



The Email Infrastructure Handbook: Homebuilt vs Outsourced

2019

Summary

1	Introduction.....	03
2	Key Considerations.....	04
3	Assessing Your Options.....	19
4	Conclusion.....	26



Introduction

Your email demands can probably get a little overwhelming at times. With a growing contact list that can contain personal information, to the design and delivery of both marketing and transactional emails, a big decision weighing on your mind might be who you are going to trust with these demands.

The question of whether to trust your homebuilt solution to manage your emailing program, or outsource to a third-party service provider to take some work off of your plate can require a lot of consideration.

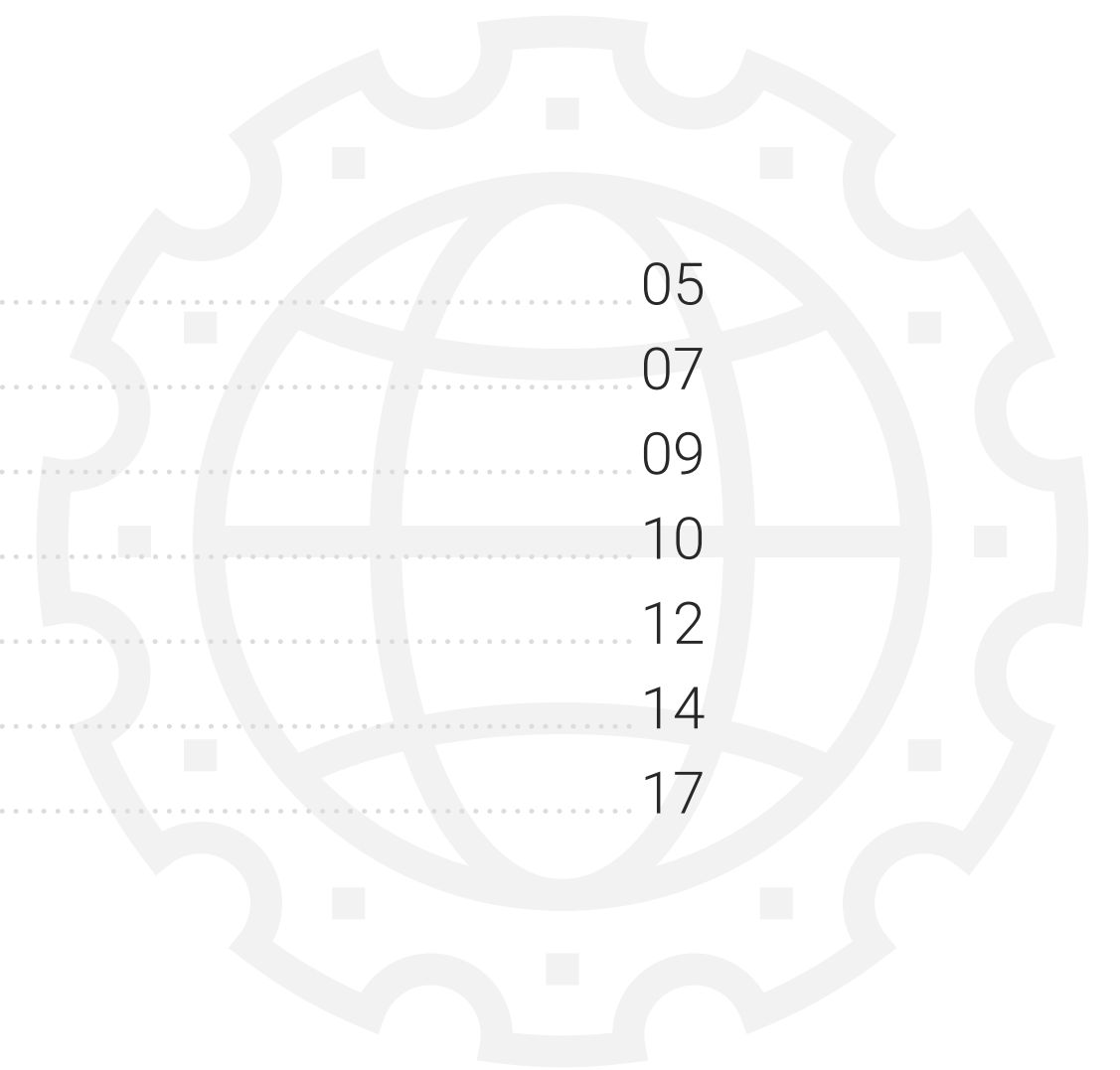
Weighing all of the factors can be difficult. Deliverability, cost, and data privacy & security are just the tip of the iceberg. You will need to evaluate all of the pros and cons when it comes to the 'build vs buy' options, and this guide is here to help with in-depth explanations that outline all that you will have to evaluate when making your final choice.



Key Considerations

Choosing between building or outsourcing your email infrastructure involves many considerations that vary in importance depending on your company's needs. To get started, below are a list of the key aspects you need to take into account before making your final decision.

Deliverability	05
Cost	07
Data Privacy & Security	09
Scalability	10
Maintenance & Support	12
Stats & Analytics	14
Template Builder	17

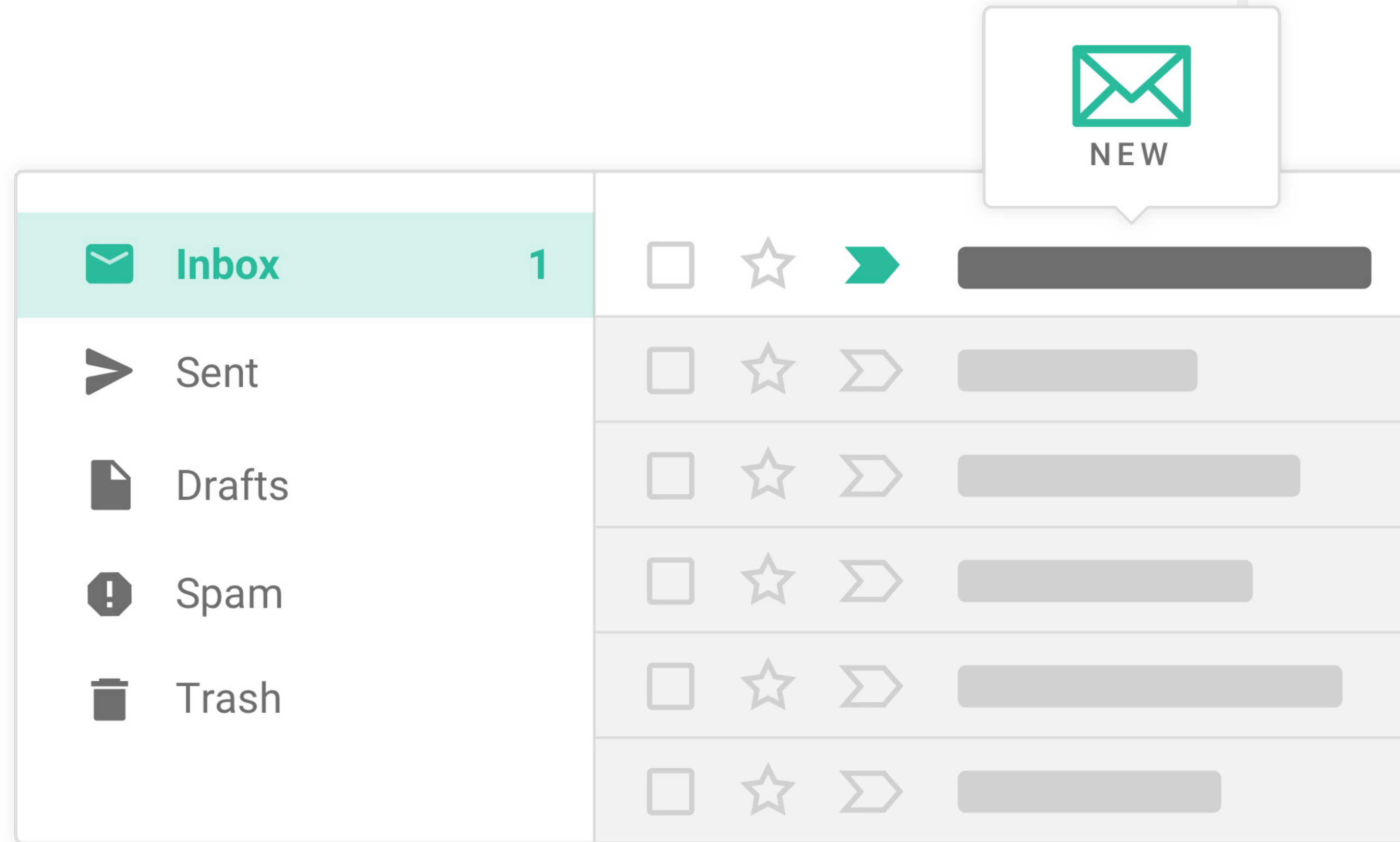


Deliverability

Deliverability can be a tough game to play. Successful deliverability means that the emails you send land in your subscribers' inboxes. If they land anywhere else, like the spam or junk folder, it means the delivery failed. Or even worse, if the email address has a typo or is expired, it could bounce back entirely.

When considering outsourcing your email infrastructure, deliverability should be at the top of your list.

Ask yourself, how has your deliverability been under your current internal systems? Sometimes, a company's internal email infrastructure doesn't report basic stats like



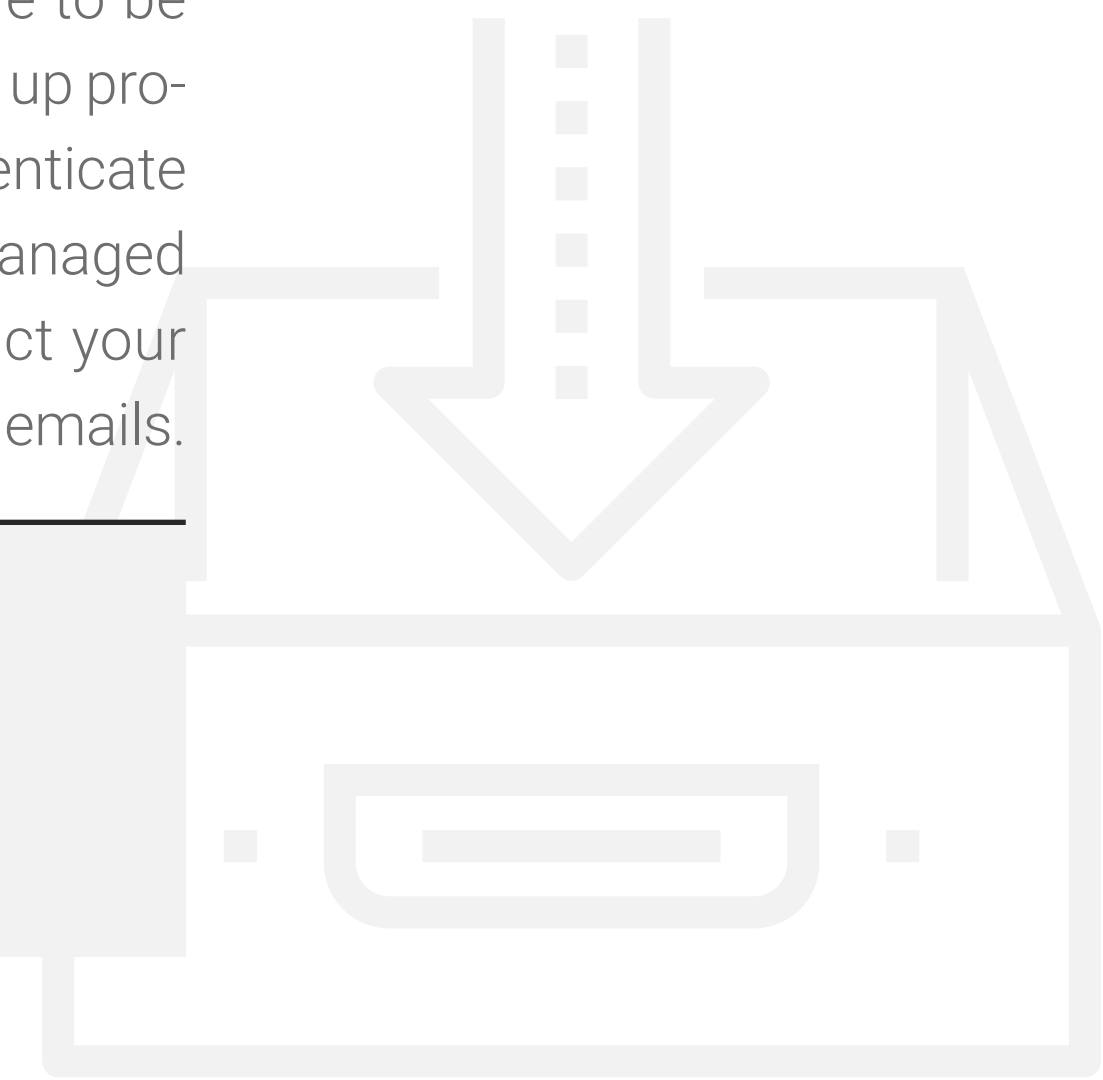
bounces, spam, or even opens and clicks. **These stats are proxies for deliverability and can help inform your list-cleaning practices.** Without these stats, you are very likely sending to inactive users, old accounts, emails with typos, and spam traps, all of which will negatively affect your deliverability.

Some internal email tools do report detailed stats, which can definitely help with deliverability. In this case, you will also need to consider your domain and IP reputation with inboxes and ISPs, as well as whether you have a person (or people) on your team familiar with deliverability best practices.

Before sending can even begin, some steps have to be taken to prepare for good deliverability, like setting up protocols for SPF, [DKIM](#) and [DMARC](#) to properly authenticate your email. Issues with deliverability have to be managed immediately and efficiently to continue to contact your customers, whether it's transactional or marketing emails.

An almost constant diligence is required to ensure the contact list remains clean, and monitoring blacklist placement as well.

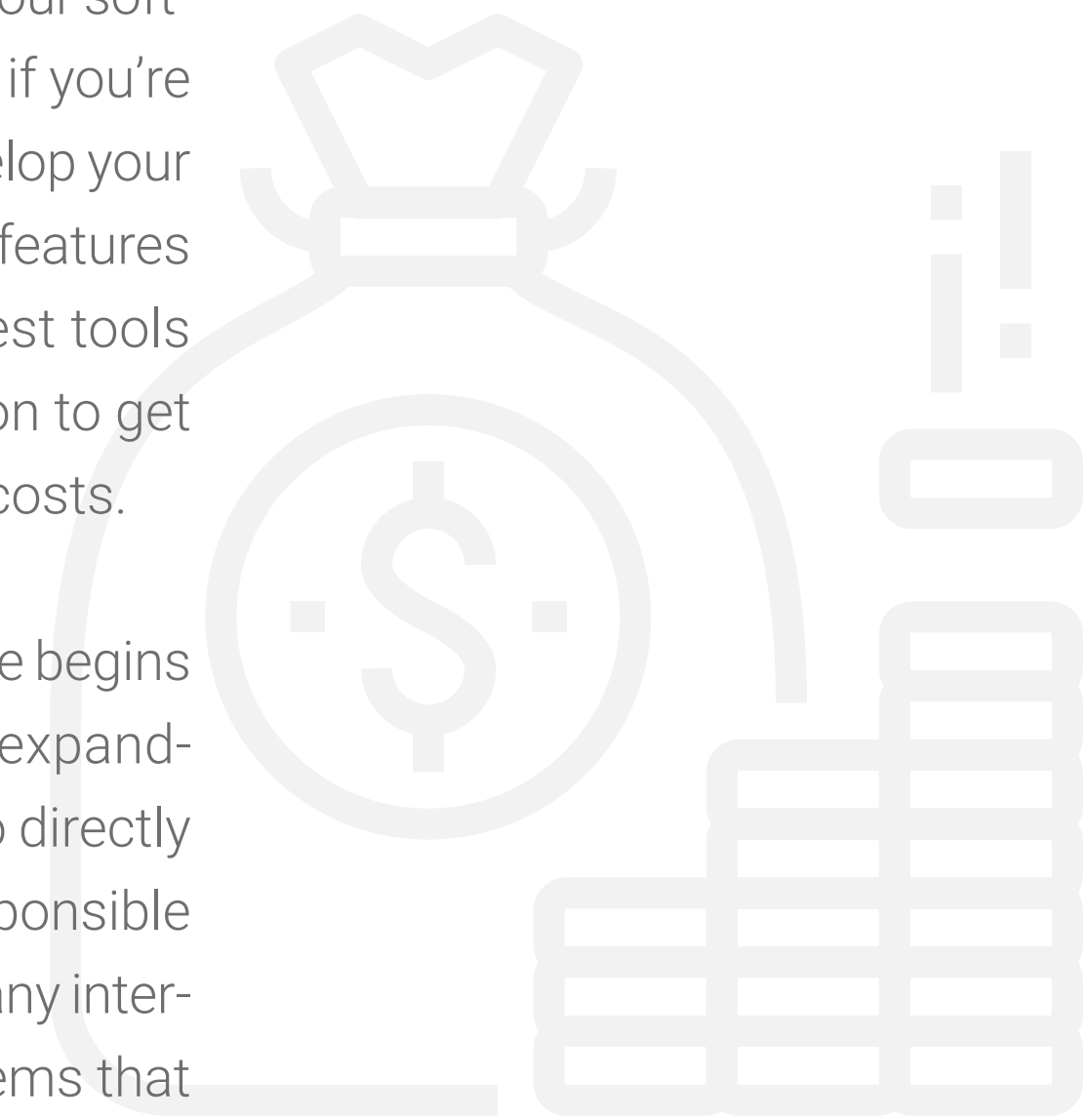
Learn More: [Email Deliverability: A How-To Guide To Get Into The Inbox](#)



Cost

When it comes down to it, what usually matters most for many businesses is cost. There are three main expenses to keep in mind when reviewing your decision to outsource your email infrastructure:

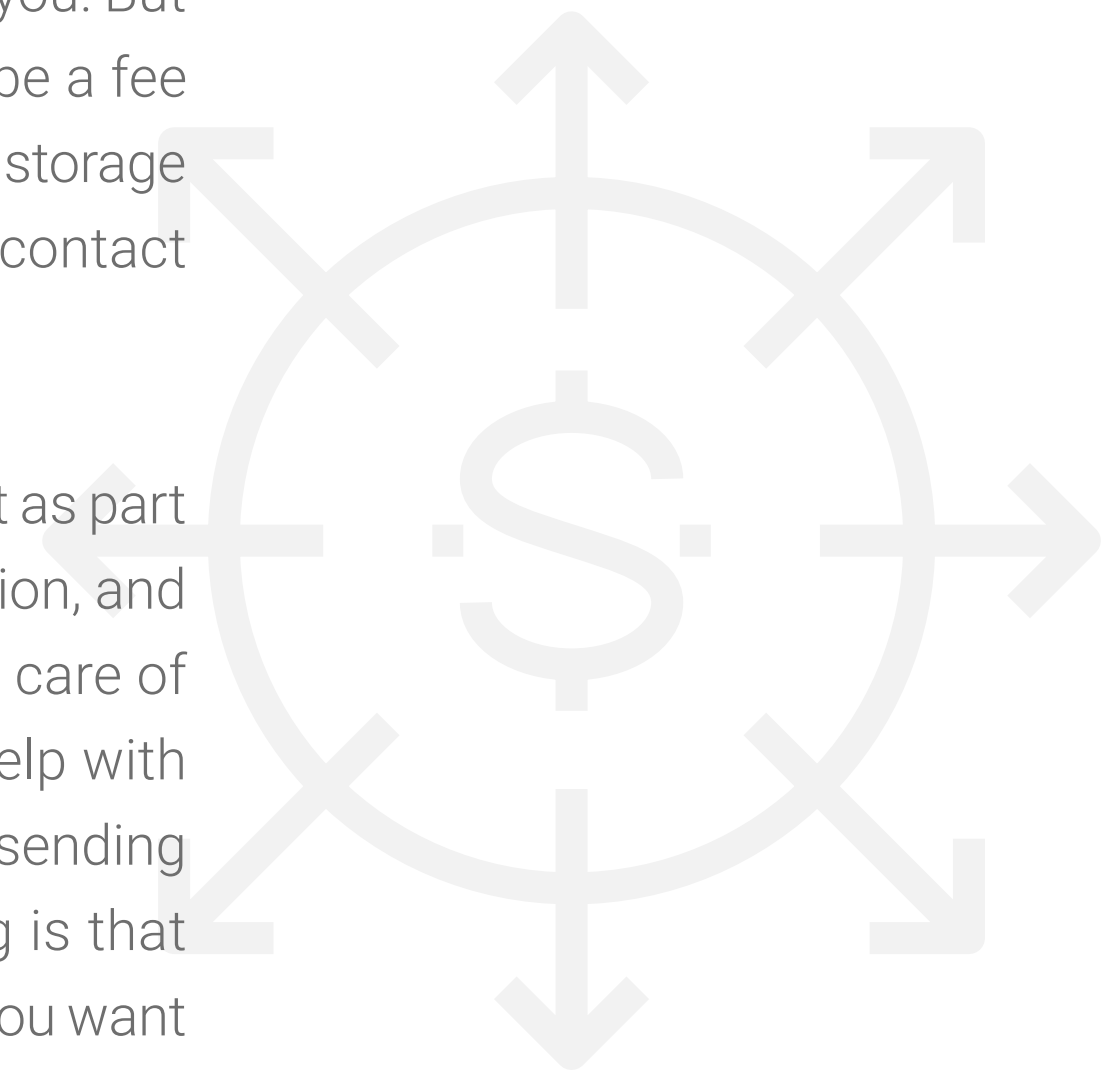
- **Hardware:** Your email infrastructure is only as strong as your hardware. Maintaining and updating your servers to keep up with the demands of your email program can be costly, and fixing issues like broken fans and disk failures won't be cheap. If instead you host your servers on cloud platforms like AWS and Google Cloud Platform, you may not be responsible for maintaining servers, but you certainly need to take into consideration cloud hosting fees, which can quickly add up.
- **Software:** Purchasing, building, and maintaining your software definitely has to be considered in your costs if you're going to build your own email software. If you develop your own software, staying on top of bugs, adding new features for your marketing team, and developing the latest tools like personalization, A/B testing, and segmentation to get the most out of your email strategy are on-going costs.
- **Staffing:** When your homebuilt email infrastructure begins to grow to accommodate the demands of your expanding business, a team will have to be established to directly oversee your infrastructure. This team will be responsible for ensuring that your emailing continues without any interruption, and to effectively troubleshoot any problems that may arise.



Not to be forgotten is how costs can fluctuate unpredictably due to outages and scaling needs as you and your email volumes grow. These considerations can make it difficult to truly estimate future costs.

However, if you were to decide to outsource your email infrastructure, there are of course costs associated with this, too. Namely, there are three categories to keep in mind:

- **Email Routing:** Depending on the volume of emails you send per month, an email service provider's (ESP) pricing might be more demanding than running your own infrastructure. If you don't need the features, deliverability support, and other advantages of an ESP, smaller volumes might be able to be handled by your infrastructure. Typically, email routing is charged on a CPM basis (i.e. per 1000 emails) or based on pre-selected plans. If you send consistent volumes monthly, you can also be assured of cost certainty. If your volumes vary by month, an annual plan could also be used to ensure cost certainty.
- **Storage:** Keeping your contacts, templates, and statistics all in one place requires quite a bit of processing power, and that's what an email service provider can give you. But to provide you with those solutions, there might be a fee associated with this. While Mailjet does not charge storage fees, many ESPs do charge based on things like contact list size and audience size.
- **Services:** We're talking about every feature you get as part of the subscription. Email automation, segmentation, and A/B testing to improve your sending are all taken care of as part of outsourcing. Additionally, support to help with sending issues and to provide answers to all your sending questions are built into the cost. The tricky thing is that pricing can fluctuate depending on what services you want access to, so your service needs will have to be assessed before you outsource.



Data Privacy and Security

With all of the private data that your company deals with on a day-to-day basis, and the growing regulations around data protection, security and privacy standards must be a constant concern.

There is a lot to be said for the security that owning your infrastructure can bring, especially with on-going cybersecurity issues and data breaches. **Maintaining an infrastructure that protects your data properly can be a full-time job, and depending on your company, perhaps many peoples' full time job.** Not to mention keeping up with the ever evolving laws and practices that have to be monitored and followed diligently.

When it comes to your email infrastructure, outsourcing can be especially beneficial if maintenance is an ongoing

concern, or your internal servers or cloud computing providers don't have state of the art systems and accredited protocols.

That said, sometimes an internal server can be the most secure given you can have full control over it, and full exposure to how it works. If your business has prioritized security and privacy across your whole company, perhaps an internal email infrastructure is the best way to ensure optimal security.

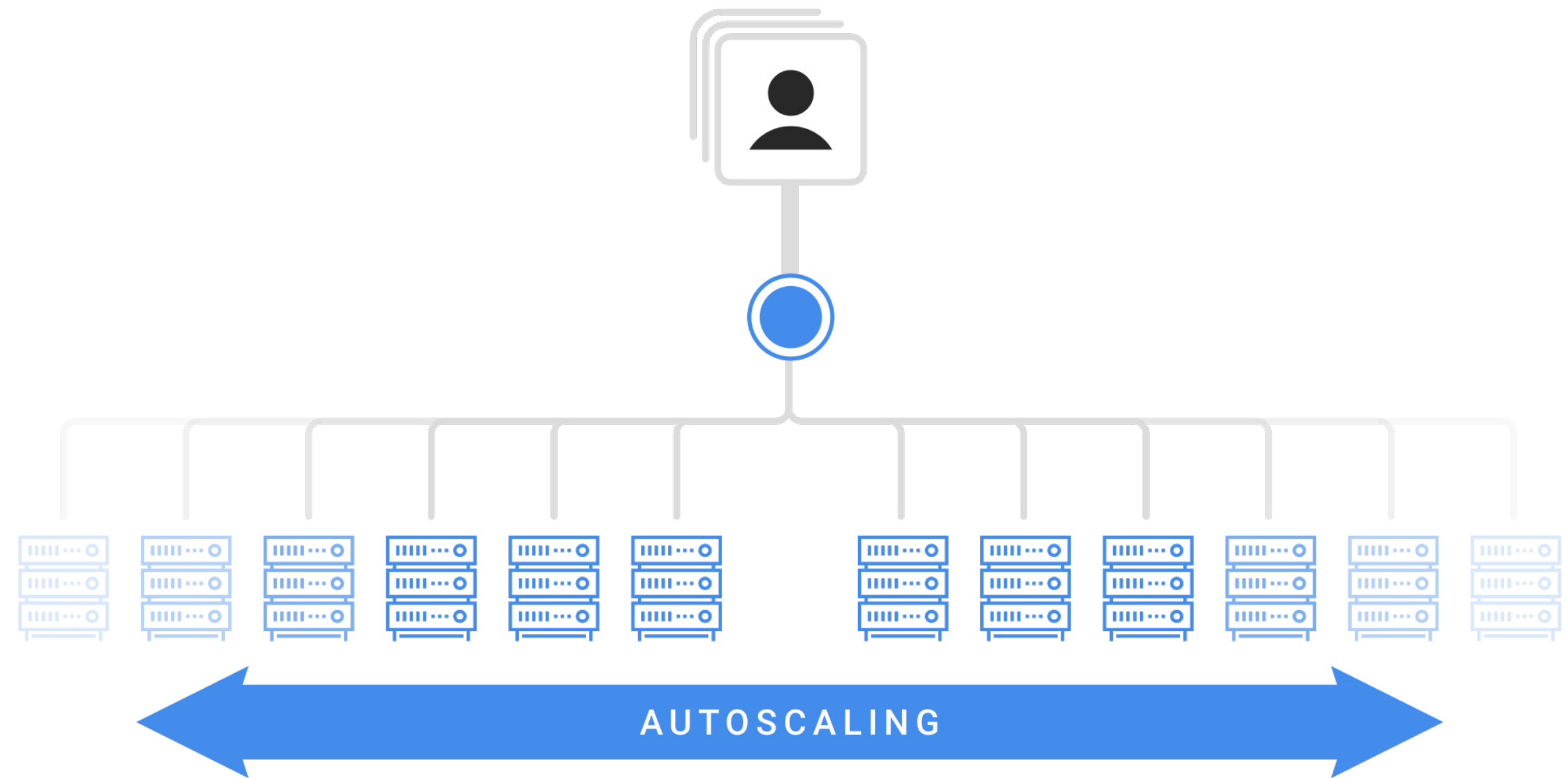
But if you're not as confident, many email service providers bring a high quality of privacy and security. For example, Mailjet has prioritized security and privacy resulting in the highest standard of data protection, now recognized by third parties as [GDPR compliant](#) and ISO 27001 certified.



Scalability

Sending 100 emails? A piece of cake. Sending 10 million emails? Not quite so simple. As a successful business grows, communicating with customers, users, and prospects becomes more complex. That's why your email infrastructure will need to scale right alongside it.

As your email needs begin to scale, and the teams required to manage these do as well, you will need to ensure your infrastructure keeps up with your email volume, sending speed requirements, and data processing.

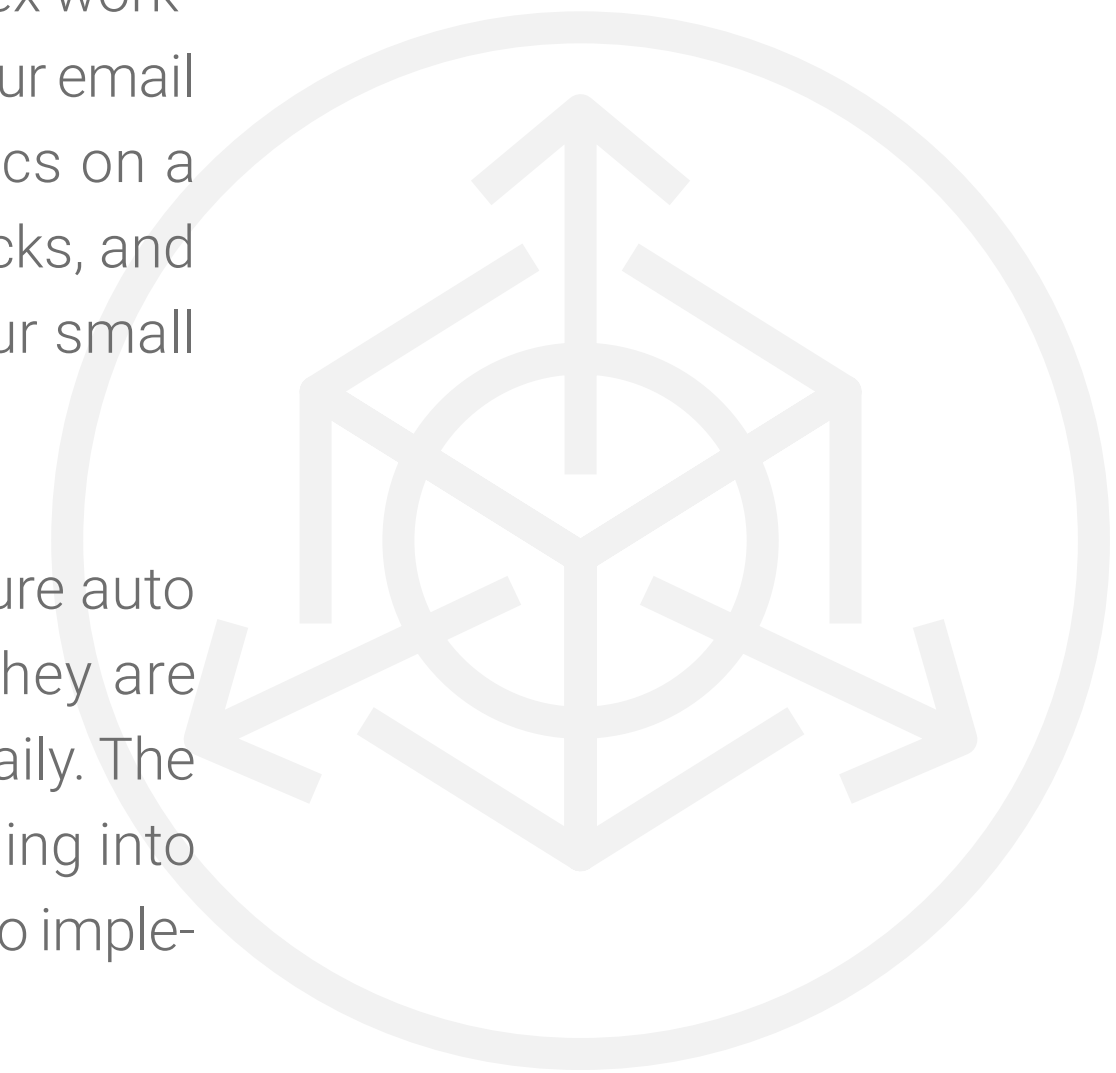


Working with an ESP, or building an internal email platform that has auto-scaling capabilities can fundamentally improve your entire email functionality. **Auto-scaling is a way for infrastructure to adapt to user demand, while maintaining performance and minimizing cost and resources.**

If you are sending campaigns at varying volumes, times, and speeds, your demand could sometimes spike above the capabilities of your infrastructure. If you are sending more emails on higher volume days such as Black Friday and your infrastructure can't meet the demand, then you can be faced with delays and data loss.

This is especially important when building complex workflows and triggers into your email campaigns. If your email solution is not able to process data and analytics on a real-time basis, then triggers based on opens, clicks, and replies can be queued. In the blink of an eye, your small delays can compound into longer delays.

ESPs that specialize in robust infrastructure ensure auto scalability of their email infrastructure, given they are dealing with hundreds of thousands of senders daily. The upfront cost and complexity of building autoscaling into your own internal email platform may be a barrier to implementation.



Maintenance & Support

Even the smallest interruption in your sending can be a big problem. Your emails need to get where they are going on time, and in the right mailbox. Support can be crucial in solving these issues quickly and efficiently so they do not impact you for hours, or even days on end.

So, when considering whether to build or buy your email infrastructure - what about on-going maintenance? **Well, the reality is that regardless of your choice, there will be problems, bugs, and outages.** And when this happens, troubleshooting email interruptions can be difficult, confusing and time consuming. Sometimes, many resources have to be dedicated to finding and fixing the issue, particularly when the problem can interfere with your business' ability to get work done.



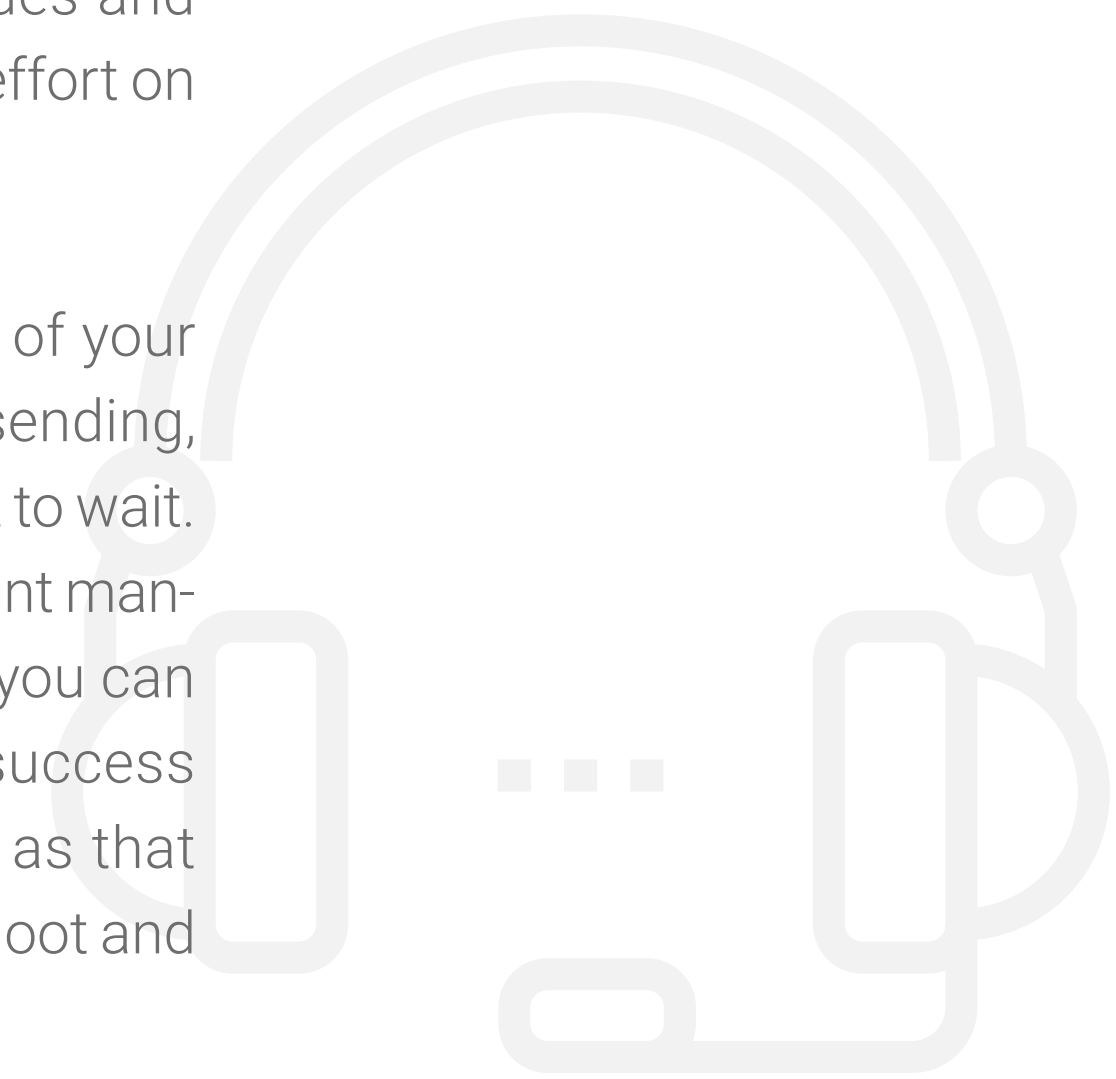
Keeping on top of your email infrastructure is demanding but necessary to neutralize any issues before they get out of hand.

Constantly checking on the servers and staying on top of your domain and IP reputation takes up time, money, and resources, but when they're neglected and there's an issue, it can end up being just as costly.

Working with an email service provider can take some weight off your shoulders, and gives you back some time

and money to allocate somewhere else. Upgrades and updates will be done automatically with minimal effort on your part.

Of course, when maintenance is completely out of your hands and a problem arises that impacts your sending, there's not much that can be done on your side but to wait. Working with platforms that have dedicated account management could be key here. Is there one person you can call if there are issues? Sometimes customer success teams at cloud platforms can essentially serve as that member of your team - always on call to troubleshoot and solve problems for you.

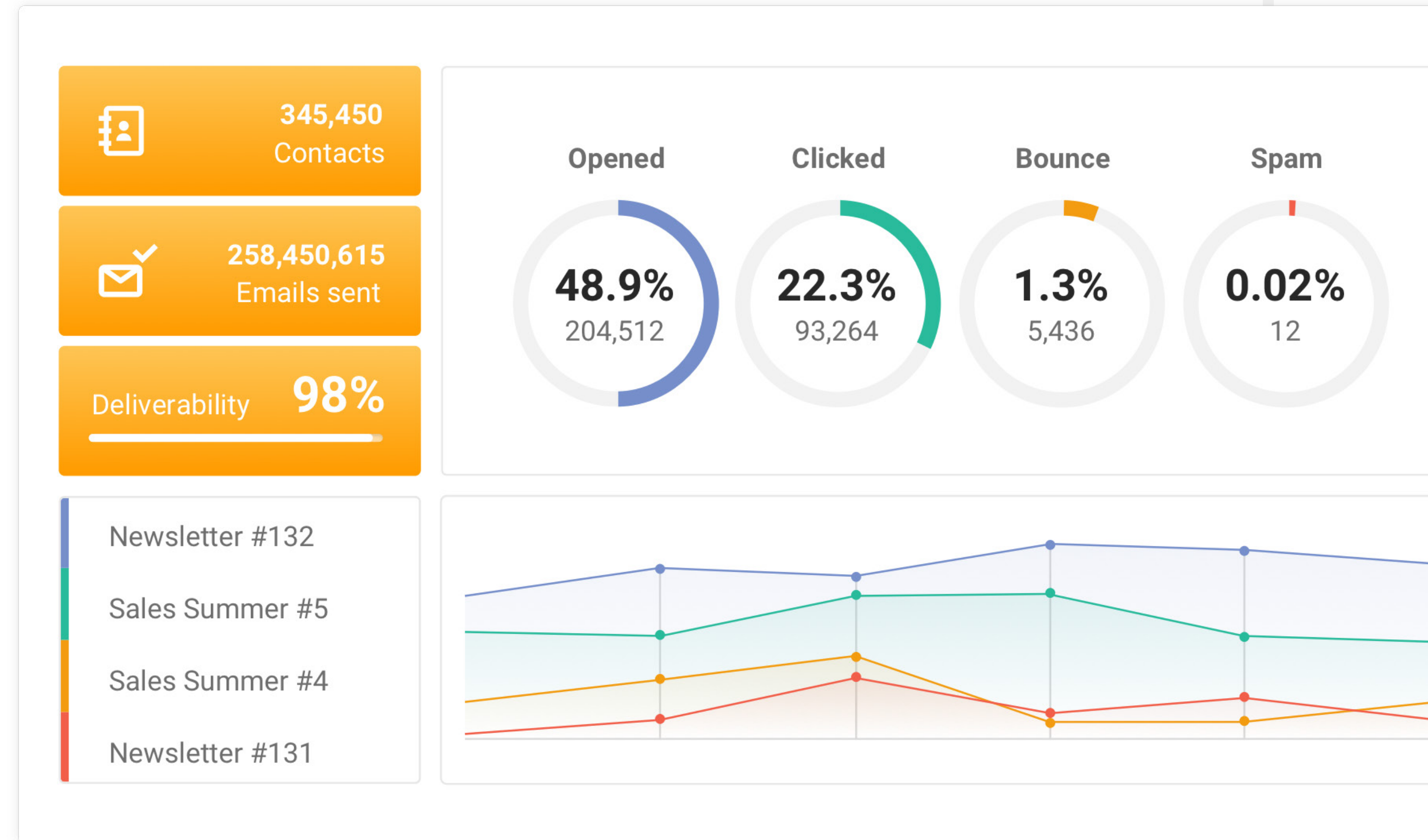


Stats & Analytics

Email campaign statistics are an integral part of improving your sending and engagement. Preparing the system to collect and query statistics can be very time consuming, but without a system in place it could be very detrimental to your future sending.

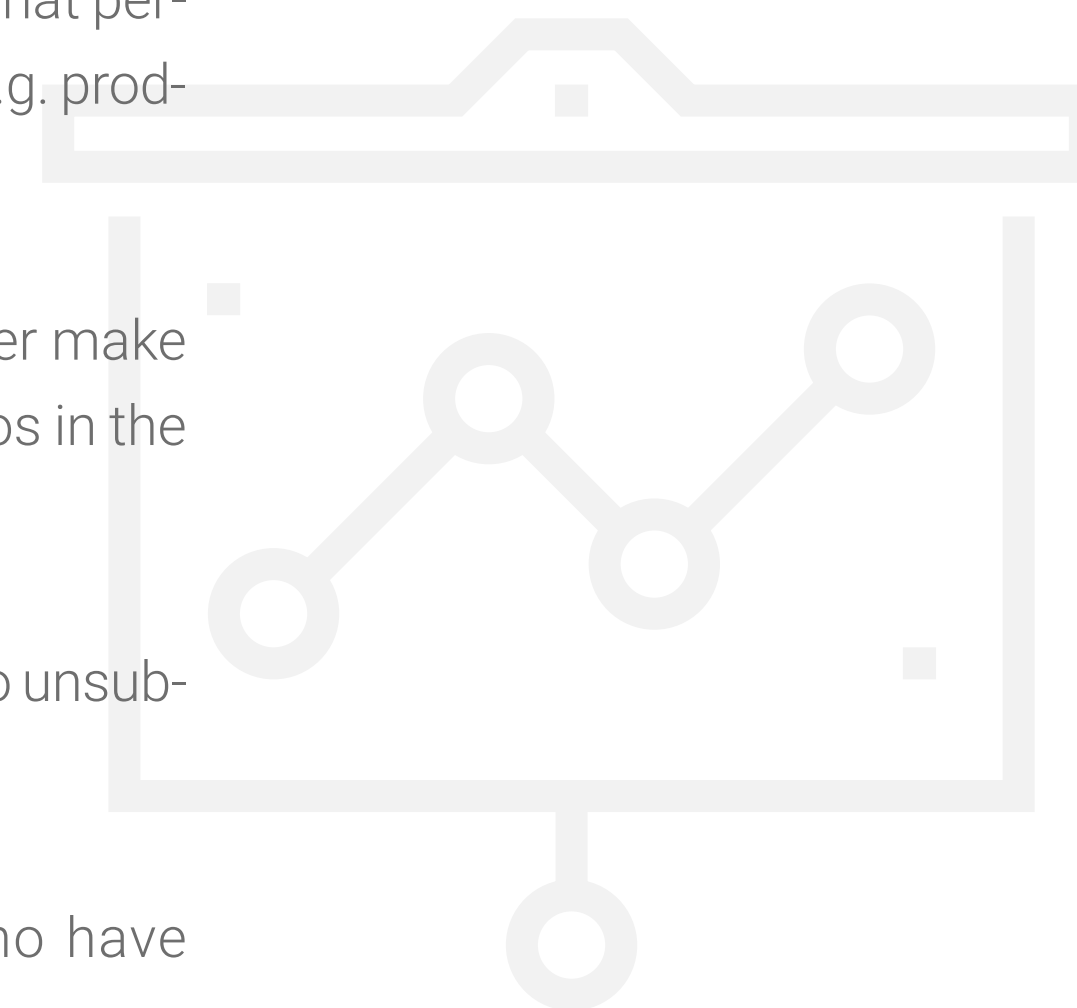
Systems to collect and store email statistics can be expensive to build and maintain, and as your business grows, storage of statistics will have to scale alongside it.

By building your own email infrastructure, you will need to build systems to log, store, and maintain your stats in such a way that is accessible for decision making, and reliable for complex email needs like segmentation, personalization, dynamic content, and list cleaning.



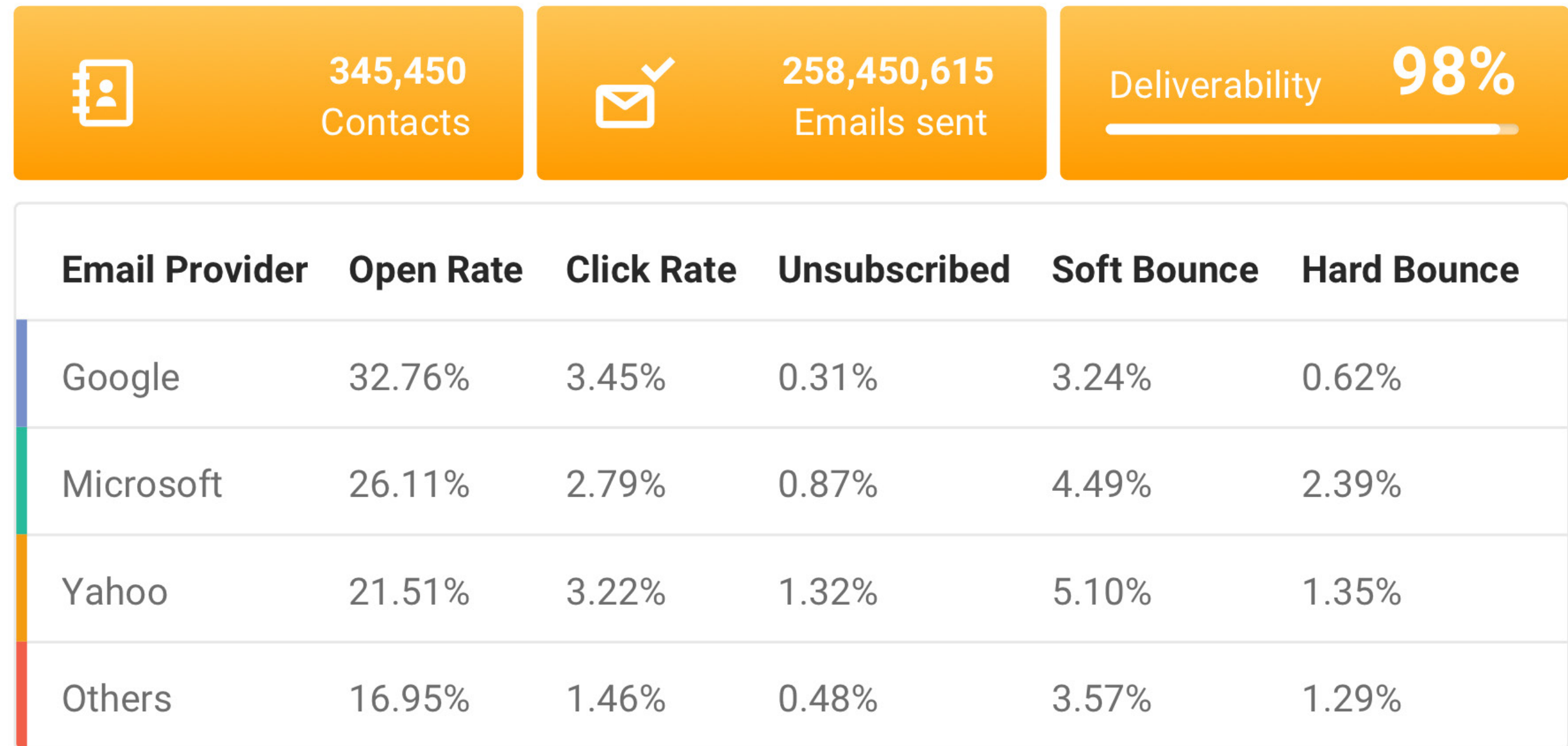
There could be a nearly endless list of stats that you should be on top of and utilizing in your emails, but the top tier stats you should consider include:

- **Open Rate:** The percentage of emails opened on any given campaign.
- **Click Rate:** The percentage of people who clicked a link in your email.
- **Clicks Per Link:** The number of times a specific link was clicked, in order to track the highest performing links and buttons.
- **Conversion Rate:** Based on your defined goals, what percentage of emails delivered resulted in your goal (e.g. product purchased).
- **Bounce Rate:** The percentage of emails that never make it to your users because of hard bounces (e.g. typos in the address) or soft bounces (e.g. inbox is full).
- **Unsubscribes:** The number of people who opted to unsubscribe from your campaigns.
- **Spam Complaints:** The number of people who have marked your email as spam.



If you are building your own infrastructure, stats like open rates and click rates are crucial to measuring success and optimizing future campaigns. Equally as important are stats like bounce rate, unsubscribes, and spam complaints that are just as foundational to your business. Not properly tracking these will take away the opportunity to adapt based on the info (e.g. removing unsubscribes from future emails), potentially resulting in **massive deliverability problems, reduced email performance, and legal issues** from regulatory bodies like GDPR and CAN-SPAM.

Learn More: [Email Campaign Statistics: What Do They Tell You?](#)

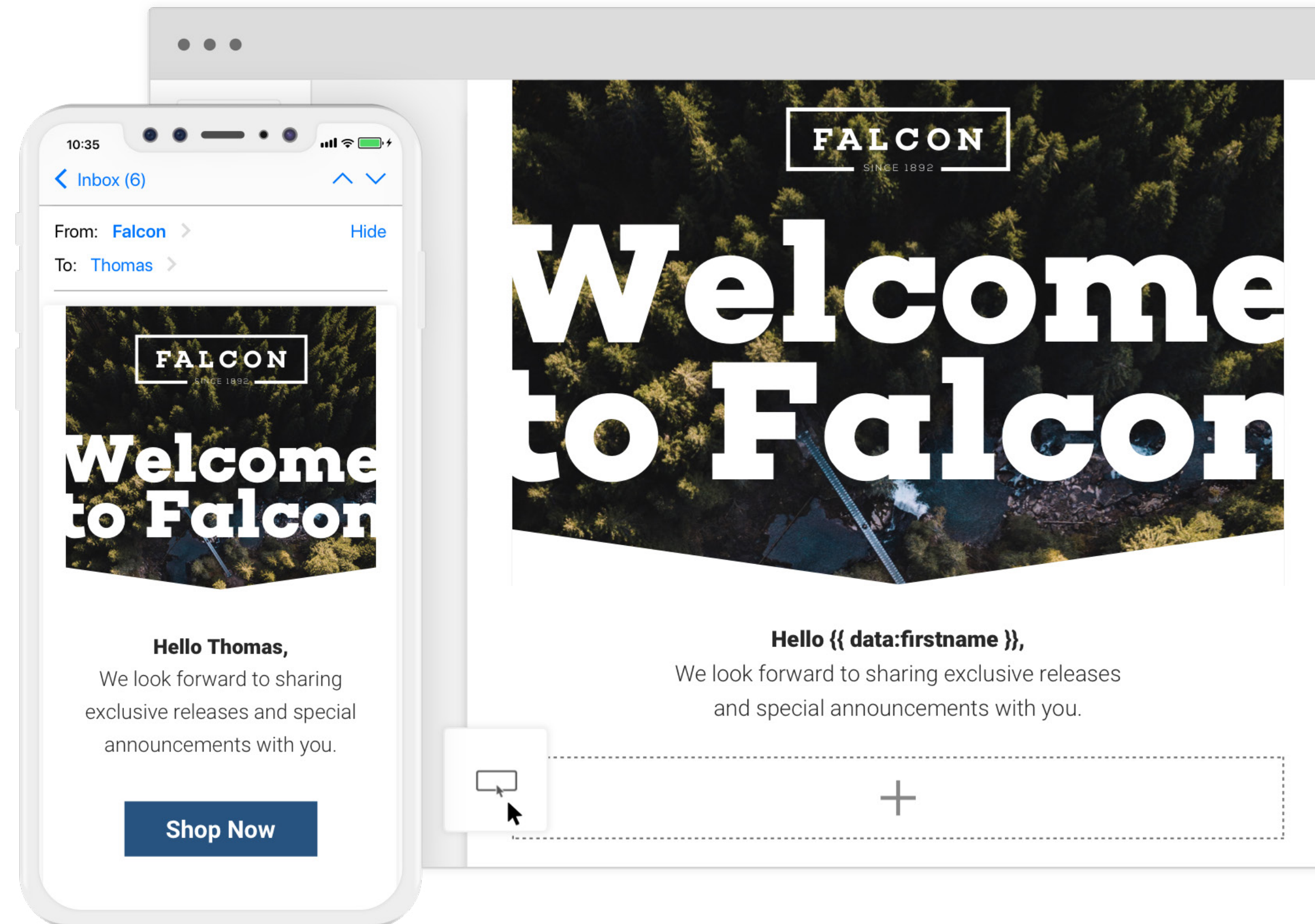


Template Builder

Given it's been shown that over [80% of people](#) simply delete an email that doesn't appear correctly on their mobile device, email templates have to not only look good, but look good on all devices and inboxes. This is why responsive email design is so important.

With your own internal email platform, you can build a few HTML templates and ask marketers to make their edits in the code.

But, individually coding templates can be a tedious task for developers, taking their focus and expertise away from tasks that are more worth their time.



Sometimes, using templates that can be easily repurposed by marketers, copywriters, and CRM specialists can save a ton of time and money.

Outsourcing your email platform can reduce the burden on the developer. Many ESPs offer pre-built, responsive templates, and a simple drag-and-drop editor that makes it easier for your team to create, validate, and send campaigns. Just as most companies have adopted external Content Management Systems like Wordpress to make web development and updates easier, third party email service providers add the same value to email campaigns.

You will need to assess the value of the time saved, and the productivity enabled by collaborative and intuitive builders, compared to the cost of an external platform.

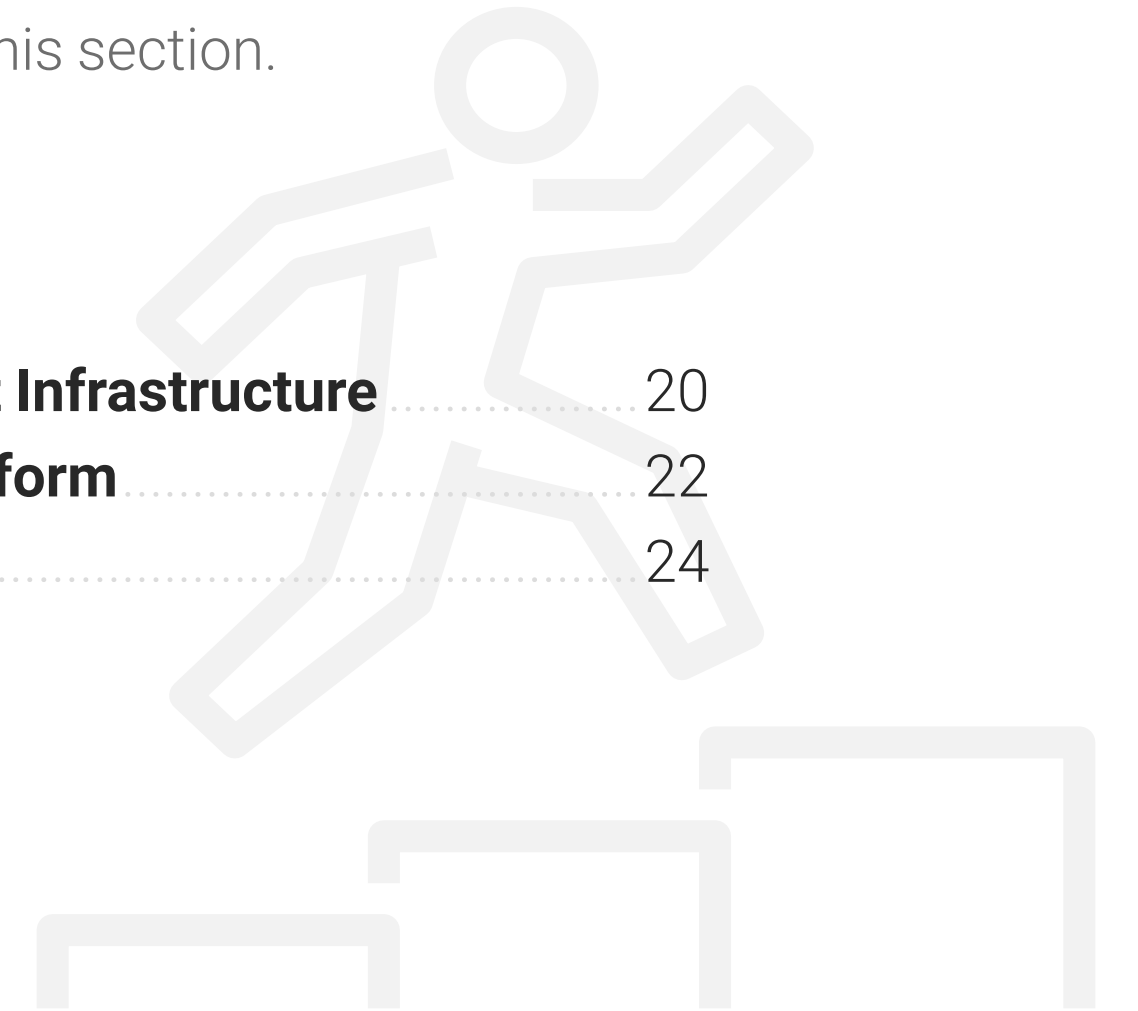
Learn More: [Guide To Creating Responsive Emails](#)



Assessing Your Options

Ultimately, there are three options when thinking through your email infrastructure: maintain your homebuilt email infrastructure, procure an email service provider, or a combination of the two. We're going to take a closer look at each of the three options in this section.

Maintaining Your Homebuilt Infrastructure	20
Procuring a Third Party Platform	22
Opting for a Hybrid Solution	24



Maintaining Your Homebuilt Infrastructure

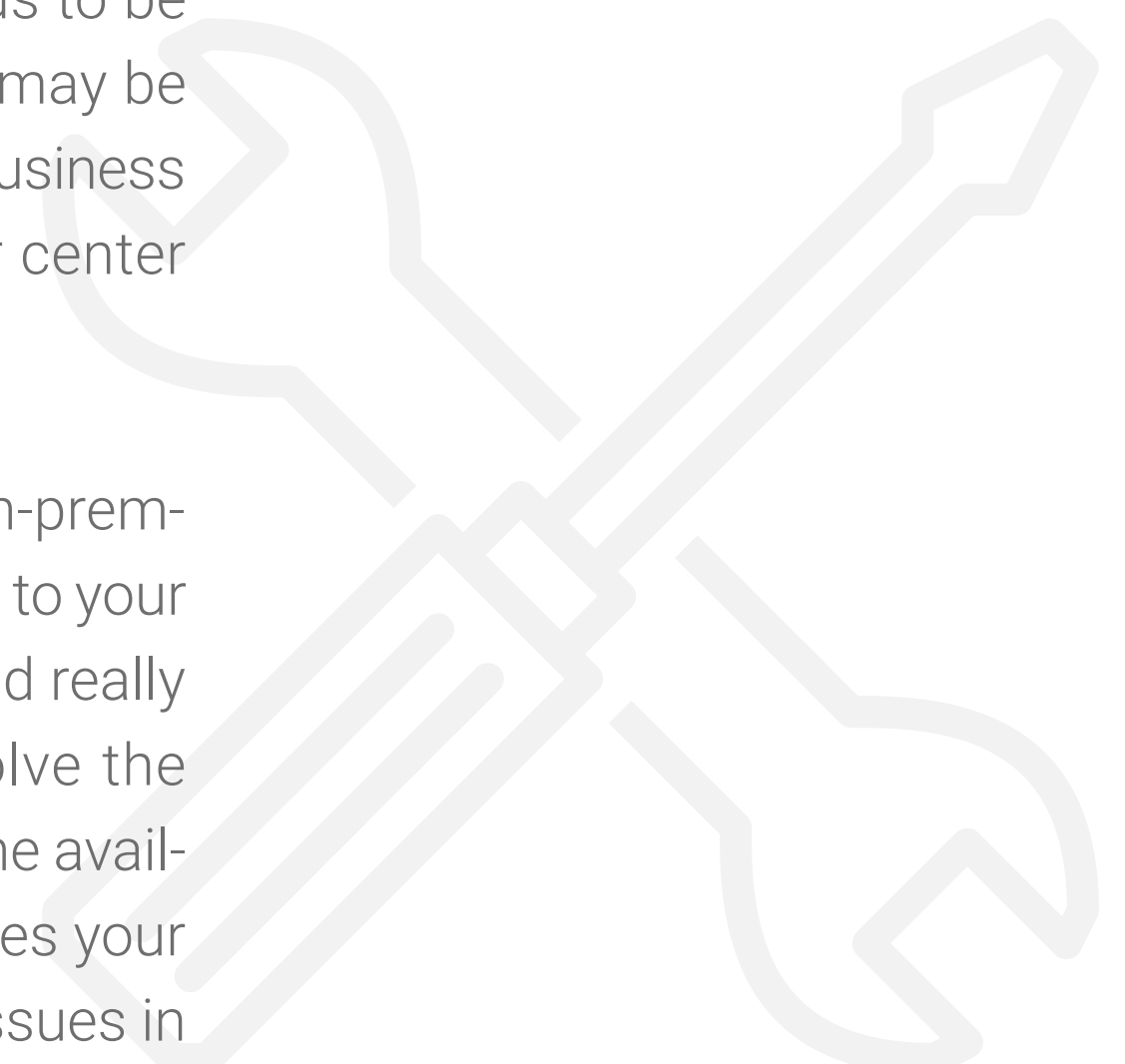
Maintaining your company's personal email infrastructure comes with many benefits, not the least of which is confidence in security and privacy. A large concern that accompanies outsourcing is the idea of your data and information being stored on a third-party database and in the cloud.

Cost is also a big factor and requires a lot of consideration before any choices are made. The cost of building, upgrading, and maintaining the email infrastructure needs to be weighed against the costs of email routing, data storage, and services from third party ESPs.

If you have already invested in a robust data center that's capable of handling your email program, then you may be able to build and maintain your own email infrastructure.

But if this is the case, careful consideration needs to be placed on your ability to scale. Your data center may be big enough now, but will it be in the future as your business grows? And what will the costs be to scale your center along with your business?

Cost of building an infrastructure aside, if your on-premise server goes down, you have immediate access to your entire infrastructure, including hosts, backups, and really anything else you need to troubleshoot and solve the problem. Whereas with outsourcing, you rely on the availability and speed of a third party. Ask yourself, does your team have the ability and bandwidth to address issues in a timely manner? Or is it better to rely on external teams whose whole job is to maintain email systems?



When to choose to Maintain Your Homebuilt Infrastructure?



You cannot find an ESP that meets your security and privacy standards.



You are confident in your current servers to manage and scale with your email needs.



You are confident in your staff's ability to keep up with maintenance, deliverability, and integration needs.



Procuring a Third Party Platform

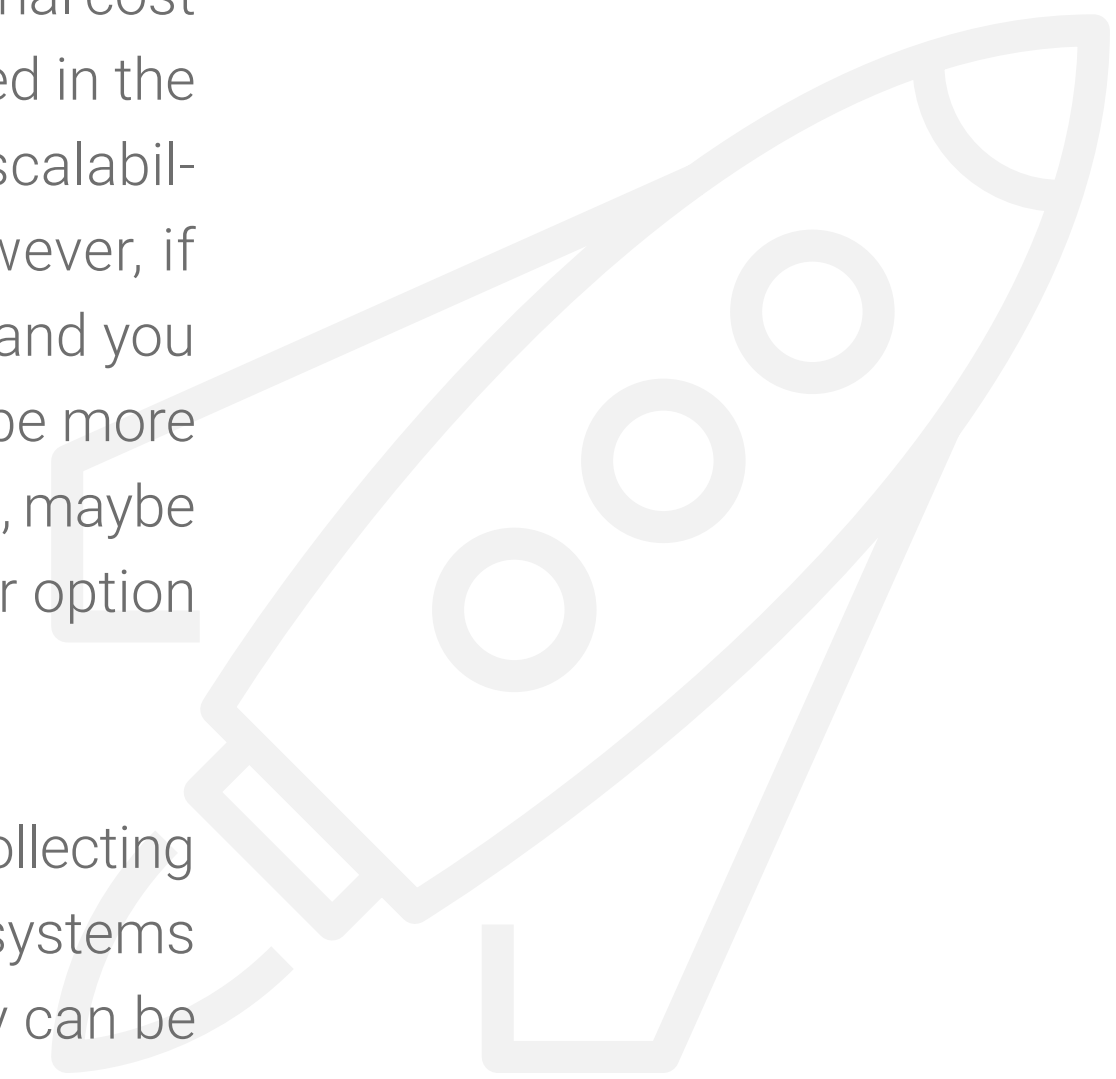
When considering outsourcing, it's important to keep in mind both where your homebuilt solution is falling short, and what your main concerns are with outsourcing.

If your main concern is security and privacy, vetting the ESPs you are considering is a good start. If the ESP has proper security and privacy measures in place, like GDPR and ISO 27001 for example, then security shouldn't be an issue. Your data, and your clients' data, will be safe when outsourced.

Outsourcing can also relieve a lot of work for your company's email team as well. Updates to the infrastructure will all be handled by a third party, maintenance will be taken care of without any work on your part, and troubleshooting email issues will be off your plate.

However, outsourcing to an ESP can be an additional cost that you might not be willing to take on. Embedded in the cost of outsourcing (to a strong ESP) is infinite scalability that grows alongside your email needs. However, if your personal infrastructure is powerful enough, and you feel confident that the future cost of scaling will be more manageable than the ongoing cost of outsourcing, maybe maintaining your homebuilt platform is the better option for you.

Finally, it's important to also consider the cost of collecting and maintaining your email stats. Building these systems can be both time consuming and costly, but they can be foundational to your email program's success, both in the present and the future. An ESP will already have these systems in place from day one, ready for you to start gaining insights right away.



When to move to an ESP?



You would need to build server capabilities and a staff from (nearly) scratch.



Email is causing a burden on your current servers, resulting in outages, and performance issues.



When you need better stats and analytics to optimize campaigns and meet regulatory requirements.



Opting for a Hybrid Solution

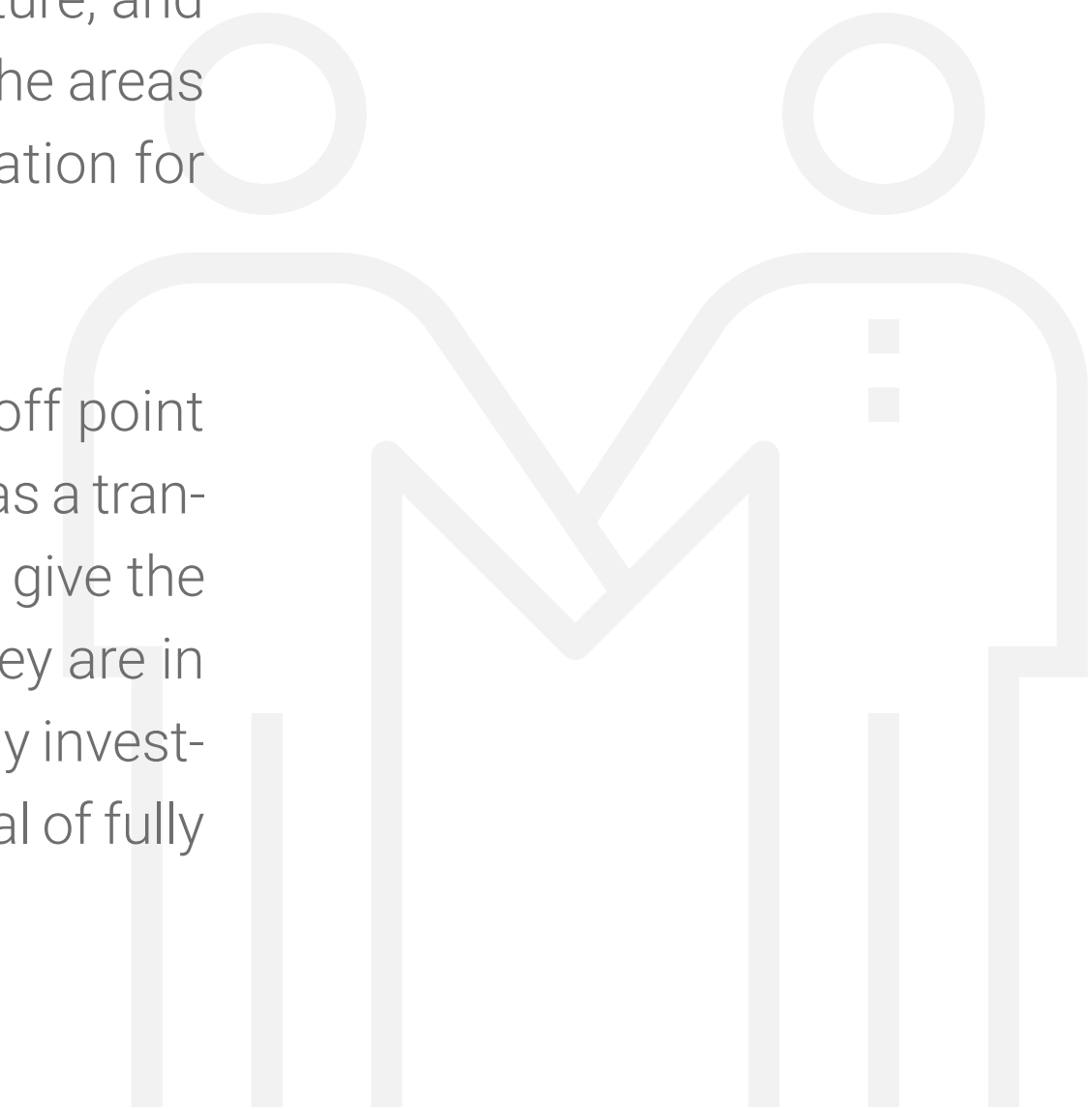
Maybe, after reading those other two solutions, you find yourself somewhere in between. That's where a hybrid solution comes in.

You could look into outsourcing some aspects of your email infrastructure, like sending only your marketing emails through the ESP. Meanwhile, you can keep your transactional emails on premises to maintain, under your roof, the most important information and data.

If you're considering a hybrid solution, benchmarking is a good place to start. Essentially, it allows you to identify loopholes in your infrastructure that an ESP can help close.

Identifying the weakest points of your infrastructure, and then selecting the ESP that will help strengthen the areas that you do not specialize in is a main consideration for hybrid solutions.

Additionally, hybrids can be used as a jumping off point before fully switching over to an ESP. When used as a transition tool, a hybrid approach lets you effectively give the ESP a test drive and gauge just how effective they are in helping you with your areas of concern before fully investing in them, especially if you have the eventual goal of fully moving over to a cloud-based solution.



When to choose a Hybrid Solution?



You are not ready to transition your full email functionality to a third party.



Your servers can handle transactional emails due to low volume, but cannot handle high volume sending like newsletters.



You are looking for a third party to serve as a redundancy to your internal system.



Conclusion

It's a lot to take in. As you can see, there are quite a few considerations, and each one has to be weighed against your own infrastructure and what it is capable of. If you're at a loss for where to begin, assessing your homebuilt email program's strengths and weaknesses is a great place to start. Once you sort that out, you can begin to compare the pros and cons of maintaining your current system.

If the cons outweigh the pros, then it might be time to consider outsourcing part, or all, of your email infrastructure. And coming to this conclusion can open a whole other can of worms... or questions. What about data safety? What about scalability? What about deliverability? These questions can only be answered with a fair amount of research and making sure you pick the email service provider that is right for you.

If any of these questions need answered, we're here to help! Contact our [Enterprise team](#) to discuss how Mailjet can support your email infrastructure.



About Us

The Email Solution for Fast-Moving Teams

Accelerate Your Business With Marketing And Transactional Email.

Mailjet is an all-in-one solution to send, track and deliver both marketing and transactional emails. Its cloud-based infrastructure is unique and highly scalable with a proprietary technology that optimizes email deliverability. Mailjet can be accessed either via an easy-to-use online drag-and-drop interface or via APIs that allow developers to integrate its features within their online app or service, or its sophisticated SMTP relay.

Leading Brands Trust Mailjet



Product Hunt



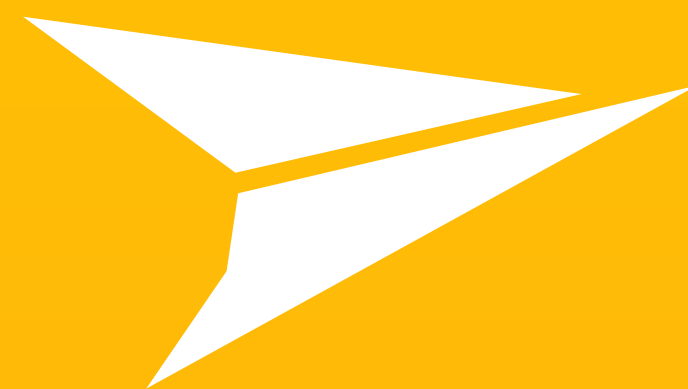
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