginning, things were simple.



There was a website. There was email. The two went hand-in-hand, with the occasional spreadsheet or document thrown in.

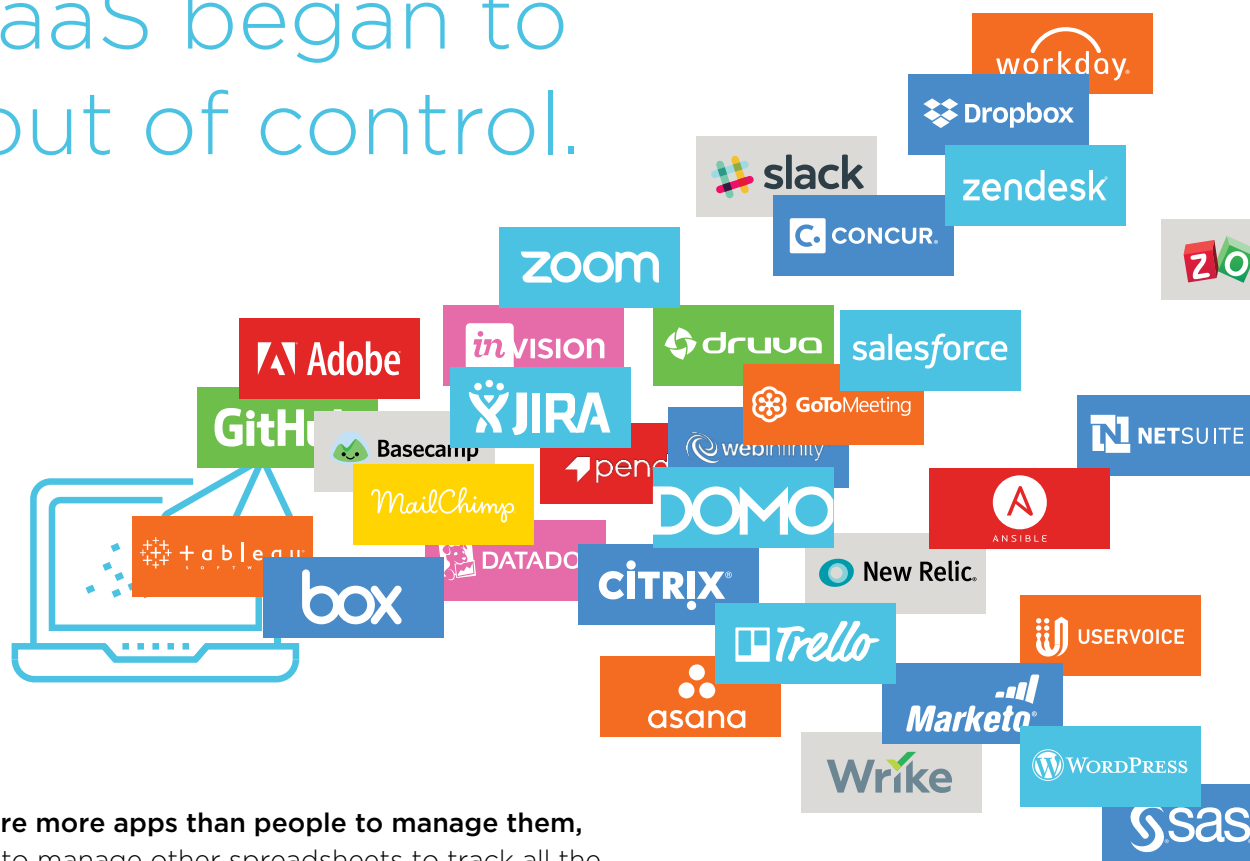
Then customers started to flood in, and suddenly the company's productivity apps were no longer sufficient. So an accounting software package and customer relationship management (CRM) tool were added to the mix, to help build loyalty and grow sales. When the business began to really take off, it came time to expand. And that led to the purchase of new human resources software, project management software and collaboration tools.

Soon departments were thriving. As teams continued to grow, they discovered newer and better apps to fill various needs. Marketing automation gave way to heatmapping and A/B testing. Customer support emails led to live chat apps and social media service tools. Websites were made better with search optimization and data analytics... and the list goes on.

It's no surprise that the business came to depend on its SaaS tools. The robust mix of software and subscriptions added up to a big competitive advantage—one that helped the organization soar past competitors.



Until SaaS began to spiral out of control.



Suddenly, there were more apps than people to manage them, and spreadsheets to manage other spreadsheets to track all the tools different teams were using. Monthly subscription fees were being paid to cover dozens of advanced features when only a handful were really needed. In a few cases, two or three different apps were being used by different divisions to accomplish the same thing.

Though this story isn't based on any one company, it's a problem most organizations are facing today. We've heard similar scenarios repeated again and again in conversations with numerous executives. In their efforts to get ahead, organizations have stack app upon app as various departments attempt to solve different issues.

But we've reached a point of saturation: The rate at which companies are adopting new software and apps is now exceeding their abilities to analyze the effectiveness of those tools. This leaves the average organization with a vast array of annual contracts and monthly invoices and no real visibility into ROI.

That's why tech stack management is so critical today. We believe 2019 can be the year when companies finally regain control of their technology and align it to the business outcomes they strive so hard to achieve. It's time to get strategic about your software. Because your business depends on the SaaS tools you choose.



Overview

So many apps. So much potential. The explosion of technology in recent years means that most companies have come to rely on a wide variety of solutions for everything from communicating with customers to completing day-to-day tasks. But while many of those software subscriptions and cloud-based services were purchased with high hopes for greater profitability and productivity, in many cases the reality is much different.

If you ever get the feeling that you should be getting more returns from your technology, you're far from alone.

Most businesses are underutilizing technology — and studies indicate that decision makers tend to underestimate just how much is being wasted. One [survey](#) revealed that CIOs at the average large enterprise believe their companies are paying for 30 to 40 cloud apps, when it's really closer to 1,000. [Another](#) found that users are under the impression that 30% of their tech spend is being wasted, when the actual number is 35%.

How can this be? Simple: It's become incredibly easy to quickly purchase new apps, licenses and logins without much forethought to how they'll collectively serve the greater good of an organization. In marketing technology alone, one specialist [mapped out](#) 6,242 unique vendors—a sevenfold increase in just four years.

With the sheer volume of available solutions, anyone with a credit card can acquire a new SaaS service within seconds without thinking too hard about implications for the business or budget.

This is a big problem. But not one that can fix it.

As anyone who's ever regretted investing in rarely-used software has experienced, not having a process in place can cost you — big time. **That's where the “tech stack” comes in. A structured tech stack, to be exact. Once you get strategic about your software, and your technology is organized into one cohesive unit, amazing things can happen.**

On the following pages, we'll cover:

- What a tech stack is — and why you need one
- Guidelines for better tech stack management
- How to harness the power of your tech stack

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Contents

**THE FIVE-STEP APPROACH TO REACHING THE
FULL POTENTIAL OF YOUR TECH STACKS.**

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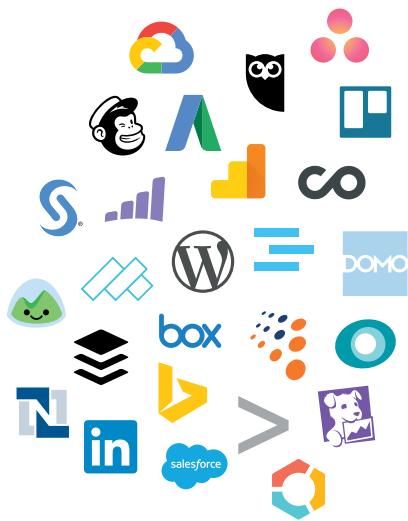
STEP 1

Understanding the Modern Tech Stack

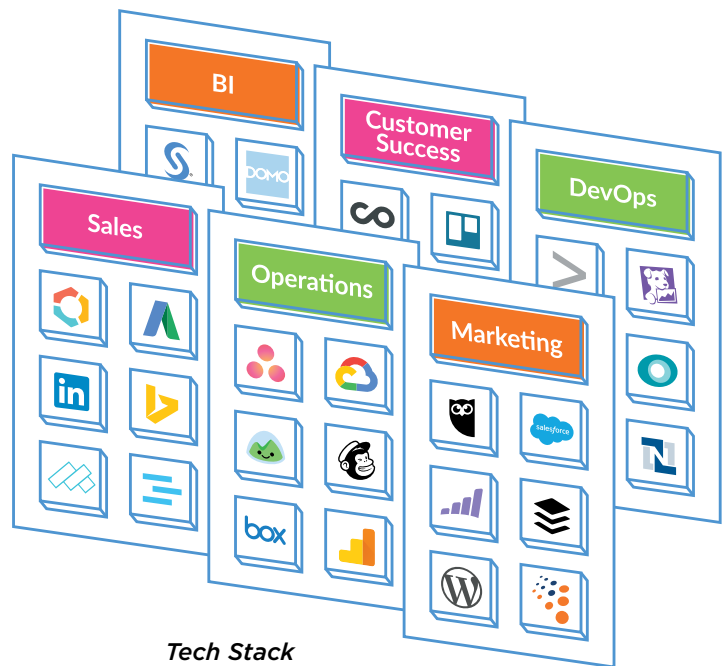
What is a tech stack — and why do you need it?

Software suites. Digital platforms. Marketing “stuff.” No matter what you call it, your company is using a stack of technology. But do you have a manageable tech stack? Let’s take a look...

The tech stack takes your full array of technology and transforms it into one cohesive unit that lets people see how all those different solutions work together to drive growth. Think of it as an organizational chart for your software: Tech stacks communicate the relationship between your digital tools and your critical business functions, serving as the foundation for uniting people and driving company success.



Technology



Tech Stack

STEP 2


Assessing Your Current Technology

Where do things currently stand?

Before you can begin to build a solid tech stack or strengthen an existing one, it's important to first take a good, hard look at your current technology.

The first part of this process is relatively straightforward:

First, use the worksheet on pg. 21 to create a list of all the apps you or your team use regularly, like the example below.

 See pg. 21 for an example tech stack worksheet.



Now draw lines between any that are integrated or otherwise connected.



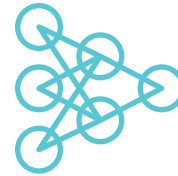
This is the foundation for your team's current tech stack.

Expanding your scope

Seems simple enough. That is, until you factor in two keywords: *your team*. Chances are, this is just one small component of a much larger and more complex bundle of solutions that exists across the entire organization.

To understand the true state of your current technology, you'll need to do some digging to find out how many other sets of solutions may exist within your organization. Are other departments using apps you aren't aware of? Where else is money being spent to deploy technology? Conducting a short survey or sharing a simple questionnaire may be all that's needed to aggregate a full list, but be sure to cover every corner of your company. Divisions that tend to be technology-heavy include:

- Business intelligence
- Communications
- Customer service
- Engineering
- Finance
- Human resources
- IT
- Marketing
- Product
- Sales
- Web development
- Operations
- Project management

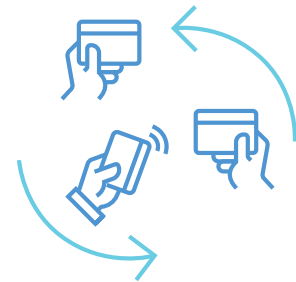


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With a full list at hand, it's easier to take a critical look at which apps have the potential for lasting ROI. Which apps and tools are:

- Being used consistently?
- Interconnected through integrations or APIs?
- “Collecting dust?”
- Proving to be too difficult or time-consuming to use?
- Creating overlap (i.e. 2-3 subscriptions that do the same thing)?
- Providing the most value?
- Connected to actual results?
- Measurably moving the needle for better customer experiences?

You may be surprised to learn just how big of an overhaul is needed. If that's the case, don't panic. With so much technology purchased and deployed at so many different times and by so many different people, it's not uncommon for accountability to get lost in the shuffle.



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STEP 3

Examining IT Oversight (or Lack Thereof)

Where has all the oversight gone?

Once upon a time, IT was charged with vetting, approving, purchasing, deploying and maintaining technology across the entire organization. There was someone to help ensure data stayed secure and spending was kept in check. No longer. Different departments are making their own decisions around what software to buy and how to manage it. Anyone with a corporate credit card can buy software and IT would never be the wiser.

Most often, this is where problems begin.

 **At the end of the day, everyone's just trying to solve their own problems.**

Maybe it's the struggling customer support team that needs to capture more detailed data, and so subscribes to a cloud-based service that promises to aggregate insights for personalized experiences. Fair enough. It's a valid concern and one worth pursuing.

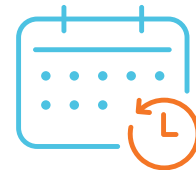
However, in this example, no one thought to first check with departments like marketing or business intelligence to see if they're already using something similar—let alone find out if the new tool will integrate with existing ones. All management knew was that a problem existed and a solution was needed, fast.

Fast forward several months and leadership is now learning that people are using just ONE feature—even though the “platinum plan” they pay for covers dozens more. And that’s not even the worst of it.

Turns out, there’s a much simpler app that does the exact same thing for a fraction of the cost. It offers direct integrations to several of the company’s other tools. And, unknown to the customer support team, marketing has been using it all along.

Instead of pride in a job well done, there’s now regret over a poor investment with little to show for it. And the cycle starts all over again.

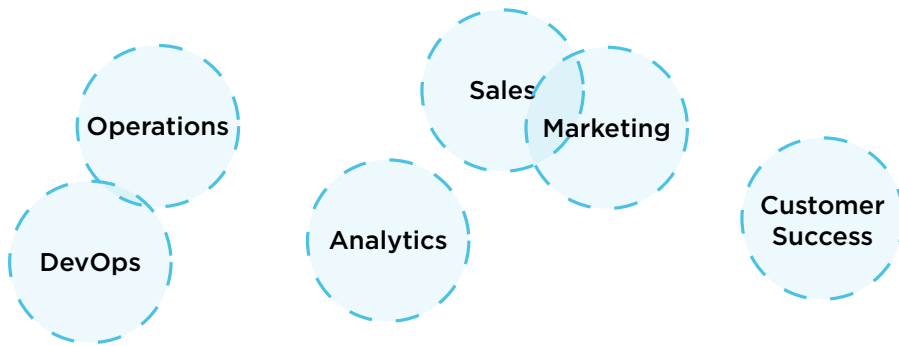
This kind of thing happens all the time. Teams frequently undergo months-long processes that take them from one app to the next, without knowing an internal solution already exists.



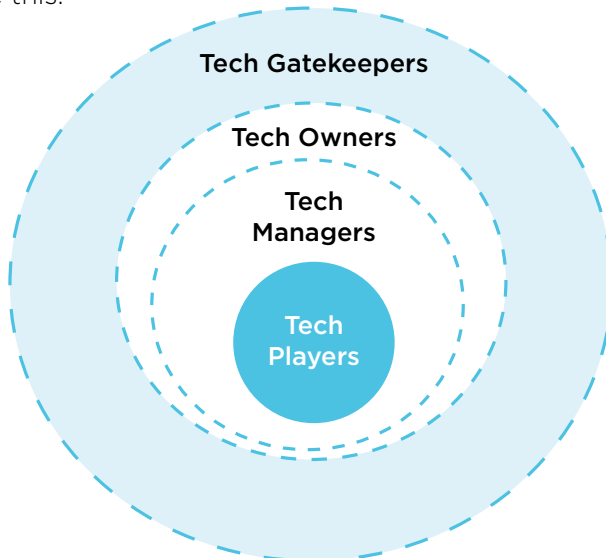
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The rapid growth of SaaS has made it incredibly easy for virtually anyone within your organization to make lightning-fast spending decisions. Teams can easily expand their stacks with zero visibility for corporate executives and IT, and no accountability for ROI whatsoever.

Aligning your tech stack can change all of that. When you consciously adapt to technology and start to structure roles around it, the framework may start to look less like this:



And more like this:



This newer, tiered version of tech management is the real key to driving business growth. Start by filling in this missing piece of the puzzle, and the rest will start to fall into place.

STEP 4

Evaluating Existing Tools

Once you have a strong understanding of where things currently stand, it's time to work toward harnessing the real power of your tech tools. Deciding what's really needed is a fundamental, yet often overlooked, first step. This is the time to really dig in and decide which technologies can be used to their full potential moving forward—and which apps it may be time cast away.

Which apps are slowing progress and productivity?

Which tools are over-provisioned, or include costs for features you don't need?

Which tools have designated in-house experts capable of training and educating others?

How often are you replacing old tools and onboarding new ones?

How much time is lost to learning curves as a result of onboarding new tools?

What gaps exist in your current technology that need to be filled?

It's important to involve all stakeholders in this process to see what tools different teams like, don't like and recommend... as well as ones they're likely to ignore or avoid. For many organizations, this process will bring new issues to light—ones that have built up over time after starting imperceptibly and going largely unnoticed.

 Companies are still underutilizing the technology they already have at an epidemic level.

FORBES

Does this sound familiar?

A new account here, a credit card entry there... those handfuls of seemingly harmless trials, purchases and upgrades have suddenly bloomed into a vast network of apps that's left leadership with little understanding of just how many tools are being deployed. Whether a company is aware of it or not, this devolution of IT oversight can lead to significant problems over time.

OVERSPENDING

It doesn't matter if a company has 15 or 1,500 employees. There's still a high likelihood the organization's SaaS spending is going to [double by 2020](#). As teams continue to [add more apps](#) each year, it's imperative to monitor ROI—something that few businesses are measuring consistently.

UNDERINVESTING

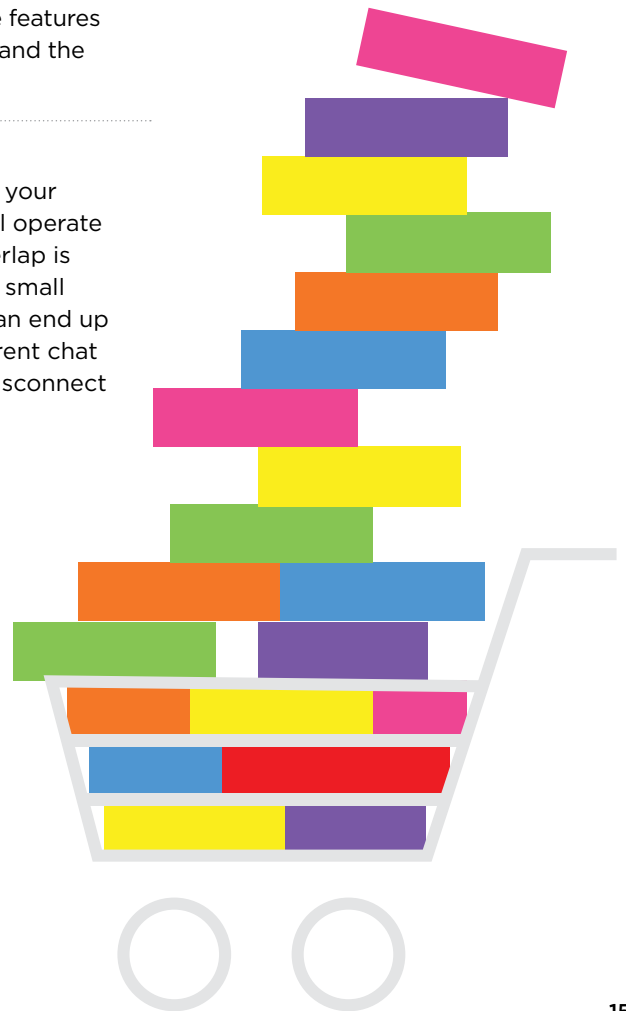
As apps pile on, it can become increasingly difficult to understand what's being used and, even more important, invest in training or develop in-house expertise. Teams buy more apps to fix their app problem while underinvesting in institutionalizing expertise and knowledge.

OVERPROVISIONING

Widespread use of “freemium” subscription models makes it easier than ever to try out new tools at seemingly little or no cost. But what happens when a team reaches the limitations of a free version? In these instances, users often wind up with far more features than can actually be used... and the price tags to match them.

UNNECESSARY OVERLAP

Are departments united by your technology? Or do they still operate in silos? If it's the latter, overlap is inevitable. Even a relatively small 100-person business unit can end up deploying four or five different chat bots simply because of a disconnect between departments.



Stack Smarter. Go Further. To benefit from everything your software makes possible.

Many teams will rush to launch a new application or cloud-based service when, in reality, a number of considerations should be factored in. Keep these in mind as you both vet current tools and consider new ones.

ACCESS

Is the app device-centric?
How will users gain off-premise access?

COST

What are you really paying for?
How many available features are actually needed?

INTUITIVENESS

How easy will it be to get comfortable with features and functions?
How long is the learning curve?

INTEGRATIONS

Are existing integrations readily available?
How will you connect the app to other technology?

LICENSES AND LOGINS

How many employees will need access?
How will logins be handled?

ONBOARDING

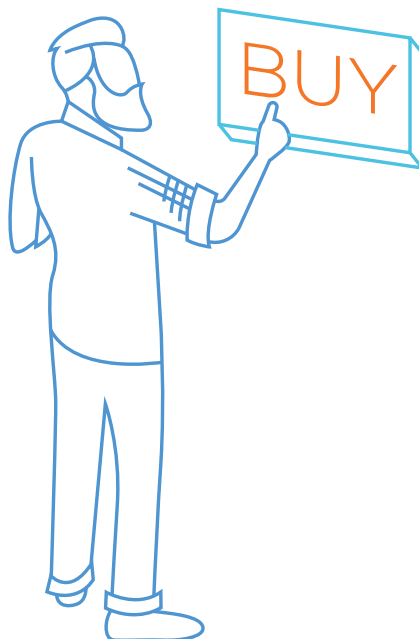
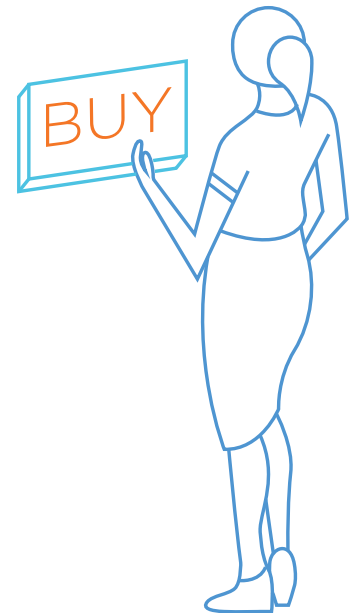
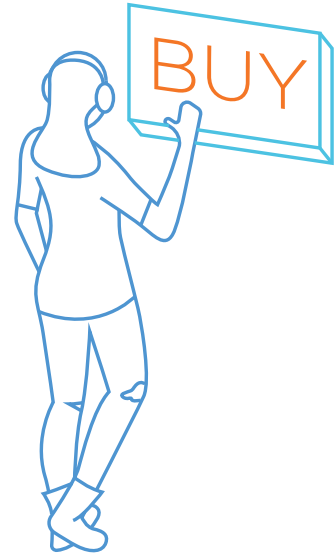
How long will it take to onboard a new solution?
Who will provide the training, and how?

OWNERSHIP

Who will the designated expert(s) be?
How will they share and institutionalize knowledge?

VISIBILITY AND ACCOUNTABILITY

Where will app details be stored and shared?
How will results be measured?



STEP 5

Experiencing Software as a Strategy

Tuning Your Tech Stack to Growth

As you fine-tune your stack, take time to map out the big picture. Your teams need full context on what, why, when and how to use software, vendors and data sources. Remember, the goal is to find the right mix of technology to drive your business forward. For today's employees, understanding their role in the tech stack is as vital as understanding their role in the organization.



1. Map out your stack. Determine which tools have been deployed, where they live and how much is being spent on them.



2. Identify your stack teams. This will involve defining five key groups of stakeholders.


Managers: This group usually consists of individuals who first identified the need for new software, and may or may not also be the “owners.”

Owners: Who has knowledge to share? Who knows the most about your existing tech tools? Most organizations have several different sets of solutions, in which case there will be multiple owners.

Informed parties: This typically involves leadership, such as IT and finance, that needs visibility into your tech stacks and ROI.

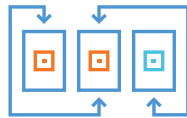
Users: These are the employees who use the apps in their day-to-day roles.

Experts: Consultative experts for the tools themselves, these stakeholders are capable of building integrations and solving issues.

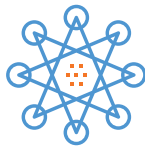
 As you fine-tune your stack, take time to map out the big picture.



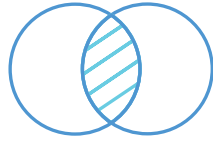
3. Formalize expertise. Once you've identified the true tech stack experts, work on institutionalizing their knowledge. It's important that these stakeholders remain in close collaboration. The more you can reach across departments, divisions, business units and teams to unite these employees, the better positioned you'll be to maximize the full potential of your technology.



4. Document processes and workflows. As you make changes to ensure the true experts stay connected, you can begin to formally document their insights and lessons learned. This knowledge share will help ensure that all employees know which tools are available to them. It also keeps things in check as you onboard new tech in the future, and serves as a key component when preparing new hires.



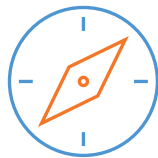
5. Look for opportunities to integrate. Look across departments for synergies and opportunities to connect key business functions.



6. Uncover gaps and overlap. Do you have two or three tools that perform the same function? Are there areas where you'll need additional technology to achieve the business results you're working toward? Examine the tech stacks you've mapped out to decide where you may need to fill gaps or eliminate excess.



7. Justify ROI. How much revenue are your sales enablement tools generating each month? How many net new prospects do your demand gen apps bring in? What are the top three ways your customers are being satisfied each week as a result of your customer service tools? Be ruthless as you examine your newly mapped stacks to decide where true returns on your technology investments can be achieved.



8. Plan for future investments or cost-cutting efforts. With full visibility into what's being spent, who's using what and which tools are leading to real returns, you can more easily determine where to focus spending moving forward. Decide what to keep, what to eliminate and how you'll determine purchases and deployments moving forward.

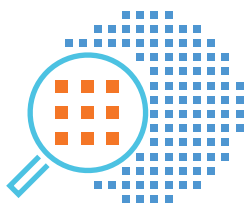


Ready to Tune Your Stack to Growth?

Introducing **AirStack™**

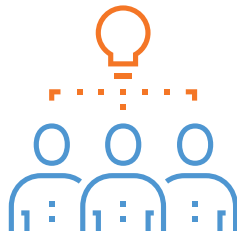
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Experience Software as a Strategy with Lenovo AirStack—a smarter, more productive way to manage the software that shapes your business. Giving you total visibility into your entire software ecosystem and connecting high-performance teams to the tools they need, AirStack is built to give your business a solid software foundation to move forward faster



Total Visibility

See every element of your entire software ecosystem



High-Performance Teams

Connect your people to the knowledge and tools they need



Smarter investments

Solidify your software foundation to move forward faster

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Appendix

Example Tech Stack Worksheet

← Write company departments in the top row (e.g. Accounting, Operations, Marketing, etc.)

Below each department, list all the software applications used for day-to-day tasks.

Examine your tech stack. Do you see gaps or redundancies?

Tune Your Stack Growth

