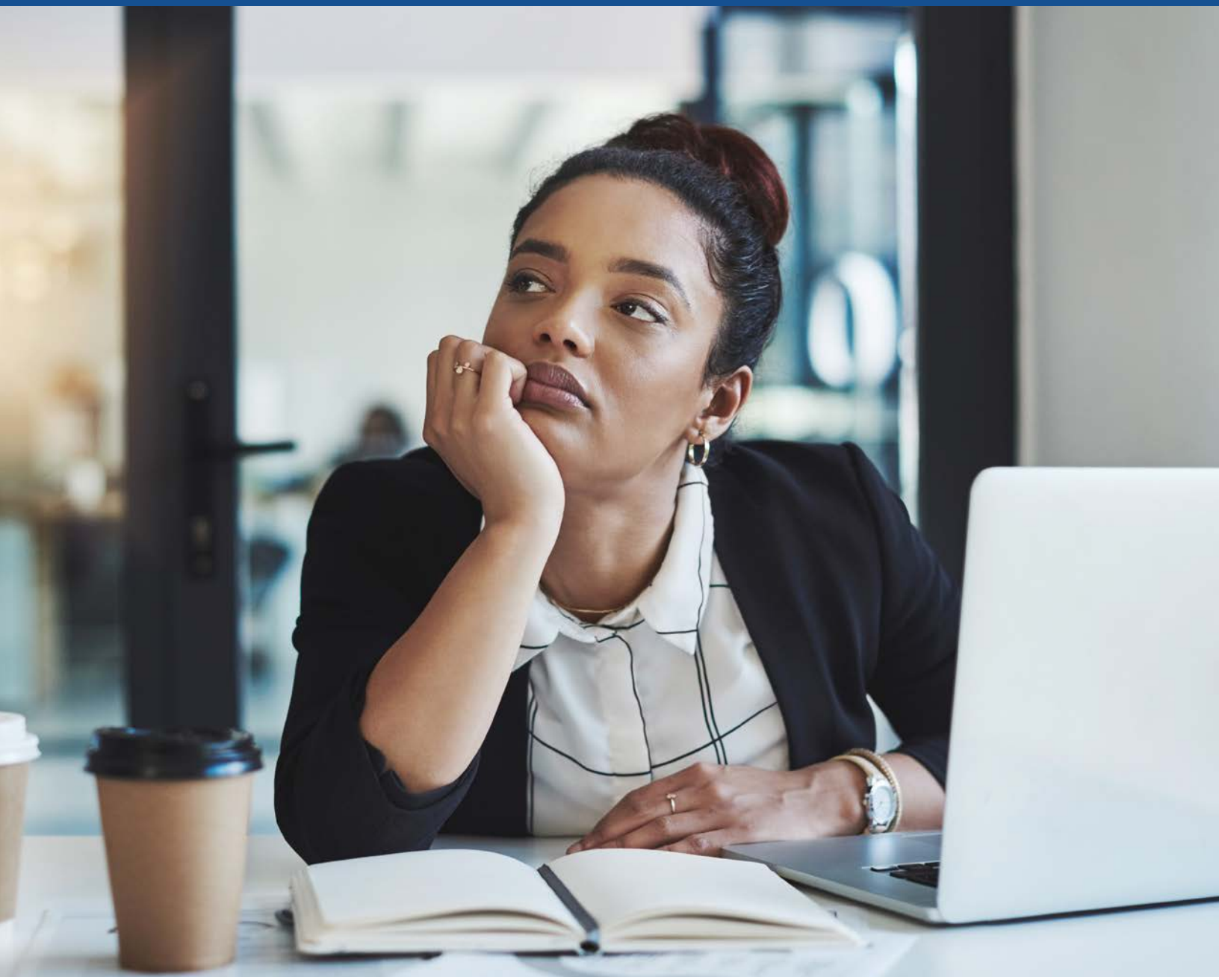
WHITE PAPER

Top 10 Reasons SharePoint is Running Slowly

by Rajan Todankar



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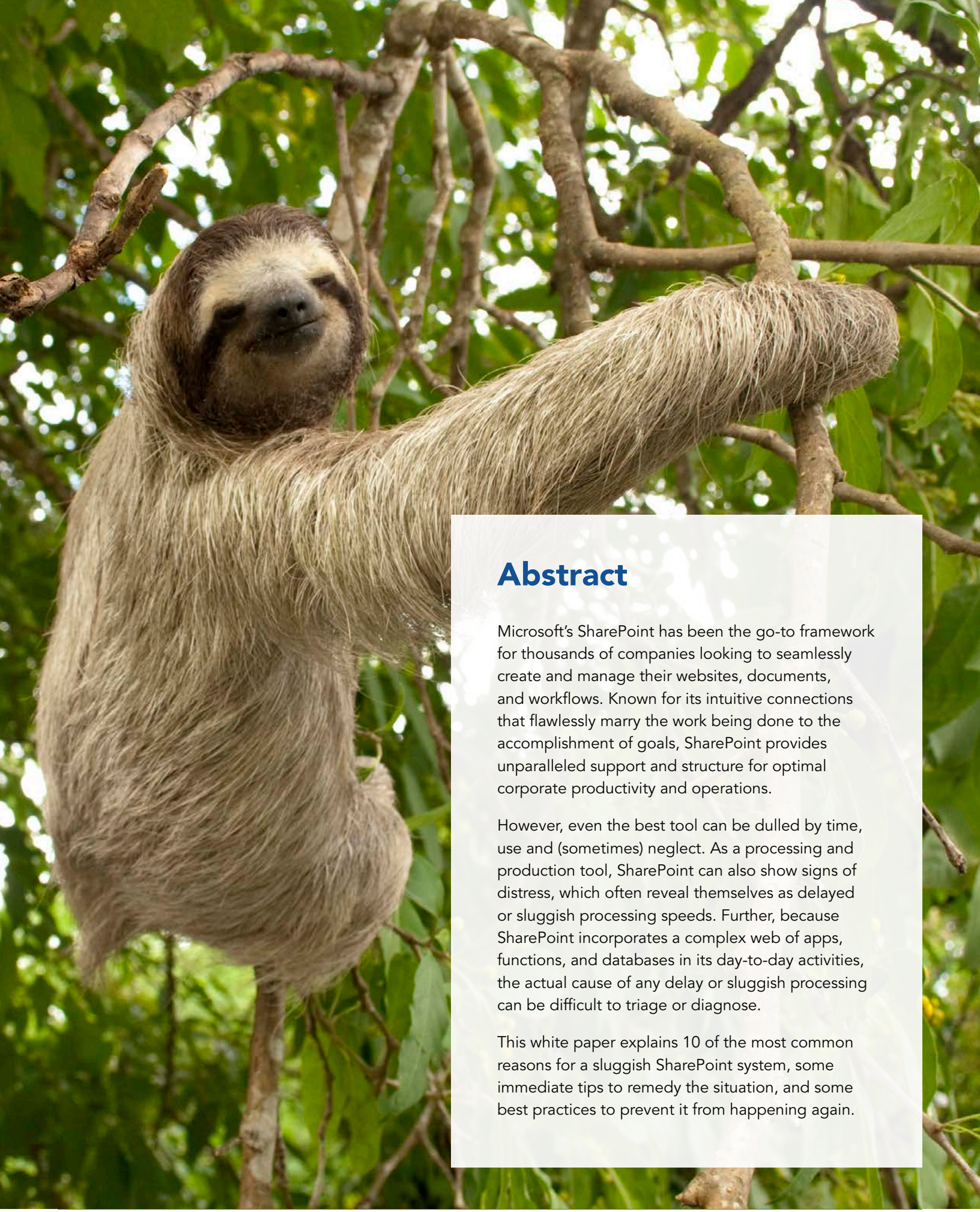


Abstract

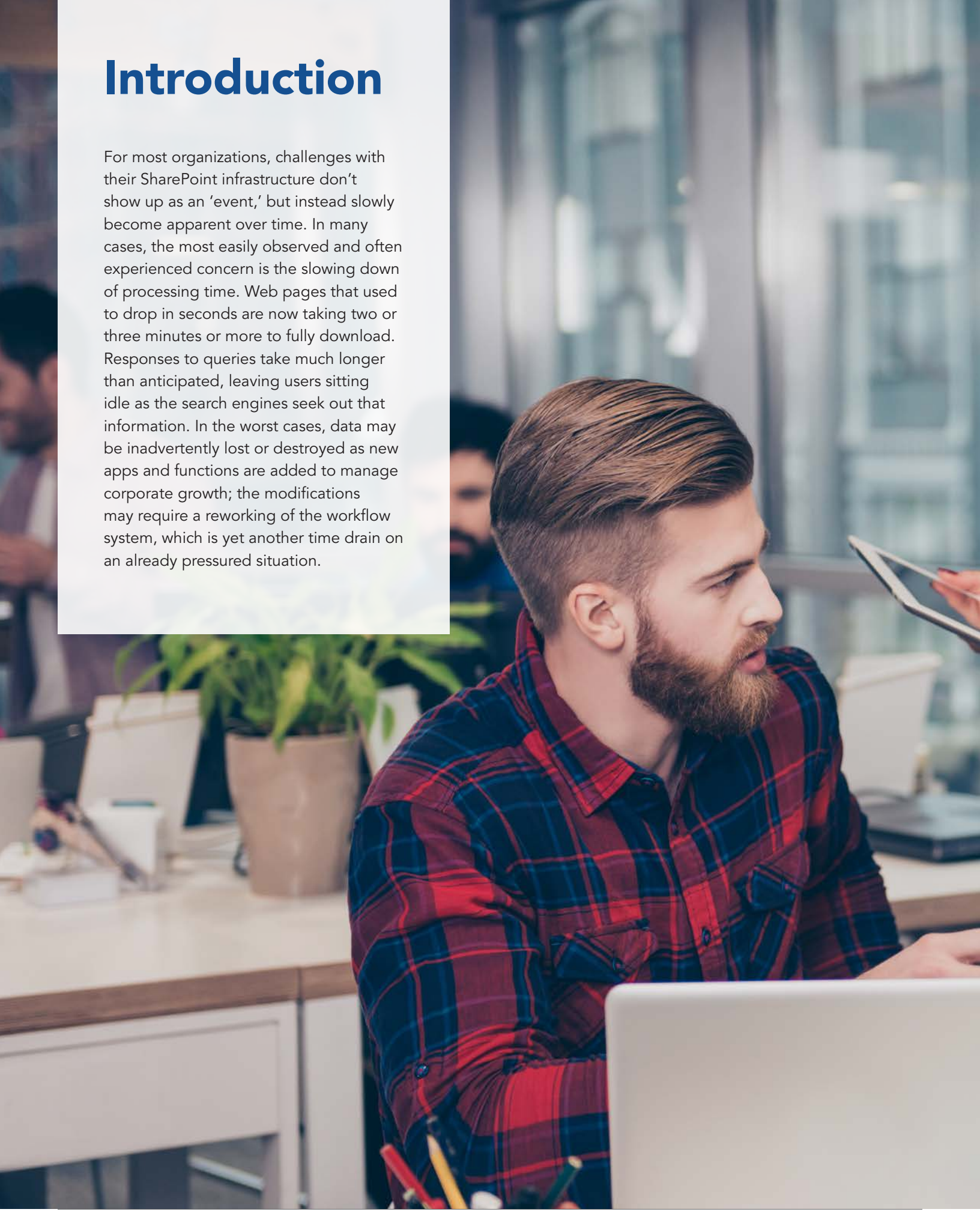
Microsoft's SharePoint has been the go-to framework for thousands of companies looking to seamlessly create and manage their websites, documents, and workflows. Known for its intuitive connections that flawlessly marry the work being done to the accomplishment of goals, SharePoint provides unparalleled support and structure for optimal corporate productivity and operations.

However, even the best tool can be dulled by time, use and (sometimes) neglect. As a processing and production tool, SharePoint can also show signs of distress, which often reveal themselves as delayed or sluggish processing speeds. Further, because SharePoint incorporates a complex web of apps, functions, and databases in its day-to-day activities, the actual cause of any delay or sluggish processing can be difficult to triage or diagnose.

This white paper explains 10 of the most common reasons for a sluggish SharePoint system, some immediate tips to remedy the situation, and some best practices to prevent it from happening again.

Introduction

For most organizations, challenges with their SharePoint infrastructure don't show up as an 'event,' but instead slowly become apparent over time. In many cases, the most easily observed and often experienced concern is the slowing down of processing time. Web pages that used to drop in seconds are now taking two or three minutes or more to fully download. Responses to queries take much longer than anticipated, leaving users sitting idle as the search engines seek out that information. In the worst cases, data may be inadvertently lost or destroyed as new apps and functions are added to manage corporate growth; the modifications may require a reworking of the workflow system, which is yet another time drain on an already pressured situation.



What then becomes apparent with a SharePoint slow-down is the negative impact it has on productivity. As the mainframe for your business, even a short delay of service can wreak havoc on your business systems, causing drags in production, missed communications opportunities, and lost connections with your remote workforce. The loss of data alone can significantly skew corporate data analytics.

Fortunately, SharePoint is a Microsoft product, so its design lends itself well to the discovery and remedy of system glitches. Because our SharePoint team at Datavail follows a consistent path through each analytical stage when we are triaging our client's concerns with their SharePoint service, we are able to uncover and resolve common issues and concerns while improving as much as possible the capacity of the system as a whole. Here are 10 of our top SharePoint hang-ups, our go-to answers to the problem, and what we recommend you do to fix or avoid them.

Reason 1: General Sluggishness

While it always takes time for a system to find the precise data it needs, that time can drag if it must sift through the vast pools of data that have been accumulating since the inception of the business. Further, for many legitimate reasons, those resulting corporate data lakes may not have sufficient or dedicated indexes that can target appropriate data locations per query, and which would speed the search and the work. There are several reasons why sluggishness happens, so a methodical search is often used to investigate the cause.

A helpful tool to identify where the sluggishness is originating in your system is a Page Load analysis, which will pinpoint which elements on which pages are taking the longest to load.

Those slow-loading elements should be added to and stored on the Master Page, so they don't need redownloading for that page's next instance.

Another possible cause of drag is a bot. Lots of companies use web-crawling robots (bots) to capture and assimilate new data as it comes in. Sometimes, these bots interfere with regular processes, slowing the system. In these cases, we recommend a two-step process that uses a text file - robots.txt - to stop unwanted or unnecessary crawling while offloading the indexing/crawling processing to a dedicated front-end server. You can also take advantage of SharePoint's lists and 'look up' columns to narrow searches to prescribed values.

Reason 2: Unmanaged Crawl Schedules

Companies that don't track their crawl schedules may find their resources are unexpectedly maxed out just when customers are arriving in high numbers. The resulting congestion slows down every response to every request, which could lead to disappointed consumers or lost business opportunities.

However, system crawls are an essential element of every network operating environment, collecting the data that keeps the enterprise current. The trick to preventing them from slowing down your system is to ensure that they are scheduled so they don't interfere with operations during peak performance periods.

For optimal efficiency, the schedules for crawlers will balance maximizing operational performance with quality crawl factors to gain the most data while causing the least impact or intrusion. SharePoint's review of the existing crawl schedule and its history should reveal the patterns and time it takes to complete a crawl cycle. With this data, reconfiguration of the programming will shift it out of peak operating hours while ensuring it remains sensitive to the need for incremental and continuous crawls as well as the full crawl function.

Reason 3: Account for Your Core Technologies

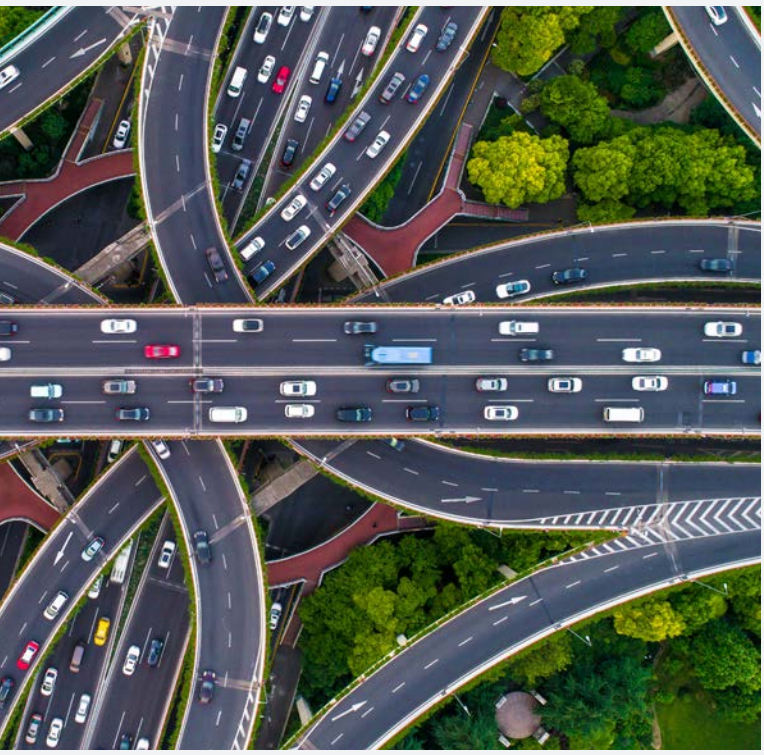
When functioning well, users experience SharePoint as a smooth and effective business processer that responds swiftly and appropriately to their commands. However, deep within the programming is an interdependent complex web of apps, languages, capacities, files, databases, and connectors that make those responses possible. Pulling up a website, for example, requires the drive to coordinate multiple forms of data from a variety of resources and assemble them into a manageable and functioning visual. Under the surface, glitches or gaffs in any one of those resources can be enough to slow or stop the functioning of them all. In many cases, SharePoint slows because of errors or fails within these elemental resources; because users don't fully understand the interdependencies within their system, they can't comprehend where the failures are happening within it.

Addressing this concern requires a thorough evaluation of all available data to determine the exact sequence of events that lead to the slow-down issue. Once that's discovered, several responses may be appropriate, depending on the cause. Tools like Fiddler can trace that sequence and implementing compression and caching mechanisms such as BLOB or Object Cache can reduce the high disk I/O activity on the SQL.

Reason 4: Missing Server-side Dependencies

Seeking but not finding is also a process-stopper. Most apps work in an interconnected way that is 'dependent' on the existence and functioning of other apps and programming. When any aspect of the resulting system fails, is incompatible or becomes outdated, then that element is 'missing' from the processing algorithm, and the search for it can slow or stop other processing from happening. Users end up waiting while the system searches for elements that are no longer available or functional.

The easiest way to resolve this concern is to remove the resources from the database or storage location. A detailed analysis for server-side dependencies will identify the data or links to be removed which will also remove the cause of the delay.



Reason 5: System Bottlenecks

As noted earlier, your digital system is comprised of myriad databases, apps, and hardware, all of which must function compatibly for your work to get done.
A challenge is one of those elements can cause problems; the inability of two or more to connect or work well with each other can cause a bottleneck that is sure to delay your processing capacities.

A thorough check of both the hardware and SharePoint's configuration should reveal where within the system the bottleneck is occurring. In some cases, upgrades of one, the other or both may be necessary to ensure that all your elements have the appropriate capacity to interact seamlessly within the system as a whole. Subsequent monitoring using the System Center Operations Manager will prevent this from becoming a problem in the future.

Reason 6: Capacity Management

With the pace of business these days, it's not surprising that the demand on systems often grows faster than their capacity to manage it. Adding resources to accommodate added products, services, or personnel will certainly increase the pressure on your SharePoint system, which can also impede or impair its functioning. We advise that you evaluate your SharePoint's capacity and take advantage of its flexibility with each incremental growth step of your business so that it can adapt and grow with you.

A better practice, however, is to carefully evaluate capacity versus projected demand while in the planning phase of your SharePoint migration. Your optimal SharePoint deployment should incorporate your plans for the future so that its design can manage that growth. Further, including a feedback loop that gathers performance target data as you build over time will show you when and how your system works its hardest. That information will help you make better decisions when it comes time to update your capacity metrics.

Reason 7: Custom Code

Many organizations are justifiably proud of their proprietary programming. However, not all custom coding is appropriate for use within a SharePoint environment and using it can definitely impair function and productivity.

If you have such coding and it's critical to your success, then you can still use it, but handle it carefully. Be sure it's fully debugged, especially in consideration of its merging with SharePoint. Your code should be fully debugged in a sandbox before it's deployed, tested using real test cases, and its performance carefully monitored within that environment. The goal is to go live without suffering any memory leaks or creating any dangling or orphaned objects.

Optimally, however, keeping customized coding to a minimum maximizes the ease and success of a SharePoint migration.

Reason 8: Third-Party Solutions

Like proprietary programming, third-party solutions can also throw a time-sucking wrench into the SharePoint works. The packaged time jobs and PowerShell scripts can put enormous stress on hardware resources when they initiate simultaneously, which can slow down the rest of the SharePoint processing.

The best way to manage this challenge (assuming that the third-party option is the best option for your function) is to thoroughly vet the program with its developers before you deploy it. You need to discover and understand the logical and functional dependencies that may affect your SharePoint assets and may want to request a solution tailored specifically to your enterprise. SharePoint's Production Monitor can test it before deployment while also establishing a baseline for operations. Note also that the customized third-party solution may have an impact on the resources within your Farm so analyze it for that reason, too, before you commit it to your SharePoint environment.

Reason 9: Data Clutter

Just like in other messy places, data clutter in your storage or processing programs impedes your company's functioning. Task execution takes longer when the server must sift through obsolete, irrelevant, and unused information to find the data central to its search.

Clearing away the clutter is one time saver that you and your human staff perform, however. We can help you set up policies that control when data is archived or destroyed, how those processes are recorded and logged, and who should have control over which aspects of those resources. Many companies choose to archive everything (you never know when you'll need it), while others are content to let obsolete data die per its useful lifecycle. Datavail can help you understand the ins and outs of that decision, too.

Reason 10: Design Away Delays

Of course, the best way to address slow processing is to avoid it altogether by designing your SharePoint services to optimize every element of your business. SharePoint was created to give each company the computing flexibility it needs to compete and thrive in today's busy marketplace. Your SharePoint design should reflect the uniqueness and value of your organization while engaging your workforce to maximize their abilities. This level of personalization not only enhances the work of both human and digital assets but also frees them from distractions caused by their tech so they can focus on their work. And once the system is functioning exactly as you want it to, SharePoint also provides the tools you need to govern it well, today and well into the future.

Best Practices to Avoid System Slow-Downs

Assuming you've addressed each issue and your SharePoint system is again running at optimal performance levels, you'll want to keep it that way to avoid costly time delays in the future. Adopting these best practices will help you to maintain your productivity even while your organization continues to grow.

Update Regularly

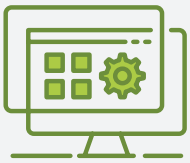
Keeping those SharePoint elements tuned will keep the whole system in shape. Be sure to install the latest patches, service packs, and updates for all those products upon which SharePoint relies, including SQL Server, Windows Server, and Internet Information Services. Doing so will ensure your team is always working with the most current and fastest processing available, while also keeping your company safe from emerging cyber threats and criminals.

Access Available Performance Tools

Microsoft performance tools help you to see exactly what's going on in your enterprise on a daily, even hourly basis. The SharePoint Log Viewer tracks both access and event logs, so you know who's doing what and when; the Microsoft System Monitor provides insights into usage levels and system strains, while the Performance Monitor keeps you informed on overall operations.

Debug

Visual Studio is your go-to Microsoft product to rid your system of unwanted coding errors. Using its IntelliTrace feature will identify the bugs, and partnering that software with Microsoft Monitoring Agent in Trace mode will let you collect data while avoiding replication of the problem.



Check Your Central Administration Console Regularly

The Central Administration console provides insights into a wide range of assets and its task list lets you manage administrative details to resolve persistent problems like latency and delays. Reviewing the server farm operations lets you see your available resources and examine the related diagnostic data that will help you pinpoint both problems and potential solutions.

Let Datavail Be Your SharePoint Managing Partner

Your organization will work best when your technology is operating at peak performance. As a Microsoft Gold Partner, Datavail is best qualified to not just get your system running well, but keep it operating at optimal levels for as long as it's in business. We've spent years helping clients move metric mountains by sharpening the tools of SharePoint; we can do the same for your enterprise. Whether you're migrating to the cloud, upgrading SharePoint, or looking for a fully managed service provider we can offer:

- SharePoint on-premises to cloud migrations
- Custom SharePoint development
- SharePoint upgrades
- Ongoing SharePoint monitoring and management
- SharePoint consulting and more

Conclusion

Sluggish performance by your SharePoint programming doesn't mean it's losing its luster. It usually just means a little tidying is in order and having the right tools for the job will get it back in shape and better than ever. With these 10 problems and their top 10 solutions – and our best practices to stop problems before they start – you should be able to get your application back on track and your teams working more efficiently.

And if your team is stretched thin or in need of experienced direction, let Datavail clean your SharePoint and keep it sharp for years to come. Contact us to get started.

Rajan Todankar
SharePoint Administrator

Biography

Rajan Todankar is a SharePoint Administrator with six years of experience. An acclaimed, versatile "SharePoint Geek" Rajan is interested in all things technology, the newer the better. At Datavail, Rajan manages SharePoint environments for 10 different clients, five of those are Fortune 500 companies. Rajan has also authored a research paper, *Identity Synchronization Techniques in SharePoint*."

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