T1V

white paper

How Zoom Fatigue Affects
the Brain and Why
Visual Collaboration Can Help

TABLE OF CONTENTS

INTRODUCTION

At some point over the past year, we've all been there - you're in a long video conference meeting that drags on for hours…

After about 45 minutes of straight video conferencing, you start to become restless and tired - your eyes feel heavy and sometimes you even develop a headache.

You've quickly developed a classic case of Zoom fatigue. But what is Zoom fatigue, really - and why does Zoom fatigue happen?

According to neurological experts, meetings with JUST video conferencing increase stress on our cognitive load (the amount of information that working memory can hold at one time). This is because some of the features in video conferencing software consume too much conscious capacity, or the way in which our brain responds to an interaction.

Why do we find video calls so draining? There are a few specific reasons.

FINDINGS

Video calls force us to focus more intently on conversations in order to absorb information. The combination of audio latency issues, the lack of nonverbal cognitive cues, and multifaceted view exhaustion creates a perfect storm of video conferencing fatigue.

Audio Delays

One of the main culprits of Zoom fatigue is audio latency. If the audio quality of a video call is delayed - whether that's from the audio hardware in a room, the network speed of the connection, or simply a pause while waiting for a coworker to respond to a question - even millisecond delays in virtual verbal responses negatively affect our interpersonal perceptions.

> " **Even millisecond delays in virtual verbal responses negatively affect our interpersonal perceptions.** "

Stanford University's peer-reviewed study references research that compared video conferencing to audio-only interaction. Study participants performed a guessing game as well as a secondary recognition task to measure cognitive load. The respondents in the video conferencing section made far more mistakes on the secondary tasks - as a result of mismatched image and audio latency.

No nonverbal cues

Another way that video conferencing meetings are taxing on the brain has to do with the lack of nonverbal cues. Humans interpret social cues through so many different ways - like body language, pauses in breath, and even fidgeting. On a simple video call, the only way to show we're paying close attention to whoever is speaking is to look directly at the camera.
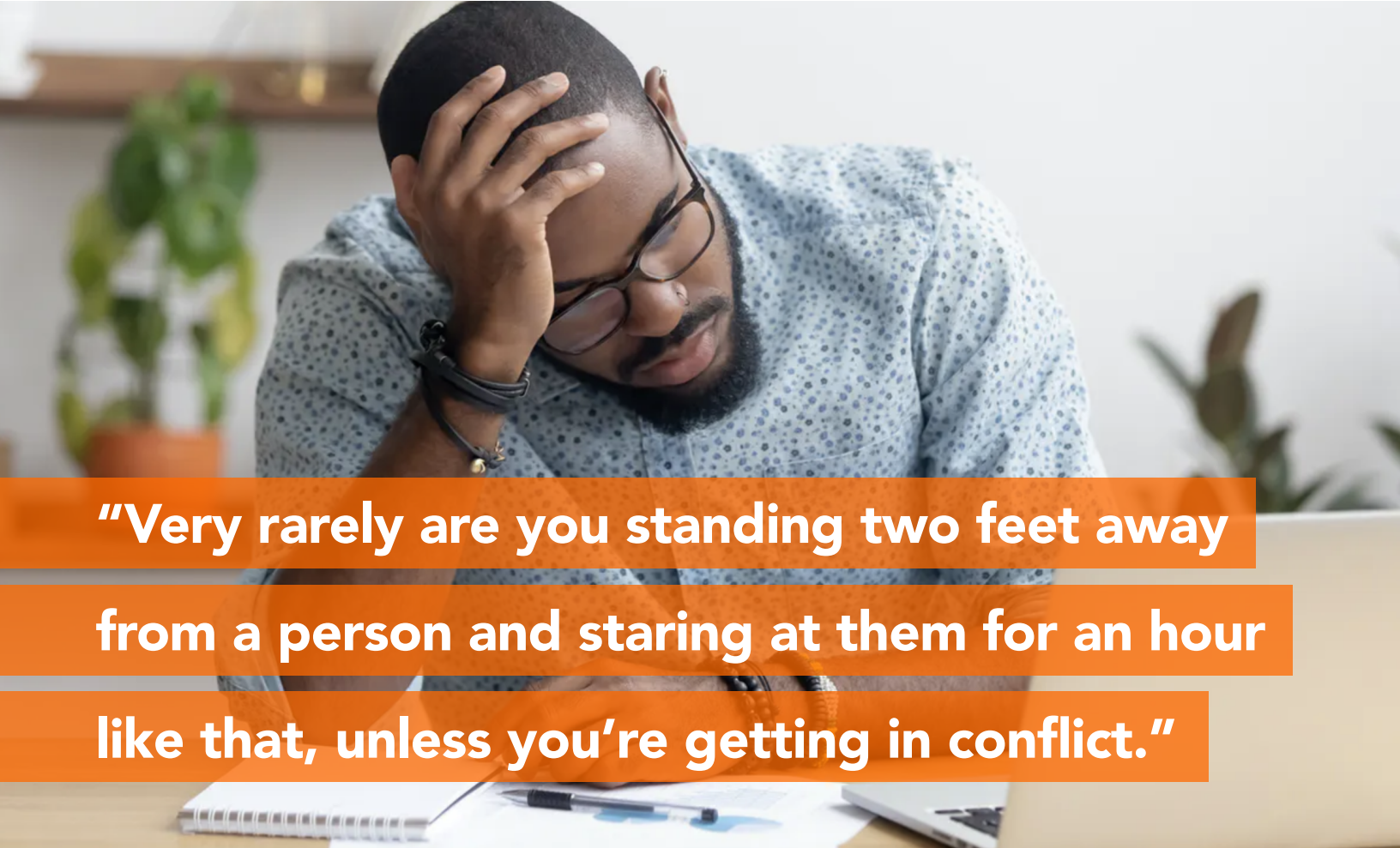
National Geographic confirms that if a person is framed only from the shoulders up in a video call, the possibility of viewing hand gestures or other body language is completely eliminated.

When we're in a meeting room, in-person - we are able to use peripheral vision to look around at other meeting participants. But on a video call, we're engaged in a constant gaze that consumes a surprising amount of attention.

That attention is unconsciously split in a face-to-face meeting, where humans can process nonverbal cues automatically, and still listen to a speaker simultaneously. If we're in a meeting with just a video chat, we need to work harder to process these nonverbal cues. Relying predominantly on verbal information to understand other people's emotions is tiring.

View exhaustion

Lastly, the video conferencing view plays a big role in the level of fatigue you experience. For example, the creator of 'Together Mode' for Microsoft Teams explains, "Very rarely are you standing two feet away from a person and staring at them for an hour like that, unless you're getting in conflict."

"Very rarely are you standing two feet away from a person and staring at them for an hour like that, unless you're getting in conflict."

He says, "When you have faces staring at you like this, the arousal response kicks in, that fight-or-flight mode. If you're in fight-or-flight mode all day, it's taxing to do these meetings."

They argue that multi-person grids on-screen magnify the issue of video conference exhaustion. When all meeting participants appear in a grid, or Gallery view, it challenges the brain's central vision, "forcing it to decode so many people at once that no one comes through meaningfully, not even the speaker."

The other end of this is the mirror effect - or staring at yourself constantly during a video conference. People are more likely to evaluate themselves when seeing themselves, often leading to stressful self-evaluation that takes away focus from a presenter. Experts recommend staying on 'Speaker View' or selecting 'Hide Self View,' which hides your video to save from the mirror effect distraction.

TRENDS

More than just video conferencing

The Unified Collaboration and Communication, or UCC industry - stands at a pivotal position in the transformation of technology due to the enhanced capabilities of visual collaboration solutions.
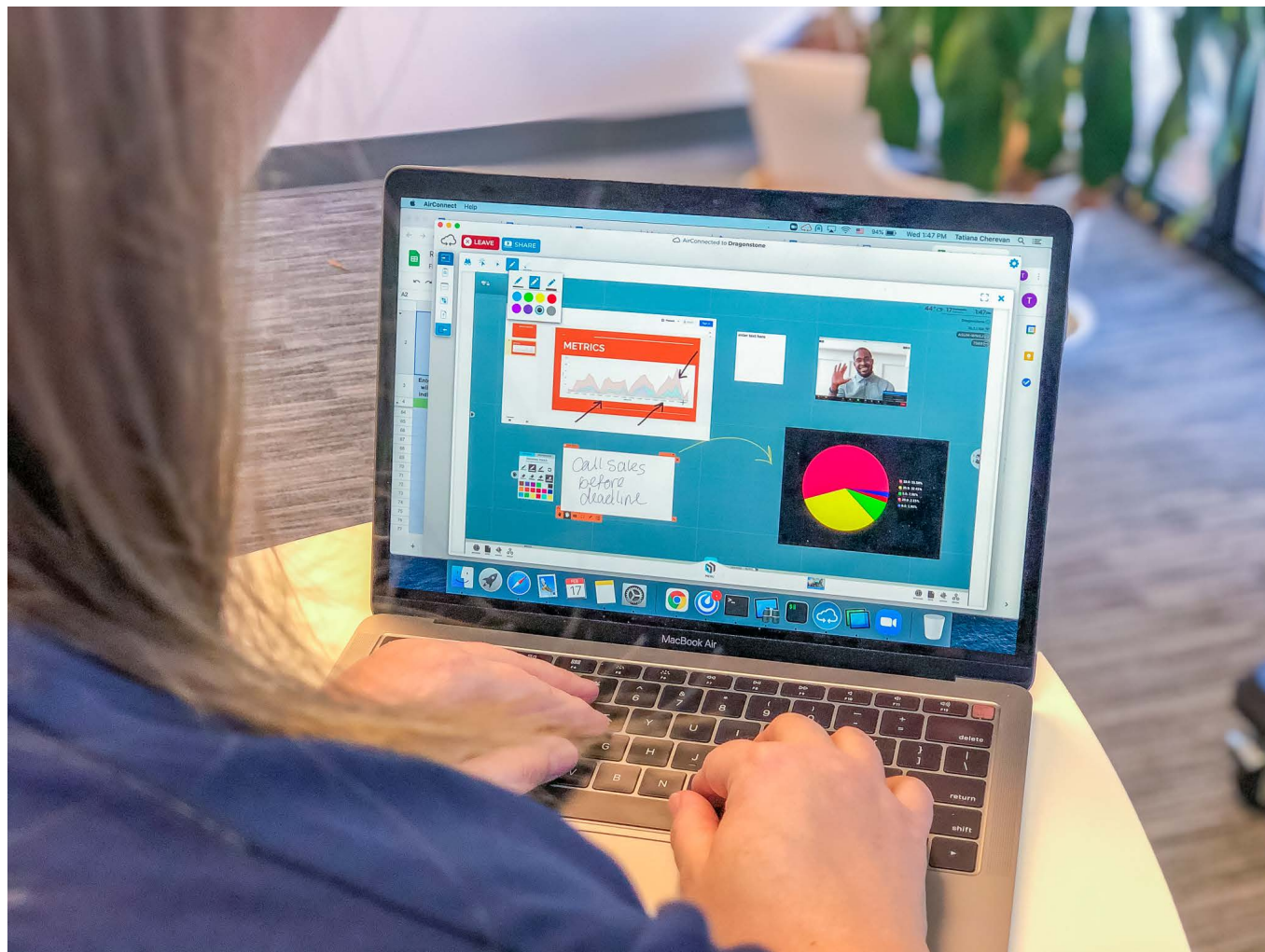
Visual collaboration is increasingly proving itself as an essential component of a standard, productive meeting. With the rise of the hybrid workplace, it looks like having at least some remote participants in all meetings will be the way of the future.

Video conferencing is a vital platform for hybrid meetings and face-to-face connection - but with the widespread effects of Zoom fatigue, just using video conferencing is not enough.

In order to combat Zoom fatigue, it is necessary to have video conferencing WITH a visual collaboration tool, so that your brain can see more than just talking heads.

TAKEAWAYS

T1V's visual collaboration tools allow meeting participants to add Notes, Sketches, active web content, image files, and more to an interactive virtual Canvas that can be accessed in-room and remotely via the T1V app.

On T1V's UCC Webinar, Dr. David B. Agus - one of the world's leading physicians, CEO at the Ellison Institute of USC, and contributor to CBS news described the difference between 2D vs. 3D interaction. Dr. Agus explained, "The human brain wasn't wired for Zoom." 2D communication (solely staring at a video camera) decreases creativity and productivity. Only when humans start interacting with their environment - like touching and manipulating content on a 3D interactive Canvas, does the mind relax, causing it to retain information better.
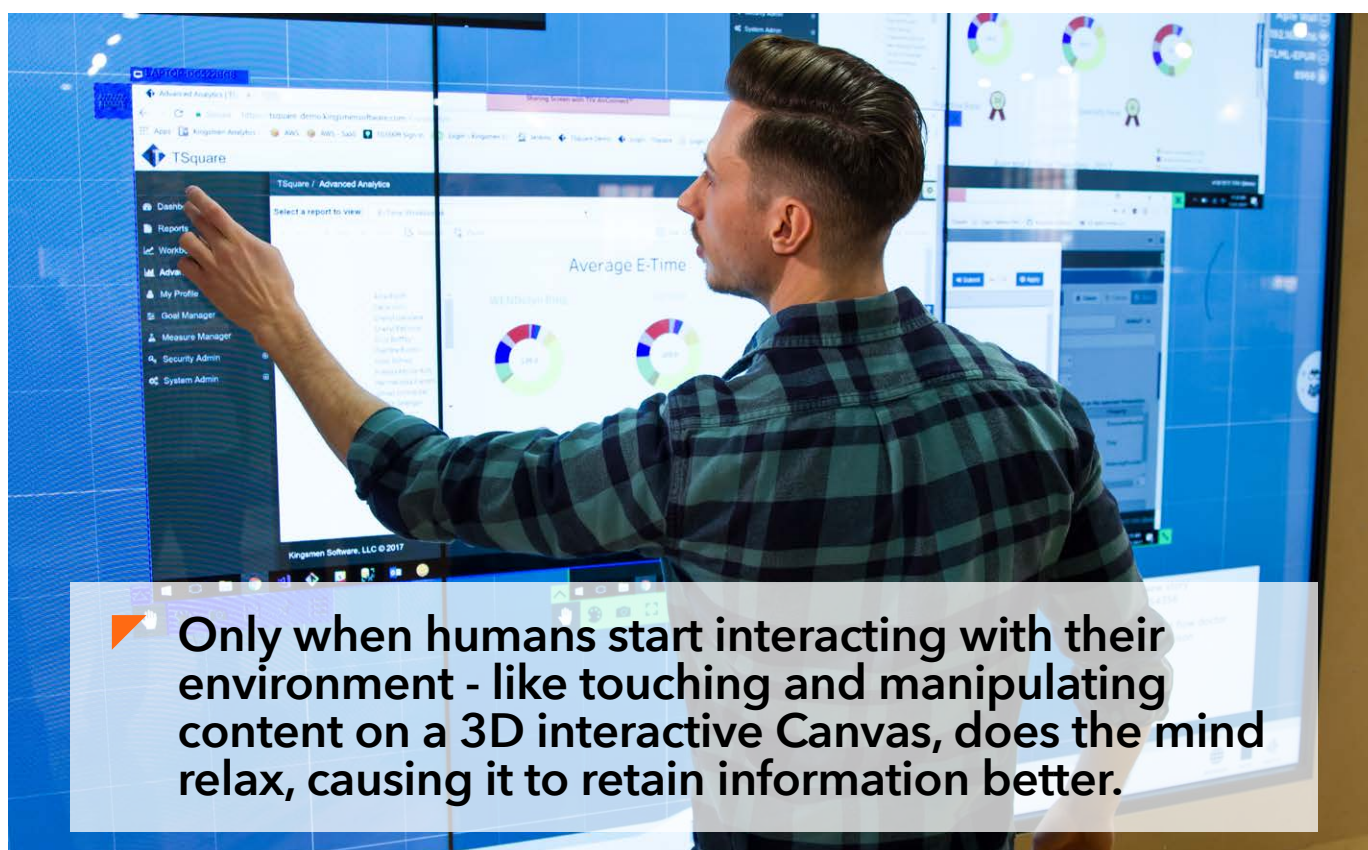
◤ Only when humans start interacting with their environment - like touching and manipulating content on a 3D interactive Canvas, does the mind relax, causing it to retain information better.

Additionally, this visual component of sending live content to a Canvas that you can interact with during a meeting enables team members to be less reliant on meeting audio.

With video conferencing applications integrated into T1V collaboration solutions, users can seamlessly collaborate with each other over BlueJeans, Webex, MS Teams, and Zoom - AND actually see the active content that everyone is working on together at the same time.

Discover how T1V's visual collaboration software is more than just video conferencing at **t1v.com**

T1V

T1V is a visual collaboration company specializing in hybrid collaboration software for enterprise and education markets. The company's collaboration platform includes ThinkHub® collaboration for global teams, T1V Hub™ wireless screen sharing, and the T1V companion app - all working cohesively to bring teams together for seamless, intuitive working sessions.

T1V's suite of collaboration software transforms the way people meet - making meetings a place where teams can collaborate anytime, from anywhere.

T1V ThinkHub Connect™ active learning technology is designed to support a variety of teaching and learning styles, from traditional lecture to team problem solving and group-based work. The solution also supports collaboration amongst students located at off-site locations and allows easy content sharing between remote locations.

All T1V solutions are Built for BYOD™ (bring your own device) to support the many devices, programs, and platforms of today's hybrid meeting and learning environments. T1V is a leading innovator in large-scale, interactive software technology, with seven issued patents in collaboration and active learning software.

To learn more, visit t1v.com