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–Sendhil Mullainathan, Professor of Economics, Harvard University

<sup>1</sup> *Time Magazine*, “The Mistake Busy People Make. We think we need to manage time, but we also need to manage bandwidth,” Sendhil Mullainathan, 2013



## Executive summary

There are only so many hours in the day, or so goes the old adage. But according to Sendhil Mullainathan, a professor of economics at Harvard University, “Busy people all make the same mistake: They assume they are short on time, which of course they are. But time is not their only scarce resource. They are also short on *bandwidth*. By bandwidth I mean basic cognitive resources.”<sup>1</sup>

Is this scarcity of mental bandwidth colliding head on with enterprise communications? The number of devices and screens competing for our limited attention has exploded in recent years. Our workdays are punctuated with pings, tings, ringtones, and vibrations, and we feel compelled to respond to their Sirens’ call, even though doing so keeps us in a constant state of alert and scatters our focus.

We even feel the pull of these devices when they are silent. In fact, in a recent CBS News *60 Minutes* documentary, Anderson Cooper explores how your phone, apps, and social media can get you hooked like gambling, working deep in the brain stem.<sup>2</sup>

For instance, not checking your phone for emails or notifications for a certain period of time can cause the brain to raise levels of the stress hormone cortisol, which creates anxiety. So to get rid of that anxiety, you check your phone often.

Worse yet, all the calls, texts, emails, calendar invites, and IMs associated with those notifications also compete for our attention. As a result, we feel overloaded. And we are; because attempting to focus on so much input, without any effective means of prioritizing, simply overwhelms our limited mental bandwidth.

As an IT leader, you are responsible for enabling many of these channels. But how do you enable your organization’s employees to get work done when too much communication and too many channels divide their attention? This white paper looks at the problem of communications overload and how it distracts people from the tasks at hand. It also suggests how changing the user experience can streamline communications and collaboration so that knowledge workers can apply their undivided attention to the priorities that matter.

<sup>1</sup> *Time Magazine*, “The Mistake Busy People Make. We think we need to manage time, but we also need to manage bandwidth,” Sendhil Mullainathan, 2013

<sup>2</sup> CBS News *60 Minutes*: “What is ‘brain hacking’? Tech insiders on why you should care,” 2017

## Fractured focus: The mentally taxed modern worker

Many businesses realize that effective communication is becoming increasingly complex because of the mushrooming number of devices and communication channels. Today's knowledge workers typically have a desk phone, computer, and one or more mobile devices. They communicate using email, voice phone calls, instant message chats, tweets, social media, and team messaging chats. And most of the time, these users must juggle multiple forms of communications at the same time—and even on multiple devices.

### The problem of limited mental bandwidth: a numbers game

What should be more concerning for IT leaders is the adverse impact this constant barrage of communications can have on collaboration, productivity, and even the health and well-being of employees. Part of the problem stems from the fact that the human brain can only process so much new information at one time. In describing this limited mental bandwidth, cognitive scientists cite something called working memory—which shouldn't be confused with short-term memory, or holding onto small amounts of information for a short period of time. Working memory is what allows us to focus on something—a meeting,

a phone conversation, or an email.

For instance, you can probably easily solve this problem in your head:

$$250 + 635$$

But most of us can't solve this one without pencil and paper:

$$376960009 + 470529885$$

Why? Both problems require the same kind of mental processing, but the second problem simply overloads our working memory with too many pieces of information—numbers, in this case—to focus on at once. This bandwidth problem explains why dividing our mental focus among too many incoming communications prevents us from learning new ideas, making creative leaps, or being a good boss or valuable member of a team.

### How communications overload literally drives your knowledge workers to distraction

IT leaders know strong internal and external communications are the lifeblood of an organization's success. The McKinsey Global Institute found, for example, that productivity improves by 20%–25% in

organizations with connected employees.<sup>3</sup> But does the current state of enterprise communication equal too much of a good thing?

The problem of email overload is a good example of how communications can get out of hand. Among the 2.6 billion email users worldwide, few of us could imagine a world without it. Collectively, we send over 200 billion messages each day. But we have also become victims of email's success as a communications tool. A survey commissioned by Adobe found that the average person spends 30 hours each week using email, and, considering a full-time employee toils 40 hours during a standard work week, that's a fairly alarming statistic.<sup>4</sup>

Add to this the distractions caused by incoming messages. Shifting from the task at hand to check email, respond to a text, or answer a call makes it difficult to focus our limited mental bandwidth. According to a University of California-Irvine/U.S. Army study, regaining initial momentum following an email notification or similar distraction can take, on average, greater than 20 minutes, and 41% of the time the worker never returns to the task.<sup>5</sup>

The mental disruption caused by incoming message alerts can even take a toll on workers' health. For example, the same study found

that subjects with access to email shifted mental focus twice as much as those without, measured by how often they changed computer screens (37 times per hour compared to 18 times per hour), and remained in a continual state of "high alert," with continually elevated heart rates. Meanwhile, subjects who didn't have email access exhibited more normal heart rates.<sup>6</sup>

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But your knowledge workers just can't stop. Research like that highlighted in the *60 Minutes* piece referenced earlier suggests they have become, if not physiologically addicted, habituated to checking their devices—whether it helps to get work done or not. In addition, researchers have found a number of psychological reasons that drive people to obsessively check their email sometimes hundreds of times a day. For example, in "Email: A Psychological Self-Defence Course," the BBC reports that email users are also subject to "hyperbolic discounting," which causes them to believe emails lose value the longer they sit unopened.<sup>7</sup>

<sup>3</sup> McKinsey Global Institute Report: *The social economy: Unlocking value and productivity through social technologies*, 2012

<sup>4</sup> Adobe Report: *Email, We Just Can't Get Enough*, 2015

<sup>5</sup> *A Pace Not Dictated by Electrons: An Empirical Study of Work Without Email*, University of California, Irvine and U.S. Army, 2012

<sup>6</sup> Ibid.

<sup>7</sup> BBC, "Email: A Psychological Self-Defence Course," 2012



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<sup>6</sup> Ibid.



## Making communications work for your knowledge workers

So as an IT leader, how do you make sure communications are working for your knowledge workers—and not against them?

A good first step is recognizing the enormous complexity of the communications matrix your teams must deal with every day. From laptops to smart watches, the typical digital consumer now owns 3.64 connected devices.<sup>8</sup>

And they keep very busy on these devices. In addition to the ubiquitous cell phone call, adults under 45 send and receive more than 85 texts every day, on average, and 86% of Americans working full time rely heavily on email.<sup>9</sup>

Add to this the variety of channels. In a report on *The New Era of Communication Among Americans*, Gallup documented what many of us observe every day: different people prefer different forms of communication.<sup>10</sup> This is not surprising because each channel has its own unique benefits. For instance, while email has its place for

longer or more formal communication between individuals, it lacks the immediacy of texting (90% of SMS texts are read within the first three seconds).<sup>11</sup> Chat enables a real-time text-based conversation similar to a phone call. And a voice call not only offers more nuanced communications through emotional clues than text, but it also signals an urgent priority—when the boss calls, you generally answer the phone.

### Your users need to respond across multiple channels and devices

Why do your knowledge workers typically use all these modes of communication? It's because they need to communicate and collaborate with people who habitually use certain channels. For example, the same Gallup study reveals the increasingly obvious age gap when it comes to people's communications preferences. Sixty-eight percent of those 18 to 39 years old said they sent and

<sup>8</sup> Globalwebindex, 2015

<sup>9</sup> Ipsos Public Affairs study conducted on behalf of RingCentral: *Most Americans Working Full-Time Rely on Email to Get Work Done and to Collaborate with Colleagues*, 2017

<sup>10</sup> Gallup: *The New Era of Communication Among Americans*, 2014

<sup>11</sup> Dymark Mobile Intelligence Review, Second Edition

received text messages a lot the previous day vs. only 26% for the 50 to 64 age group.<sup>12</sup>

Consequently, a typical knowledge worker may be texting with a Millennial coworker when a call comes in from the CEO, who is older and still uses a landline desk phone. And while some coworkers still prefer voice calling, others may only respond to text or chat messages. So simultaneously using everything from voice to email to texting has become not a choice but a necessity.

This leads to a situation in which today's knowledge worker is often distracted and typically struggles to divide limited mental resources among too many channels of information. Worse yet, most of this incoming information lacks any form of prioritization. How often do you find yourself toggling between different applications on your smartphone to handle emails, voice calls, texts, and social media messages—and without any way of knowing which to respond to first?

Plus, how often does all that fragmented information cause you to lose sight of the big picture? For instance, various communications about the status of an important project may have come to you via text, chat, email, voicemail, or even a file sharing program like Dropbox. Manually searching across those siloed channels to piece together the thread of the conversation could require more time than it takes to actually get the work done.

<sup>12</sup> Ibid.

## A new focus on collaboration

A good first step toward simplifying or eliminating this juggling act is to implement collaboration software across the organization. For example, team messaging apps like the RingCentral app and Slack integrate many of these channels.

Team messaging expands the humble instant message window into an immersive collaborative workspace with the context and content teams need to get more work done and complete projects more successfully. Rather than checking inboxes and calendars, users see a real-time team experience within a shared workspace.

The collaborative workspace provides access to all of a team's resources—such as shared files, calendars, task lists—in one place. It also provides an easy-to-use mobile interface with ready access to team resources stored in the cloud. This saves time searching inboxes for attachments and other resources. Also, by adding the speed of texting and instant messages, it allows teams to collaborate in real time while drastically reducing email volume.

On a mobile device, the messaging capabilities of this collaboration software also act as a more powerful alternative to SMS text messages or consumer chat apps, transforming communications into collaboration.



## Integrating communications and collaboration

Team messaging dramatically improves collaboration by integrating critical components of modern teamwork, like real-time chat, group calendars, task lists, and file sharing. But some solutions stop there, and business communications have evolved into a dizzying array of communications channels—voice on landlines, mobile calling, conference calling, video meetings, web meetings, chat, text, email, and social media. Each channel has its pros and cons, and each has its devotees and detractors. But realistically, today's workers must connect by all of them.

As a leader in cloud communications, RingCentral is driving the next generation of enterprise communications and collaboration, which integrates collaboration software with cloud-based unified communications (UC). Already, enterprises like yours can take advantage of integrations that extend the Ringcentral app platform.

For example, in addition to the key benefits of team messaging—such as enabling users to send messages to coworkers and teams, share files, assign work, and track deadlines—when deployed together with RingCentral Office®, this virtual workspace adds the power of cloud communications. Seamlessly integrated UC capabilities allow users to, for instance, make calls to anywhere in the world or launch audio and video conferences directly from within the RingCentral app UI.

The combined solution also syncs team messaging with the RingCentral phone system directory. As a result, the people and teams of coworkers that a user interacts with most frequently rise to the top of the list in the app. This capability helps users move from being inundated with messages to handling communications in a rational, prioritized manner.

Users can also easily respond via a quick message or use click-to-dial from within the app to get the coworker on the phone either on a computer or a smartphone.

## The next step: unifying the collaboration

If “working memory” is a critical component of how we get work done, then it stands to reason that optimizing this limited mental resource will help people get more work done. RingCentral is already deploying the next generation of collaboration and communications. It unifies the many communication channels used by knowledge workers into a single, seamless workspace. This new concept goes a long way toward eliminating the communications overload and divided attention common in today's workplace.

The unified user interface gives teams seamless access to not only the capabilities of the RingCentral app but also calling, video conferencing, and other commonly used UC channels.

What's more, the RingCentral app presents a complete “history,” so that users can see within a single thread all the communications

that have occurred with a coworker or team. This eliminates time wasted searching through silos when a conversation involves multiple channels. For example, if the project lead calls asking for an update on status, the whole history of communications—messages, texts, video conferences, etc.—related to the project is visible at a glance. This saves time manually searching across channels for related information.

A RingCentral user can also see a text message and respond with a phone call to that person—all within the unified interface. They can establish priorities within the phone system and the app so that important communications or alerts find them vs. having to look for the information. Then they can quickly prioritize and respond through any communications channel they prefer (or the recipient prefers). The unified user interface even makes the worker aware of any outstanding tasks or pushes team messages that contain important key words to a top priority.



## Conclusion

Today's knowledge workers are constantly flooded with calls, notifications, and invites from an unprecedented variety of communications channels. For the most part, the spigot on this flow of information has been left fully open, and workers have suffered from the constant mental overload and dissipated focus.

Enterprise IT leaders can take the lead in streamlining and controlling this uncontrolled deluge of communications. Constantly switching between applications also adds to employees feeling overloaded while requiring them to waste valuable time searching for information. Solutions like team messaging integrate many key applications to enable real-time collaboration within a workspace where team members can share calendars, resources, and ideas.

As an enterprise solution, team messaging can be deployed as a component of a cloud UC platform. Integrating cloud communications—such as voice and video calling—enables teams to seamlessly move from one mode of communications to a channel more suited to the type of collaboration they are engaged in at a given moment. For example, when a team messaging chat session requires more experts, it's easy to invite coworkers and escalate the team messaging chat session to an HD video conference.

As the leader in cloud communications, RingCentral is continually developing new ways that collaboration can allow workers to get even more work done. Rather than simply integrating applications, the RingCentral platform unifies communications and collaborations features into a single user experience that eliminates toggling between screens. This unified client includes a history that gives users a quick view of a collaboration's big picture. Intelligence within the UC and team messaging platforms makes the flow of communications less chaotic, such as by bubbling up the most important users or messages. Call handling features also allow users to prioritize the most important incoming communications and contacts.

New collaboration tools like these can help to reduce communications overload. Rather than having a conditioned response to every ringtone and alert, regardless of importance, users can respond to a reasonable amount of input. And rather than jumping back and forth between applications, or searching for related information across unrelated channels, they can communicate and collaborate within a unified experience. Ultimately, this empowers your people to make better use of their limited working memory to get more done with less stress.

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<http://www.gallup.com/poll/179288/new-era-communication-americans.aspx>  
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# About RingCentral

RingCentral, Inc. (NYSE:RNG) is a leading provider of global enterprise cloud communications and collaboration solutions. More flexible and cost-effective than legacy on-premises systems, RingCentral empowers today's mobile and distributed workforce to communicate, collaborate, and connect from anywhere, on any device. RingCentral unifies voice, video, team messaging and collaboration, conferencing,

online meetings, and integrated contact center solutions.

RingCentral's open platform integrates with leading business apps and enables customers to easily customize business workflows.

RingCentral is headquartered in Belmont, California, and has offices around the world.



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