

ISSUE 70
**Exploring workplace
research, insights and
trends**

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**Designing For
Distraction**

Solutions to help people
manage attention

Student Attention

How to get and hold it

**India and China's
Growth Dilemma**

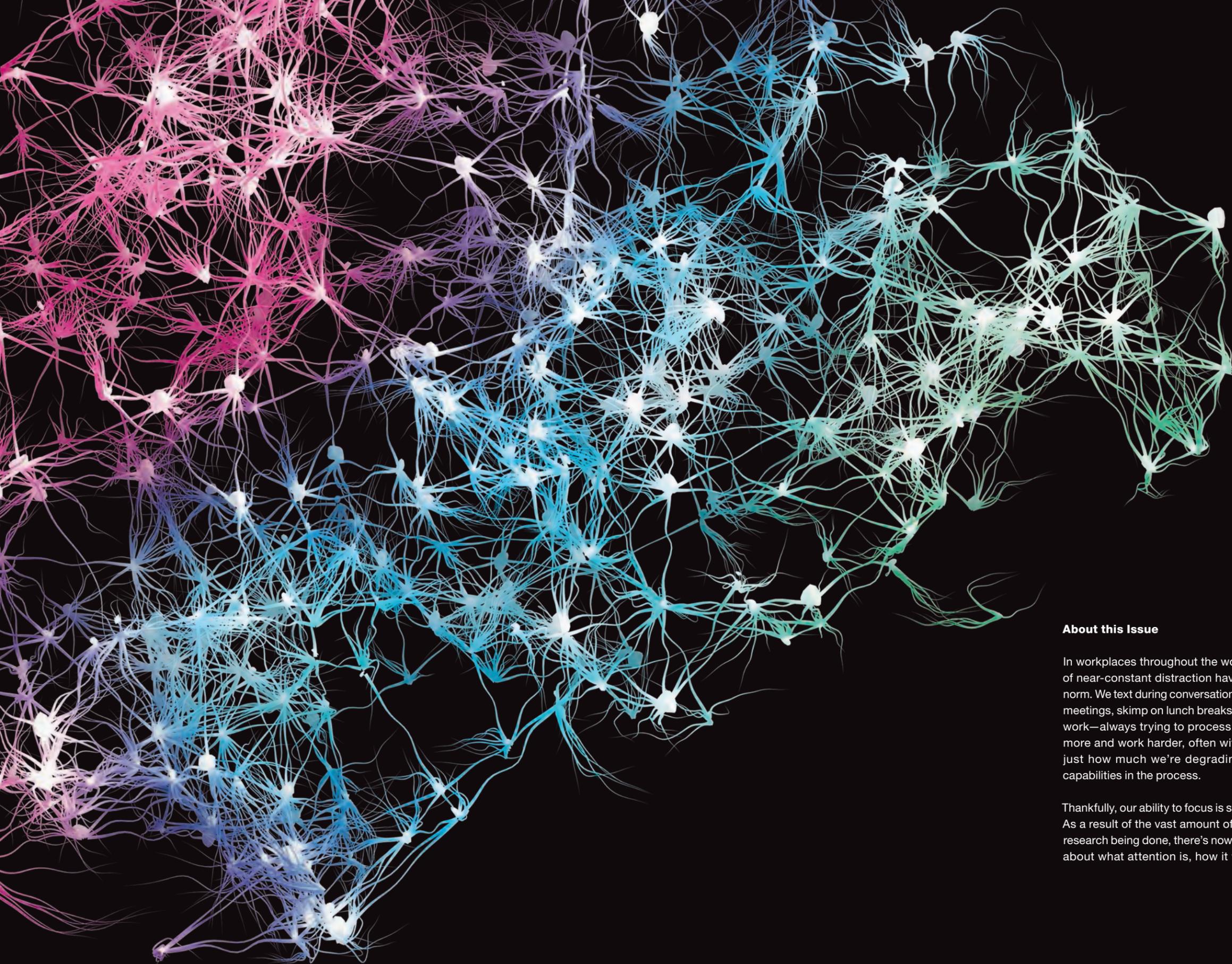
How a human-centered
workplace can help

360



Think Better

NEUROSCIENCE: THE NEXT COMPETITIVE ADVANTAGE



About this Issue

In workplaces throughout the world, scenarios of near-constant distraction have become the norm. We text during conversations, email during meetings, skimp on lunch breaks to catch up on work—always trying to process faster, handle more and work harder, often without realizing just how much we're degrading our mental capabilities in the process.

Thankfully, our ability to focus is still salvageable. As a result of the vast amount of neuroscience research being done, there's now hard evidence about what attention is, how it works, how to

attain it and how to use it productively.

By delving into the findings, Steelcase researchers have gained new insights into how our brains shape thoughts, emotions and behaviors, and then applied this new science to create concepts for how thoughtfully designed workplaces can help workers better manage their attention.

By leveraging the full capacity of our brains and our environments, it's possible to think better at work. The results can be astonishing.

Exploring workplace research, insights and trends

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Publisher + Executive Editor

Gale Moutrey

Editor

Chris Congdon

Managing Editor

Stav Kontis

Creative Director

Erin Ellison

Art Direction + Design

Plural
Conduit Studios
Agence Dandelion

Editorial Assistant

Karen Knoerl

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EUROPE, MIDDLE EAST & AFRICA

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Karen Barnes
Mike Firlik
Jane Graham
Eileen Raphael
Jonathan Weber

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Shaun Fenn / Plural
Gaurav Gandhi
Yuan Shunhua
Jeremy Frechette / Plural
Geoff Shirley / Erin Ellison
Petra Steiner

Illustrators

David McLeod
Timothy Drew Ryan

Digital Media

Conduit Studios
Ken Neil
Anne-Sophie Peter
Luke Rumley

Project Management

Sue Warmels

Production

Travis Boerema
Grandville Printing
Brian York

Public Relations

Britta Gneiting
Audra Hartges
Katie Pace
Monika Steilen



34 Designing for Distraction
Solutions to help people manage attention.

72 A Positive Prognosis for Patient Rooms
Many patient rooms are in need of a facelift, having evolved little over the years despite changing needs and new technology. As the next generation of patient rooms come onboard, new designs based on human-centric principles are improving patient, family and clinician experiences.

123 Connecting People + Purpose
It's a cornerstone of employee engagement, yet many organizations aren't articulating or living their purpose consistently. Steelcase's Applied Research + Consulting division is helping companies leverage their spaces, processes and technology to bring purpose into the daily work experience.



360 ON THE IPAD

Search "Steelcase 360 Magazine" on the Newsstand. Compatible with iPad. Requires iOS 3.2 or later.

85 The Human Side of Modern Craft
Handcrafted items are experiencing resurgence in popular culture, but many of today's workspaces are void of craft. Inspired by the Maker Movement, Coalesse is redefining modern craft with new materials and methods that artfully disrupt norms and humanize the workplace.

110 Activating Startup Culture
Is it really possible to ignite—or reclaim—a sense of "startup culture" in your workplace? With focused intentionality, passionate determination and a little spunk, we believe the answer is, "Absolutely." Here are some tips to get you started.

66 Teaching the Teachers
Ohalo College in Katzrin, Israel, takes an innovative approach to space, pedagogy and technology to educate a new generation of teachers, putting it at the leading edge of faculty development and training.

130 Taking the Lead
Read how a human-performance consulting firm has embraced palette of place to nurture employee wellbeing.

- Departments**
- 4** Perspectives
 - 6** Trends 360
 - 65** A New Learning Curve
 - 129** Sustainability Spotlight
 - 136** A Journey to What's Next



8 Think Better
It's fast becoming a deeply-embedded yearning of our time. In workplaces throughout the world, there's awareness that we're not performing to full potential and too many distractions are to blame. While the diagnosis may seem clear, most people feel helpless to do anything about it other than to keep working harder at staying focused. But neuroscience research is now shedding new light on the fundamental problem, offering decipherable clues for how to better support attention at work.

By integrating the discoveries of neuroscience with their own investigations into worker behaviors and the changing nature of work, the Steelcase WorkSpace Futures team offers new insights and ideas for how workplaces can be reimagined in innovative ways to optimize brain performance.



90 The Growth Dilemma
In markets such as India and China, the nature of work is changing as firms move up the value chain and take on more complex work. Creating flexible, resilient workspaces that enhance employee wellbeing is key to retaining talent, even when resource constraints and constant change can make that a challenge.



50 Class, Can I Have Your Attention?
Every educator wants fully engaged students. But first you have to get and hold their attention in the classroom. Based on the latest research, here are seven insights on how to do that.

JOIN THE CONVERSATION
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Perspectives

Meet some of the people who contributed information and ideas to this issue.



ELISE VALOE
Manager, WorkSpace Futures
Steelcase, Asia Pacific

Elise is passionate about exploring and discovering insights and opportunities for Steelcase in new markets. She is responsible for leading Steelcase's research efforts in Asia Pacific and currently leads a design research team that focuses on understanding users, changing behavioral patterns and the impact of emerging technologies in growth markets—all critical inputs to Steelcase innovations. "Work in growth markets is not just about call centers anymore. There is an increase in local product development which is creating a new demand for more creative, highly skilled knowledge workers, and it's changing the behaviors at work."



MICHAEL HELD
Design Director, Steelcase
Asia Pacific

A German native who has worked in five countries, Michael has a degree in industrial design and leads the Asia Pacific arm of Steelcase's global design team. Having lived and worked throughout Asia for over a decade, he heads the product development initiatives for the region with a specific focus on growth markets. "Growth markets are unique environments with fierce competition for talent, faster development cycles and less predictability. Companies operating in such markets require a business strategy that addresses these pressures, as well as spaces, furniture and technology that provides resilient and adaptable workspaces."



JOHN HAMILTON
Design Director, Coalesse

An industrial designer with training in engineering, John leads the design and development team at Coalesse's studio in San Francisco, Calif. John has international experience in product development and has been involved in numerous projects that have resulted in innovative products to support new ways of working. He's inspired by the cycle of disruption and mastery. "Design is all about challenging the boundaries. You disrupt with new ideas, then master them. That's what modern craft is and what it brings to the world."



ANDREW KIM
Manager, WorkSpace Futures,
Steelcase

It's easy for Andrew Kim to get excited about learning spaces. Not just because he spends his professional life studying educational environments at schools and universities, or because he regularly participates in presentations and workshops around the country on educational issues. What's got him most excited these days are recent discoveries about connections between the brain and the body that have implications for learning, and the institutions, educators and students (including his own three children) who can immediately benefit. "We have to consider cognitive ergonomics in planning and designing learning spaces. The science is early but indications are that our physical environment can impact how we think, and even help us think better."



DONNA FLYNN
Vice President, WorkSpace Futures,
Steelcase

An anthropologist by training, Donna leads the global Steelcase WorkSpace Futures group, a research team that innovates around insights into how people work. Prior investigations into cognitive load and the impact on people's ability to focus at work prompted team members to conduct a focused learning project to uncover and understand what neuroscience has discovered about the brain processes of attention. "Neuroscience is immensely complex and challenging to understand, and yet it provides foundational insights to everything we do. As much as culture or social practices, our brains shape our behaviors. That means that we need to design workplaces for our brains."



BEATRIZ ARANTES
Senior Researcher, WorkSpace
Futures, Steelcase

Based in Paris, Beatriz specializes in the psychology of human emotions and behaviors, and how they relate to work and work environments. Having recently participated in extensive research on wellbeing at work, she says neuroscience provides compelling evidence that achieving both productivity and wellbeing depend on understanding and leveraging how the brain works. "The brain isn't a computer that performs the same no matter how long it's been on. We're learning that some of the things that have typically been demonized in the workplace, such as taking a break, socializing or letting our minds wander, are actually regenerating our minds. We can no longer exist as if focused is the only way to be at work."



TIM QUINN
Vice President, Applied Research +
Consulting (ARC), Steelcase

As a leader in ARC, Tim works with clients to interpret organizational culture and provide recommendations to help create better workplace experiences. "When the workplace offers a better experience for employees, the organization can achieve its business objectives. We help them do that in a meaningful way." Tim enjoys creating and leading high-performance teams to tackle complex challenges. A voracious reader, he helps clients make meaningful connections to reach their goals.

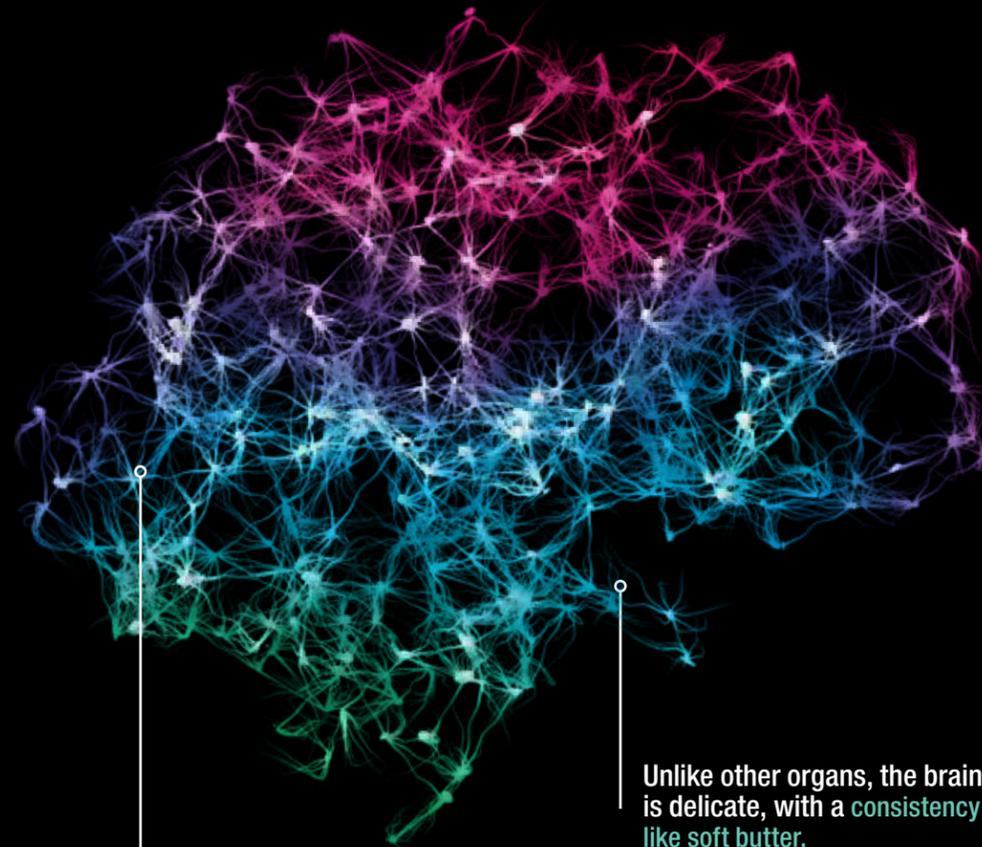


JENNIFER JENKINS
Leader of Practice, Applied
Research + Consulting (ARC),
Steelcase

Jennifer brings a deep skill set to ARC's clients including qualitative and quantitative research, leading internal change initiatives and applying design thinking skills to enhance user experiences in the workplace. "I love to tell stories based on research and insights we uncover while engaging with clients. Finding those patterns and dynamics that have the potential to improve the way people engage with space, process and technology is the heart of our practice."

BRAIN 101

New technologies are allowing neuroscientists to deeply explore what is arguably our most vital and energy-hungry organ—the human brain—and how it affects our behavior. It is an ongoing journey of discovery, but new findings offer insights that can potentially have a direct impact on work performance and satisfaction, and maybe even help us to think better.



Unlike other organs, the brain is delicate, with a consistency like soft butter.

Light it up! The average human brain uses the equivalent of 20 watts of power—enough to power a lightbulb.

"BRAIN-LIKE CHIP MAY SOLVE COMPUTERS' BIG PROBLEM: ENERGY," DISCOVER MAGAZINE

"NEW STUDY: SPECT IS BEST FOR BRAIN INJURY DIAGNOSIS AND TREATMENT," AMEN CLINICS

BRAIN BASICS



The brain comprises merely 2% of the body's weight but consumes more than 20% of the daily caloric intake of energy—more than any other organ in the human body.

"THE COMBINED EFFECTS OF EXERCISE AND FOODS IN PREVENTING NEUROLOGICAL AND COGNITIVE DISORDERS," PREVENTATIVE MEDICINE

1 billion CONNECTIONS

Brain tissue the size of a grain of sand contains 100,000 neurons and one billion connections.

"12 PRESCRIPTIONS FOR CREATING A BRAIN HEALTHY LIFE," AMEN CLINICS

100,000 MILES

If you stretched out the blood vessels in your brain from end-to-end you could wrap them around the earth 4 times—approximately 100,000 miles.

"10 FASCINATING BRAIN FACTS," IDEA

400 FEET / SECOND

Messages travel between neurons at different speeds: some seem like they're walking (one and a half feet per second), while others are fighter-jet fast (four hundred feet per second).

"YOU: RAISING YOUR CHILD," MICHAEL F. ROIZEN AND MEHMET C. OZ

60% GRAY MATTER | 40% WHITE MATTER

The brain is 60 percent "gray matter" made up of neurons, and 40 percent "white matter" made up of dendrites and axons, which create the network by which neurons communicate with each other.

"NEW STUDY: SPECT IS BEST FOR BRAIN INJURY DIAGNOSIS AND TREATMENT," AMEN CLINICS

KEEP IT IN MIND AT WORK



Research shows that multitasking increases your error rate by 50%.

"BRAIN RULES," JOHN MEDINA

MOVEMENT ENGAGES THE BRAIN

A study found that those who worked from a treadmill desk were 34.9% more likely to answer a comprehension question correctly compared to those who sat in a chair.

"THE DELAYED EFFECT OF TREADMILL DESK USAGE ON RECALL AND ATTENTION," COMPUTERS IN HUMAN BEHAVIOR

CIRCADIAN RHYTHMS IMPACT PERFORMANCE

At the beginning of the day you have the most self-control and attention because the brain is the most rested and the prefrontal cortex is the most active. Start the day with focus work; as the day goes on focusing gets harder.

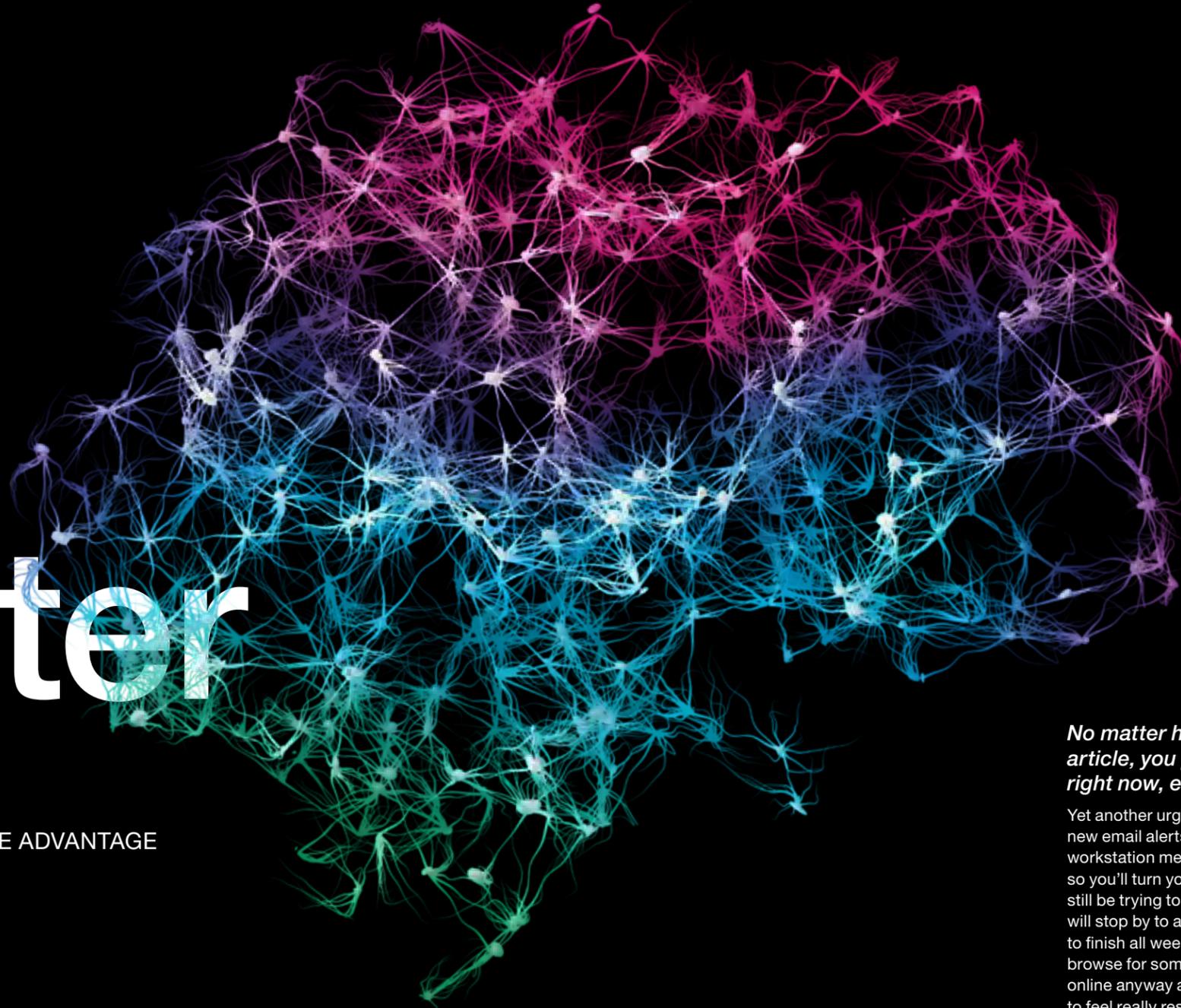
"CIRCADIAN RHYTHMS IN COGNITIVE PERFORMANCE: IMPLICATIONS FOR NEUROPSYCHOLOGICAL ASSESSMENT," CHRONOPHYSIOLOGY AND THERAPY

TRY A NEW PATH TO PRODUCTIVITY

Meditation can actually physically change the structure of your brain and has been found to increase the amount of gray matter in the insula which impacts self-awareness, perception and cognitive functioning. Benefits? It can increase compassion, memory and creativity and decrease depression and anxiety.

"THE EMOTIONAL LIFE OF YOUR BRAIN: HOW ITS UNIQUE PATTERNS AFFECT THE WAY YOU THINK, FEEL, AND LIVE—AND HOW YOU CAN CHANGE THEM," RICHARD J. DAVIDSON AND SHARON BEGLEY

Think Better



NEUROSCIENCE: THE NEXT COMPETITIVE ADVANTAGE

No matter how interested you are in this article, you probably won't finish reading it right now, especially if you're at work.

Yet another urgent text will come in, you'll get a string of new email alerts, you'll overhear a colleague at the next workstation mention your name during a videoconference so you'll turn your attention to what that's all about, you'll still be trying to catch up on your emails when your boss will stop by to ask about that proposal you've been trying to finish all week, which will prompt you to go online to browse for some more information and then, since you're online anyway and didn't take a lunch break and starting to feel really resentful about the impossible amount of the work you're expected to do and how hard it is to focus, you'll stop off at Facebook and notice that today is the birthday of your best friend from college, so you'll read the 73 messages she's received so far and then decide, what the heck, you'll give her a call while you're still catching up on email and then, before you know it, you're almost late for your third meeting of the day and feeling more stressed than ever, so you'll get a large black coffee with an extra shot of espresso and try to work on the proposal during the meeting.

TOO MUCH INFORMATION

Scenarios of near-constant distraction at work have become the norm versus the exception for most people today. It's well said that a wealth of information creates a poverty of attention, and most workers are now living that mental skirmish every day. At the same time that we're drowning in information, we're also expected to process it faster, getting to insights, recommendations, decisions or at least next steps rapidly. In minds as cluttered as a scrap yard, we scramble to find something that will "make do," responding to the pressure for action.

Yet, we long to be more effective at our jobs. We keep telling ourselves: Just be more focused, just work harder. But, in reality, no matter how hard we try, our brains just don't work that way. While our higher-level cognitive skills distinguish us from other mammals, being attuned to what's going on around us is also embedded in our evolution, a key to survival. This means that today's way of working has become a Catch 22: We're taking our natural inclination to be distracted and training our brains to be even more so.

With attention meltdowns now epidemic in many organizations, nearly everyone is struggling to adapt, often without any real understanding of what attention is, how it works, or how to attain it and use it productively. Fortunately and just in time, the research of neuroscientists in more than 40,000 labs throughout the world is shedding new light on the processes of attention and, in so doing, providing decipherable clues into how it can be supported in the workplace.

Thanks to the vast amount of research being done, it's now becoming clear that solving many of the challenges that people face at work is linked to getting smarter about that three-pound organ that we all carry around in our heads.

During the past year, Steelcase researchers and designers have been delving into the findings of neuroscientists and cognitive researchers, integrating discoveries from these experts with their own ongoing investigations into workers' behaviors and the changing nature of work. The resulting convergence of findings has inspired new perspectives and new ideas for how environments, when thoughtfully designed, can be a hardworking and effective tool to help workers better manage their attention. And that has all kinds of competitive advantages: improved worker engagement and wellbeing, more creativity and innovation, and better business results overall.

"As demands on people's attention grow, it is becoming more and more important to optimize our cognitive resources," says Donna Flynn, vice president of the WorkSpace Futures team. "By studying the findings of neuroscientists, we're realizing that knowing more about how our brains shape our physical, cognitive and emotional wellbeing is bringing more clarity to understanding human needs in the workplace. We're learning what we can do with all this new science to help people think better at work."

It's well said that a wealth of information creates a poverty of attention, and most workers are now living that mental skirmish every day.

AT A GLANCE

Issue

Many people are overwhelmed by distractions in the workplace, and their inability to focus negatively affects their productivity, engagement, wellbeing and overall performance. As demands on attention grow, it's common for people to feel pressured to work harder at staying focused and handling more. Continuous partial attention and multitasking are common but inefficient coping mechanisms.

Insight

Neuroscience research has proven that focused attention is hard work. Because the brain has finite energy capacity, it's physiologically impossible for anyone to engage in a full workday of controlled attention and meet any reasonable expectations for quality or quantity outputs. Taking time out for regeneration, inspiration and physical activity is essential for optimal brain performance.

Action

By understanding how brains work, people can become more mindful about how thoughts, emotions and behaviors are formed. Based on these insights, workplaces can be designed as hardworking tools to help manage attention in brain-friendly ways, recognizing the range of peaks and valleys in mental performance that workers experience throughout the day.

WHY WE'RE SO DISTRACTED:

3 MINUTES

How frequently the average office worker is interrupted or distracted

UNIVERSITY OF CALIFORNIA, IRVINE

23 MINUTES

How long it takes to return to a task after being interrupted

UNIVERSITY OF CALIFORNIA, IRVINE

204 MILLION

Emails sent per minute

MASHABLE

8

Average number of windows open on worker's computer at the same time

"THE OVERFLOWING BRAIN: INFORMATION OVERLOAD AND THE LIMITS OF WORKING MEMORY," TORSEL KLINGBERG

30

Average number of times per hour an office worker checks their email inbox

NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION

221 TIMES

How often the average smartphone user in the UK checks their phone every day

TECMARK

4.9 BILLION

Connected devices in use in 2015

GARTNER

200%

Increase in average time spent on mobile devices since 2012

GLOBALWEBINDEX

49%

Workers who can't choose where to work depending on the task

STEELCASE WELLBEING STUDY, GLOBAL AVERAGE OF 17 COUNTRIES

UNDERSTANDING ATTENTION:



Controlled Attention: intentionally directing the mind

- Activates the prefrontal cortex, often described as the executive center or the CEO of the brain
- Associated with higher-order cognitive skills such as analyzing, prioritizing, planning, etc.



Stimulus Driven Attention: the involuntary attraction of the mind to the unexpected, especially sensory inputs

- Activates the limbic system; dispersed parts of the brain related to survival
- Associated with emotion, motivation and various other primal brain functions

Illustrations are a conceptual representation of the brain based on fMRI scans.

Source: University of Michigan, "Challenges to attention: A continuous arterial spin labeling (ASL) study of the effects of distraction on sustained attention."

ATTENTION: THIS IS YOUR BRAIN

Dictionaries give simple definitions for attention; in general terms, it's about holding something in your mind. But cognitive researchers have a much more nuanced understanding, classifying different types of attention based on which areas of the brain are involved. For example, as a professor in Sweden's esteemed Cognitive Neuroscience Karolinska Institute, Torkel Klingberg, M.D., Ph.D., delineated two distinct types: controlled attention and stimulus-driven attention. The former is about intentionally directing our attention; the latter is about things that attract it.

It's now known that there are multiple biological mechanisms involved in attention. The prefrontal cortex, often described as the executive center or the CEO of the brain, is the director of our attention. It's the last major region to develop in our evolutionary history, and it's what enables us to selectively focus on something. But neuroscientists tell us there's more to attention than just this one part of our brains.

"To understand attention, we need to think of it holistically in terms of multiple brain functions, but also contextual issues such as the content our brains are processing, our physical state and the environment," explains Beatriz Arantes, a WorkSpace Futures researcher and organizational psychologist.

Our psychological state of arousal—in other words, how alert we are—is a significant factor because as it fluctuates, our attention fluctuates. When we're tired and lethargic, it's difficult to control our attention. When we're highly excited, our minds also jump from one thing to another. Sustaining our attention depends upon a moderate, "sweet spot" level of arousal.

Another key brain system affecting attention and arousal is the limbic system: dispersed parts of the brain that manage emotion. More primal than the prefrontal cortex, the limbic system prompts us to pay attention to stimuli that elicit fear or excitement. John Medina, a developmental molecular biologist at Washington State University with research interests in human brain development, writes, "We don't pay attention to boring things." In other words, human brains respond naturally to the unexpected, which makes us easily distractible. Evolutionarily speaking, being attuned to changes in our environment has been important to survival, and we still retain those natural tendencies to notice sounds, movements and stimuli around us.

Of course, not all distractions are external. We're also distracted by internal thoughts and concerns. Neuroscientists at MIT Trey Hedden and John Gabrieli found that internally generated lapses in attention are activated by the medial prefrontal cortex, a specific part of the prefrontal cortex that's triggered by thoughts of ourselves or other people. The medial prefrontal cortex is part of the brain's default network, our naturally occurring state of mind when we're not focused elsewhere.

Attention is also a function of motor orientation—how close we are to sensory stimuli affects how closely we pay attention to them. Students who sit close to the teacher have an easier time paying attention that those who sit far away, people having a conversation tend to lean in instinctively and fix their eyes on the person who is talking—even when that results in staring at a speakerphone throughout a conference call.

Scientists have proven that when we think we're multitasking, we're really switching our attention rapidly between things.



HOW BRAINS WORK AT WORK

Most people still regard neuroscience research as a pathway to eventual cures for mental illnesses and disorders such as Alzheimer's, unaware of the possibility of any immediate impact on their everyday lives, according to a report in the journal *Science Communication*. In reality, however, just as medical research into pathologies has produced a wealth of findings for improving our physical health, neuroscience research is producing findings that have relevance for improving our everyday cognitive functioning.

In particular, Steelcase researchers have targeted three key findings from neuroscience that have important implications for how we perform at work.

Brains get tired.

It's common to see organizations operating on the assumption that focus is the pathway to productivity and the goal, therefore, is to keep people as focused as possible for at least eight hours a day—the more, the better.

Neuroscientists, however, tell us that focus is a limited resource. Like the rest of our bodies, our brains consume energy, drawing on glucose and oxygen as fuel. Controlled attention, in particular, is very hard work, drawing heavily on the prefrontal cortex. Activities such as analyzing, prioritizing, planning and other types of critical thinking are energy guzzlers. As energy supplies dwindle, brains get tired.

Because our brains consume so much energy, humans developed physiological mechanisms over time to ensure that we wouldn't waste our finite supply. That's why, as the prefrontal cortex becomes taxed with a difficult or irrelevant task, we're more likely to become distracted. It's a simple energy-saving mechanism, like turning down a thermostat.

"Our brains work in cycles of peak activity and downtime, moving between rhythms of energy expenditure and regeneration," says Arantes. "Our brains and bodies are designed to move through these rhythms, to stay alert so we can respond to other important environmental cues."

Problems arise if we try to stay focused when our brains are tired. Distractions abound, and we end up avoiding difficult tasks, learning little, remembering less and making mistakes. As stress mounts, the emotionally driven "fight or flight" syndrome kicks in, flooding the nervous system with cortisol and adrenaline. In the resulting state of over-arousal, instead of doing productive work, people who are stressed become consumed by irritation, guilt, pessimism and other unproductive states of mind.

Noted psychiatrist and author Edward M. Hallowell has identified a neurological phenomenon he terms "attention deficit trait." He says it's a direct result of what's happening to people's brains in today's hyperkinetic environment. "Never in history has the human brain been asked to track so many data points," he says, concluding that this overloading of the brain's circuits is the primary reason that smart people are underperforming at work. We're simply expecting more of our brains than they have the energy to handle.

"It's as if the brain is on a budget. If it devotes 70 percent here, then it can only devote 30 percent there," reports Sergei Gepshtein, a computational neuroscientist at the Salk Institute for Biological Studies who researches how the brain processes visual stimuli.

"Never in history has the human brain been asked to track so many data points."

EDWARD M. HALLOWELL
AUTHOR AND PSYCHIATRIST

Multitasking attention is inefficient.

A persistent work trend in recent years has been people juggling simultaneous projects and responsibilities, each requiring frequent collaboration with a variety of people to keep everything moving forward. Our jobs depend on streams of information and interaction, and our efforts to manage everything at once have led to widespread efforts at multitasking—responding to emails during a meeting, reading a text in the middle of a conversation, browsing the Web while we’re talking on the phone, trying to accomplish multiple tasks at the same time.

Although we’d like to believe otherwise, scientists at places such as the Brain, Cognition and Action Laboratory at the University of Michigan have proven that when we think we’re multitasking, we’re really switching our attention rapidly between things. One exception: If multitasking involves

completely separate channels of the brain—for example, walking (a manual task) and talking (a verbal task)—it can be done, says David Meyer, a faculty member at the university and one of the world’s research experts on multitasking. But in today’s workplaces many activities compete for our attention, demanding “airtime” on channels in our brain that can handle only one thing at a time. Meyer has likened people’s distraction behaviors of today to smoking cigarettes decades ago, before we knew what it was doing to our lungs. In a similar way, he says, many people today aren’t aware of how much they’re degrading their mental processes as they attempt to multitask throughout the day. On a small scale, this may mean errors in our emails that make our intended meaning unclear; on a larger scale, it can mean a serious accident due to texting while driving.

The direct contrast to multitasking is what psychologist Mihaly Csikszentmihalyi, Ph.D., has famously named “flow”—being completely immersed in a challenge over time. It’s considered by many to be our most productive state. Flow rarely happens by accident, and it can’t be sustained indefinitely. During flow, however, we’re absorbed and engaged in what we’re trying to accomplish. Unlike stress, which releases chemicals associated with over-arousal and fear, flow is a highly pleasurable and highly productive state of arousal. It’s what many employees—and their employers—crave more of in today’s workplaces.

People today aren’t aware of how much they’re degrading their mental processes as they attempt to multitask throughout the day.

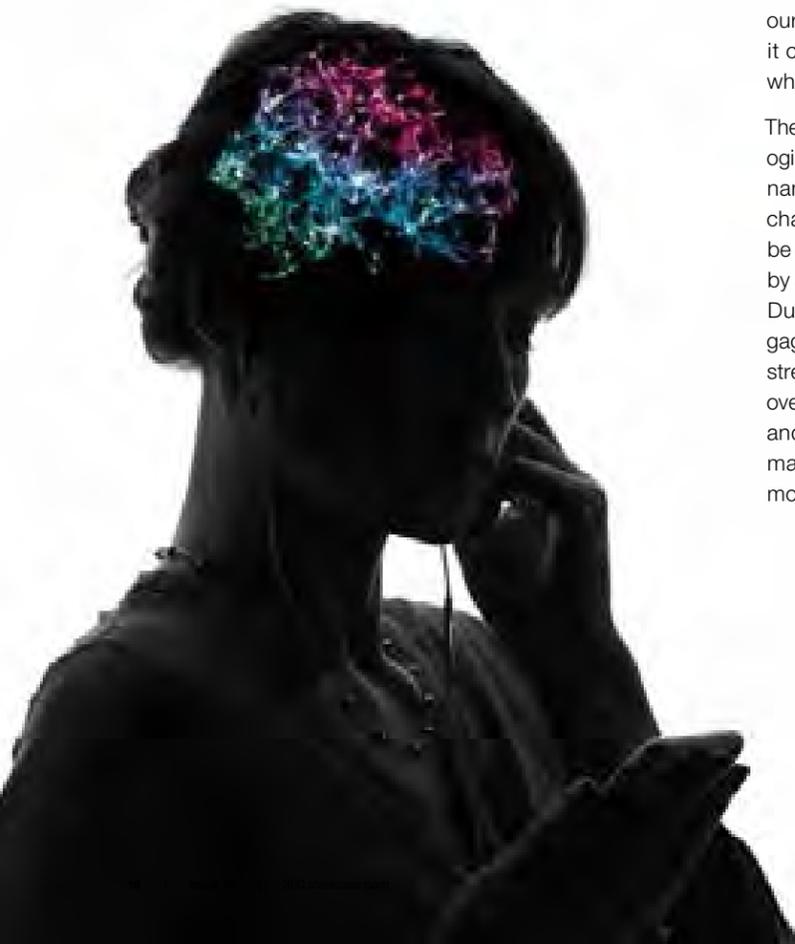


Probably one of the most remarkable discoveries from neuroscientists’ research is neuroplasticity—i.e., evidence that people can physiologically change their brains at any time of life by creating, strengthening and consolidating neural networks. This means that, instead of constantly succumbing to distractions because we’re trying to hold too many things in our minds at once, we have real opportunities to “train the brain” into positive habits.

Mindfulness—keeping your mind turned into the moment of here and now—appears to be one of the best ways to accomplish this. One of the most dramatic proofs is research led by Richard Davidson, Ph.D., who has pioneered the science of meditation as director of the Waisman Laboratory for Brain Imaging and Behavior and the Center for Investigating Healthy Minds at the University of Wisconsin–Madison. Davidson and his team have used digital imaging to look at the brains of Buddhist monks who had practiced meditation intensely for years, each accumulating more than 30,000 hours of meditation. Their brain scans showed powerful gamma activity, indicating intensely focused thought. In fact, the monks’ gamma waves were 30 times as strong as those of a control group of college students. Instead of getting lured into distracting thoughts or environmental stimuli, these monks had trained themselves to focus at will.

Mindfulness trains the brain.

As much as we’re attracted to the idea of flow, actually achieving that state of mind is a bigger challenge than ever for most workers today. Linda Stone is a writer and consultant who coined “continuous partial attention” almost 20 years ago, and it has only become more prevalent since then. Continuous partial attention is an effort not to miss anything. “We want to effectively scan for opportunity and optimize for the best opportunities, activities, and contacts, in any given moment,” Stone writes. On high alert, we feel busy and important. When used as our dominant attention mode, however, continuous partial attention puts us in a constant state of crisis, making us feel overwhelmed and unfulfilled, as well as powerless to do anything about it. By trying to stay connected to everything, we fail at connecting to anything in a meaningful way.



**THE BUSINESS
CASE FOR
MINDFULNESS**

As reported in a January 2015 Harvard Business Review digital article, a team of scientists from the University of British Columbia and the Chemnitz University of Technology recently pooled data from more than 20 studies and found that at least eight different regions of the brain are consistently affected by mindfulness, an increasingly practiced method of meditation. Of particular interest to business professionals, say the article's three authors, is the effect of meditation on the anterior cingulate cortex, a region behind the frontal lobe that is associated with self-regulation. Research subjects who meditate showed superior performance on tests of self-regulation and also showed more activity in this region of the brain than those who didn't meditate. Another brain region that appears to benefit from meditation is the hippocampus, part of the limbic system that is associated with emotion and memory.

Clearly, the mantra of mindfulness as a sound business practice is beginning to take root, and not just in Silicon Valley companies like Google, which offers emotional intelligence courses centered on meditation. Health insurer Aetna is among several stalwartly buttoned-up companies that now offer free onsite yoga and meditation classes to employees. At The Huffington Post offices in New York, there are nap rooms plus yoga and breathing classes, and a policy encouraging employees not to email after hours—all implemented after Editor-in-Chief Arianna Huffington collapsed at home from lack of sleep, resulting in an epiphany about the ill effects of an always-on workstyle.

Of course, spending thousands of hours every year in mindfulness meditation isn't a likely scenario for office workers. But research published in the journal *Psychiatry Research: Neuroimaging* shows that even as little as 30 minutes of mindfulness a day for eight weeks can physiologically change the brain. While making and strengthening connections in our brains, mindfulness also reduces sensitivity to the brain's threat-detection network.

"Essentially, engaging in mindfulness means that we are practicing our ability to recognize when our minds have wandered and gaining ability to redirect our attention. The process of nonjudgmental observation of thought trains your brain and allows you to calm your responses and maintain more emotional stability. The more we practice this, the better we get at it," explains Arantes.

Continuous partial attention puts us in a constant state of crisis, making us feel overwhelmed and unfulfilled.



**COURSE-CORRECTING FOR
OPTIMIZED BRAINPOWER**

Especially when considered together, the key findings from neuroscience that Steelcase researchers have explored in depth all point to one unambiguous conclusion: It's impossible for any worker to engage in eight hours or more of controlled attention and meet any reasonable expectations for either quality or quantity outputs. Brains get tired easily, and trying to multitask attention is counterproductive and stressful. Although mindfulness is a proven way to strengthen brain functioning, most workplaces lack adequate support for regenerative activities.

The way to increase productivity and creativity is not about always trying to do more focused work or put in more hours, conclude Steelcase researchers. Instead, it's about getting smarter about the brain, learning its limitations as well as how to leverage it to full capacity to direct our attention, and inspire and challenge us in different ways throughout the workday. ●

RESPECTING THE RHYTHMS OF OUR BRAINS

Part of the problem of our distraction, and the solution, lies in ourselves. By changing our existing habits, we can gain more control of our brains—and our lives. As we become more knowledgeable about how our brains work and more attuned to the ebb and flow of our attention, it becomes easier to recognize what our brains need when. **Steelcase researchers and designers have identified three brain modes that each require distinct behaviors and settings:**

Focus

When we need to deeply focus on something, it's important to avoid unwelcome distractions. Whether the distractions are external or internal, every time we switch our attention we burn through finite neural resources and increase opportunities for the limbic system to hijack our focus.

Whether it's turning off our phones for awhile or completely overhauling how we manage our day or just getting more sleep, a widening circle of expert authors is offering a steady stream of helpful tips in books, magazine articles, interviews and online media, suggesting various behaviors that we can adopt to focus our brains more productively (see p. 30).

Regenerate + Inspire

Although self-regulation is necessary for controlled attention it's important to recognize that distractions can be opportunities to give our brain the timeout it needs and then let our minds go where they will. Although daydreaming has taken on generally negative connotations in the work world, as it turns out our brains are still working when they wander, even though we feel like we're not.

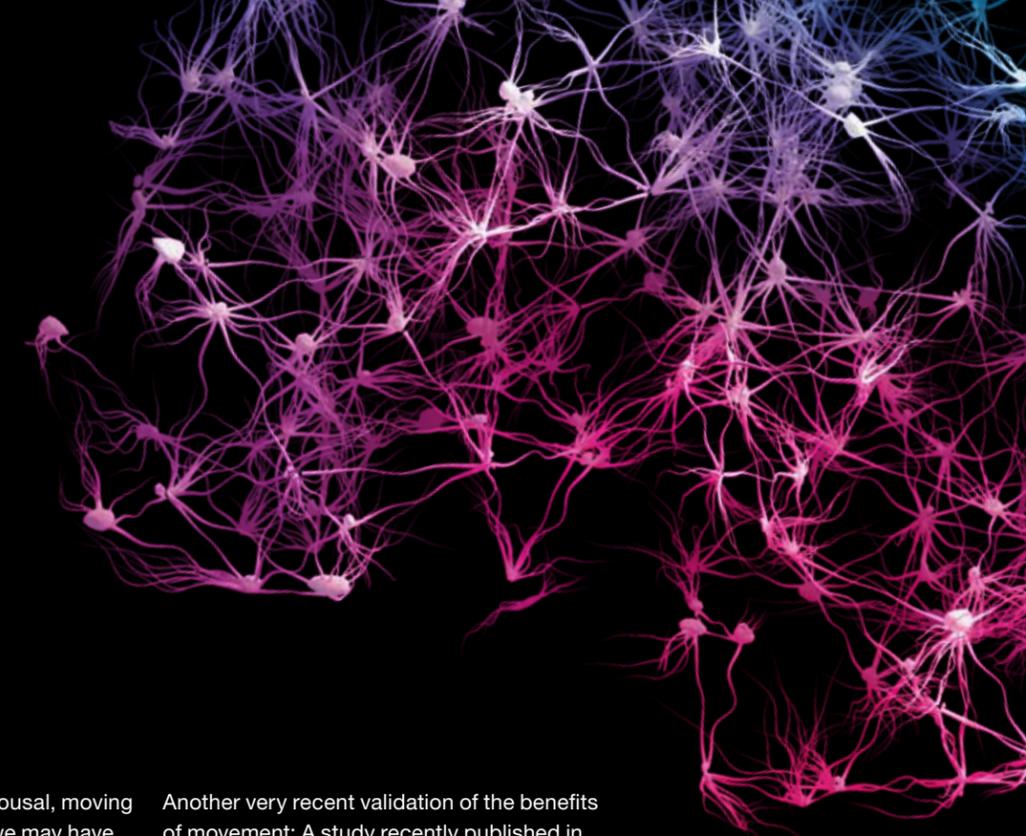
"The neurons are forging new pathways versus focusing on what you already know. And that's when insights really start developing," says Flynn. "That old adage about focusing too hard so you can't see the forest through the trees and the stereotype of 'aha' moments in the shower or driving to work—now we know that those really have a scientific component. Neuroscience helps us understand that often the best way to solve a problem is to walk away from it and let your brain do the work subconsciously."

Activate

When we need to activate our arousal, moving our bodies is the key. Although we may have learned otherwise in school, static sitting sabotages our ability to concentrate. Numerous studies have proven that movement boosts attention by pumping oxygen and fresh blood through the brain and triggering the release of enhancing hormones. While the physical and emotional benefits of movement are well established, neuroscience has proven it also enhances cognition.

Harvard's John Ratey comprehensively explores the connection between exercise and the brain in his book "Spark: The Revolutionary New Science of Exercise and the Brain." He explains that when our bodies are moving, we stimulate production of the protein BDNF (brain-derived neurotrophic factor), which he describes as "Miracle-Gro for the brain," fueling the birth of new neurons.

Another very recent validation of the benefits of movement: A study recently published in *Computers in Human Behavior* concluded that students who read something at a treadmill desk were 34.9 percent more likely to answer a question about it correctly than their sitting counterparts. They also reported paying more attention to their work, and their electroencephalography readings showed more signs of attentiveness and better memory



As work has become more intensely collaborative, most workplaces today have created an imbalance in their work environment: an overabundance of space dedicated to the open plan and far less on spaces designed to support focus work.

How can the workplace be designed to support and enhance people's brain functions instead of impair them? It's essential to offer choices that increase workers' control of the stimuli around them.

When workplaces are designed as an ecosystem of differentiated zones and settings, workers can appropriately select spaces that match their brain modes and activities as they move through their day.

There is no such thing as a consistent or predictable day. The workday journey includes a range of activities, tasks and brain modes, as shown in this example of just one person's—and one brain's—typically atypical day.

For thoughtstarters on how to design environments that support focus, regeneration and inspiration, and activation see pages 24–29.

Brain Modes

- ☉ Focus
- ☾ Regeneration & Inspiration
- ☀ Activation

Brain Mode:
☉ Focus

Thinking work. Spend dedicated time synthesizing content and completing a presentation.

See thoughtstarter on p. 24.

Brain Mode:
☾ Regeneration & Inspiration

Building & developing relationships. Informal 1:1 meeting with a senior leader for some mentoring and career advice.

See thoughtstarter on p. 26.

Brain Mode:
☾ Regeneration & Inspiration

Serendipitous encounter / coffee + food. While grabbing a coffee bump into a colleague who shares an inspiring experience she had at a conference. This interaction provides inspiration for an upcoming project.

Brain Mode:
☉ Focus

Project review. Review project status with remote colleague using personal video conferencing software.

Brain Mode:
☾ Regeneration & Inspiration

Lunch. Join some folks from out-of-town for lunch.

Brain Mode:
☀ Activation

Brainstorm session. Participate in a quick SWOT exercise with team. Work is posted on the walls for future reference.

See thoughtstarter on p. 28.

Brain Mode:
☀ Activation

Taking a moment / movement. Spent too much of the day sitting and feel the need to move while participating on a conference call.

Brain Mode:
☀ Activation

Taking a moment / plan the day. Start the day at the gym and use time on the treadmill to plan the day ahead.

Brain Mode:
☉ Focus

Taking a moment / personal phone call. Look for a private space to return phone calls, check-in with home.

Deep focus requires avoiding unwelcome external and internal distractions.

This library zone is designed as a retreat from the noise distractions and frequent interruptions that are common in open-plan offices. Phone use is prohibited and conversations are restricted.

Designed with a range of acoustical, visual and psychological boundaries, these settings support a wide range of user preferences for focused work.



Layers of boundary—from fully enclosed spaces to micro lounge settings—enable users to control external stimuli—sound, sightlines, lighting and temperature to their individual preferences.



The Brody WorkLounge settings support views to the outside and shield distractions. (Left)

The Bivi workbench provides boundaries between individuals to allow for focused work. (Right)



Brody WorkLounge, a cocoon-like setting, cuts down on visual distractions and provides an empowering sense of control and psychological safety.

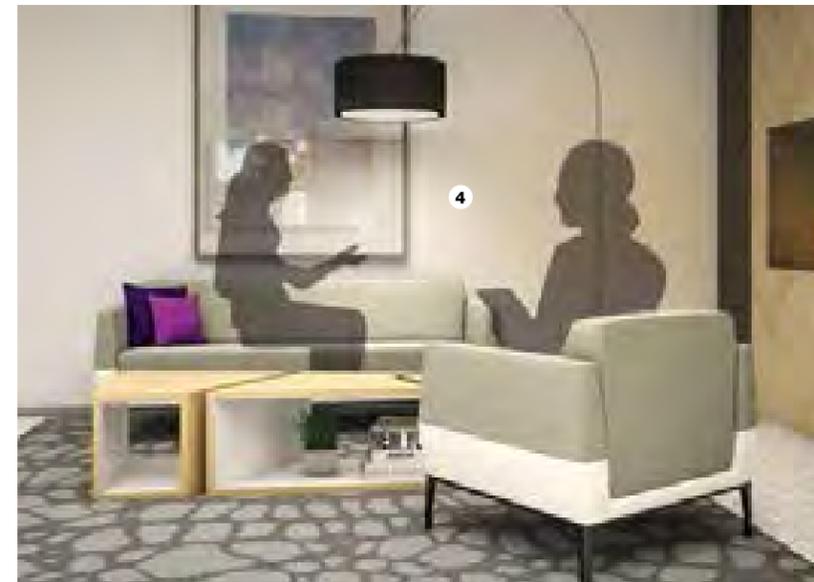
- 1 screen eliminates visual distractions
- 2 adjustable table orients user to work
- 3 light illuminates personal content
- 4 ottoman enables ergonomic wellbeing

DESIGN FOR:
● Regeneration and Inspiration

Easy access to colleagues, nourishment and places to rest the mind helps cognitively-overwhelmed workers gain a new perspective.



This social zone, placed at an intentional crossroad, hosts a variety of nurturing activities: grabbing a cup of coffee, taking a few minutes to be mindful, having a relaxed conversation with coworkers or simply taking a deep breath to recover brain energy.



- 1 A fireplace surrounded by natural wood encourages calm contemplation and is also a hub for quiet conversation.
- 2 The Visalia Lounge chair by the fireplace creates a calm contemplative place for reflection.
- 3 A coffee bar provokes serendipitous encounters and conversations, while a media wall invigorates the mind with interesting company information and news from around the world.
- 4 An informal lounge setting encourages relaxed postures and dynamic exchanges that provoke new ways of thinking.

DESIGN FOR:
● Activation

Physical activity has proven to stimulate the brain. Provide easily accessible settings that encourage workers to move throughout the workday to activate their minds and also take care of their bodies.



These settings incorporate opportunities for movement—whether a stand-up brainstorm session or a walk during a conference call, this activity refreshes the mind as well as the body.



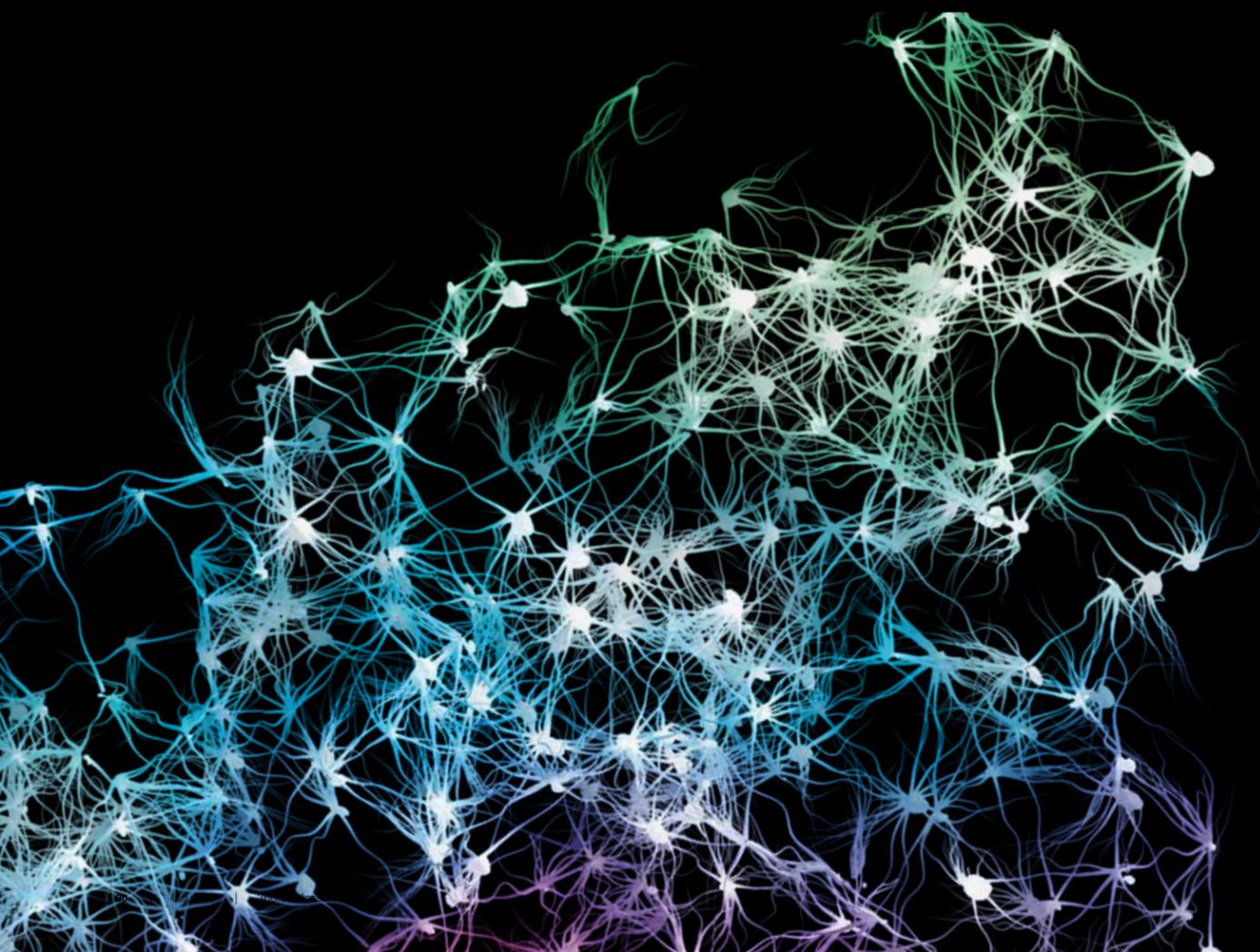
- 1 This private retreat supports an immersive experience and connection to nature.
- 2 A Walkstation Treadmill Desk can stimulate the brain through movement while doing routine tasks.



- 3 Standing height table without seating encourages movement during a short brainstorm session and access to content on the wall.
- 4 Access to natural light and views inhibits stress hormones, helping workers attain productive states of mind.
- 5 Whiteboards capture information and ideas, reducing cognitive load to encourage creative thinking.

WHAT NEUROSCIENCE IS TEACHING US

Neuroscience is a hot topic these days, with scores of new books that claim to use knowledge of the brain's inner workings to make sense of the world around us. There are scores of titles to choose from, but here is a selection of those we found particularly insightful and some of the "big ideas" they explored.



“It’s not the chatter of people around us that is the most powerful distractor, but rather the chatter of our own minds.”

Daniel Goleman

“Focus: The Hidden Driver of Excellence”

“Change focus ten times an hour (one study showed people in offices did so as often as twenty times an hour), and your productive thinking time is only a fraction of what’s possible. Less energy equals less capacity to understand, decide, recall, memorize, and inhibit.”

David Rock

“Your Brain at Work: Strategies for Overcoming Distraction, Regaining Focus, & Working Smarter All Day Long”

“The cognitive neuroscience of memory and attention—our improved understanding of the brain, its evolution and limitations—can help us to better cope with a world in which more and more of us feel we’re running fast just to stand still.”

Daniel Levitin

“The Organized Mind: Thinking Straight in the Age of Information Overload”

“My research on meditators has shown that mental training can alter patterns of activity in the brain to strengthen empathy, compassion, optimism, and a sense of well-being... my research in the mainstream of affective neuroscience has shown that it is these sites of higher-order reasoning that hold the key to altering these patterns of brain activity.”

Richard Davidson

“The Emotional Life of Your Brain: How Its Unique Patterns Affect the Way You Think, Feel, and Live—and How You Can Change Them”

“It turns out that moving our muscles produces proteins that travel through the bloodstream and into the brain, where they play pivotal roles in the mechanisms of our highest thought processes.”

John J. Ratey

“Spark: The Revolutionary New Science of Exercise and the Brain”

MORE GREAT READS



Beyond The Brain
Louise Barrett



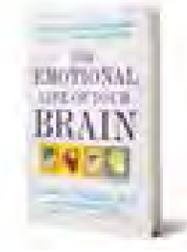
Brain Rules
John Medina



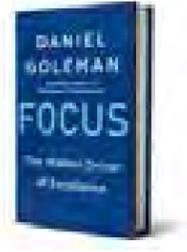
The Brain's Way of Healing
Norman Doidge, M.D.



Creativity
Mihaly Csikszentmihalyi



The Emotional Life of Your Brain
Richard Davidson and Sharon Begley



Focus: The Hidden Driver of Excellence
Daniel Goleman



Freedom, Inc.
Brian M. Carney and Isaac Getz



La Dispersion au Travail
Caroline Datchary



Madera de Lider
Mario Alonso Puig



Now You See It
Cathy N. Davidson



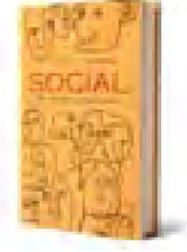
The Organized Mind
Daniel Levitin



The Overflowing Brain
Torkel Klingberg



Reinventing Yourself
Mario Alonso Puig



Social
Matthew D. Lieberman



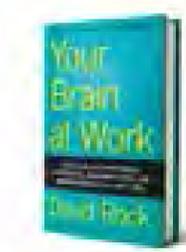
Spark
John J. Ratey, M.D.



Things That Make Us Smart
Donald A. Norman



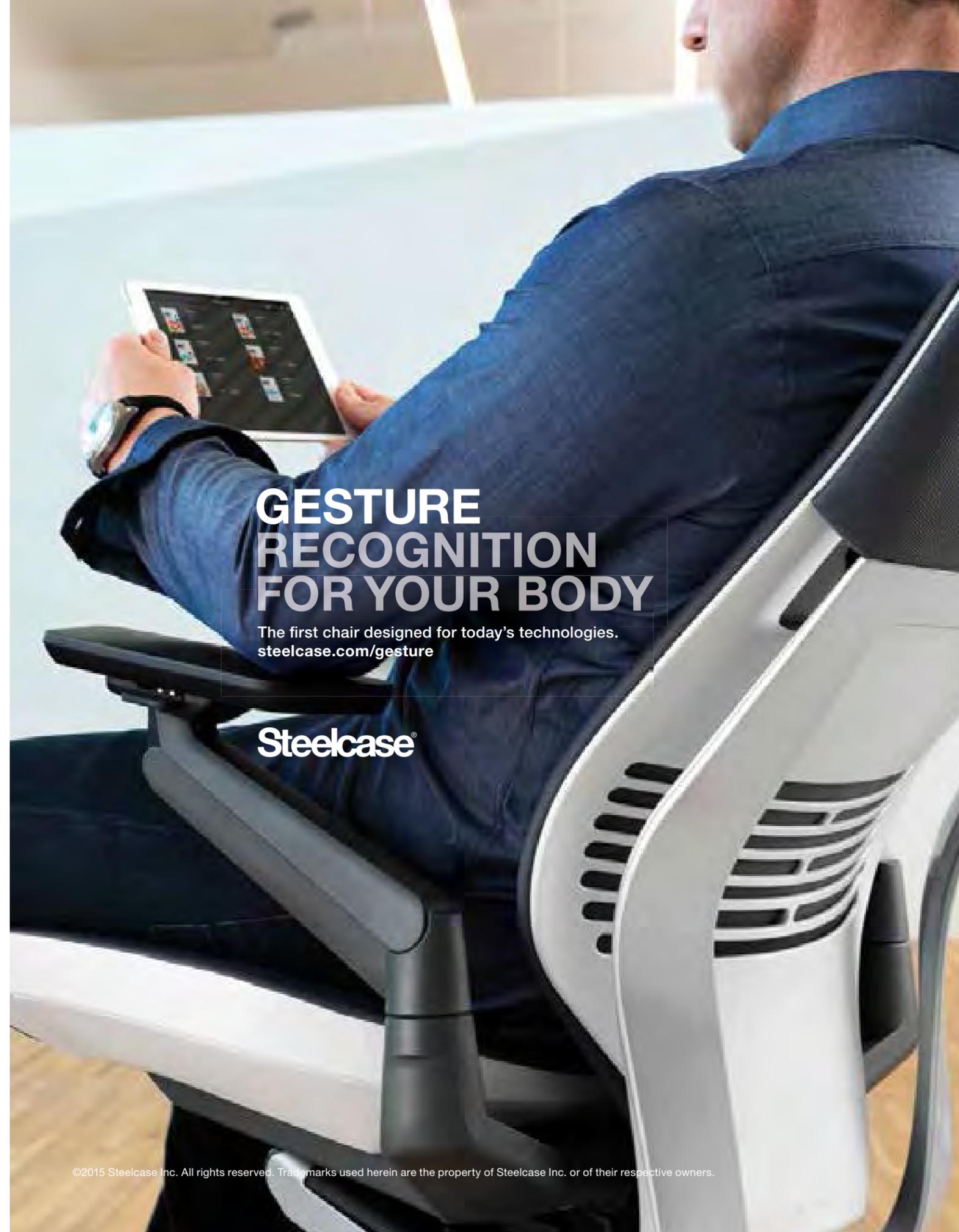
Willful Blindness
Margaret Heffernan



Your Brain at Work
David Rock



Your Creative Brain
Dr. Shelley Carson



GESTURE RECOGNITION FOR YOUR BODY

The first chair designed for today's technologies.
steelcase.com/gesture

Steelcase®

DESIGNING FOR DISTRACTION

Solutions To Help
People Manage Attention



by James Ludwig
Vice President,
Global Design, Steelcase

Design is about solving problems. And we know that one of the biggest problems workers face today is distraction.

Human beings yearn to be in a state of flow, where we are so fully immersed and energized by what we are doing, that we actually experience a sense of pleasure—even joy—in the task at hand. Yet the tension we all face as humans is that we are easily distracted.

Some of the distractions we face are innate. Just as we crave flow, we're also hardwired to seek out what is novel and new. We are drawn to voices in a crowd and motion in our peripheral vision. It's almost irresistible. Our emotions can motivate and propel us, yet we worry and stress when we feel a diminished sense of control over our environment. Sometimes the greatest distraction we face is the inner workings of our own minds.

The environments in which we work and learn are also full with distractions: too much information, people surrounding us, noise, discomfort. Some of the stimuli that add life and energy to an environment in one context, can feel overwhelming in another.

As designers it's our job to create environments that mitigate these distractions and that enable and inspire people to do and be their best. The products we make are not solely a question of taste. They are based on tangible insights. We observe explicit, emerging and latent needs. We solve for them and express those solutions through appropriate means true to a relevant and consistent design vocabulary.

To be human is to be distracted. Yet we yearn to harness our energy and find purpose and meaning in our work and learning. This paradox is at the core of our human experience.

The following pages offer a glimpse into our process and our journey as designers to help resolve this fundamental tension.



BRODY WORKLOUNGE

Our early ancestors' peripheral vision developed to be extremely acute so they could detect motion from potential predators. It's no wonder why in our workplaces and campuses today, we almost can't help ourselves from glancing up when we see someone walk by in our peripheral vision.

Brody™, a high-performance worklounge, was envisioned as a microenvironment that addresses this primal human response and encourages focus, concentration and flow.

"Design is a highly-iterative process. I like to start with the sketch. It clarifies our thinking and it's the quickest way to visualize an idea. Through drawing we can verify what we want to build."

Markus McKenna
Design Director,
Steelcase Education



Original ideas for Brody from McKenna's sketch book



McKenna reviews a 3D printed model of Brody while testing a life-size prototype.

"Brody provides a sense of psychological safety when people feel protected from behind. They feel in control of their level of exposure to the rest of the environment around them. It allows you to relax and signals the brain that you're giving yourself some time to focus. That prompts the brain to create more lateral connections and more creative thinking."

Markus McKenna
Design Director,
Steelcase Education



"Watching students gave us a window into how learning is changing and how that will impact the way work happens in the future. In some ways, student behaviors can be more extreme, but the ways they work around challenges in their environments make it very clear what the issues are. We saw some consistent patterns of behavior that told us where people are struggling and how that will influence learning and work."

Sean Corcorran
General Manager, Steelcase Education

Typical lounge furniture can get uncomfortable quickly—it's not designed for working on laptops or mobile devices, and we end up hunched over to see our screens, with sore necks and shoulders. The design team solved for this by creating an "alert recline" seating angle, so people can be in a lounge position, yet able to comfortably see and reach their work, with a moveable surface that brings devices up to eye level.





“We saw students pulling together multiple pieces of lounge furniture to create makeshift environments. They were trying to focus, and used the furniture to not only limit distractions, but to orient themselves toward their devices and materials, while allowing them to work in lounge positions. Chairs became not only places to recline, but alternative work surfaces.”

Mark Walters
Product Manager,
Steelcase Education



“3D modelling is one of the many tools we use to validate ideas. The key is to move quickly but in many small steps. Once we get to the prototype stage we test them on ourselves and we can quickly tell if something is going to work. Then the challenge becomes how do we deliver it in a cost-effective manner to our customers.”

Markus McKenna
Design Director,
Steelcase Education



It's the little, but pragmatic, design details that delight people—and limit internal distractions. Like having a place to store your bag in easy reach so it's not getting tangled up on the floor. And easily accessible power so you don't have to worry about running down your battery. Even a fully adjustable light helps you keep focus.



THREAD POWER DISTRIBUTION SYSTEM

Understanding that the search for power is a major distraction, a small design team took on the challenge to develop a power distribution solution that is simple to use, easy to move, virtually disappears under carpet and is cost-effective. The result: Thread™, an ultra-thin, U.L.-approved power distribution system that can reach places where power outlets are maddeningly absent.



Steelcase researchers observed students and workers sacrificing comfort and control for the needs of their devices. Classrooms, tethered to perimeter power, create a web of extension cords.



The challenge in designing a power distribution track for Thread was to make it ultra-thin—just 3/16" high—so it tucks under carpet without affecting foot traffic. Installation is simple: pick up the carpet, fasten down the track, expose the outlets, put the carpet back down.



Steelcase
EDUCATION

We work with leading educational institutions to create high-performance, active learning spaces that enhance student engagement and success.



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“Thread brings power to a lot of typically powerless places and opens up new possibilities for people, helping them to stay focused on what they need to accomplish and stop worrying about their dwindling battery. It eliminates another distraction and that’s good for everyone.”

Sean Corcorran
General Manager, Steelcase
Education

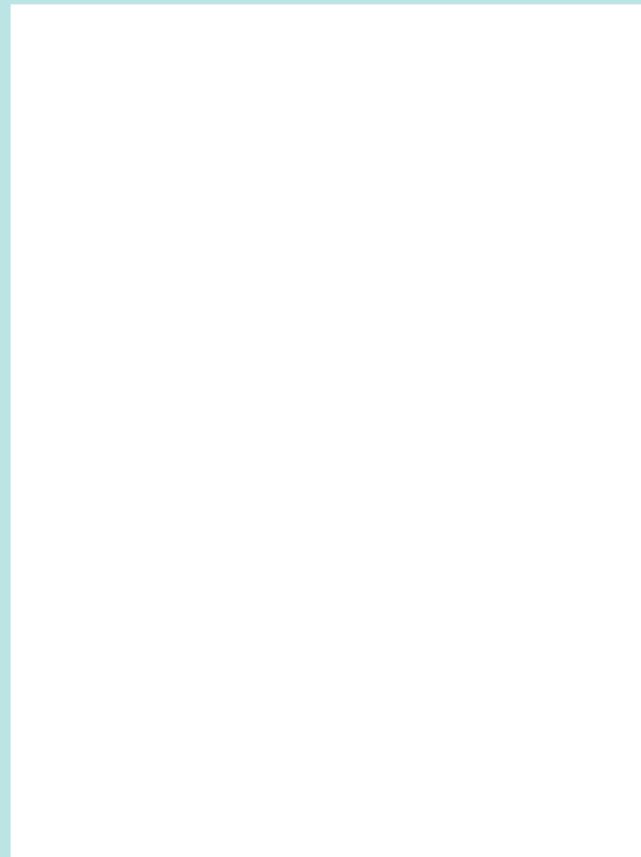
Learning has evolved. Has your classroom?

To maximize student success, classrooms must support the generative activities and peer-to-peer learning occurring in today’s blended learning environments. We create learning places that enable problem solving, communication and collaboration — the skills demanded of today’s students.

[Read our research at Steelcase.com/blendedlearning](http://Steelcase.com/blendedlearning)

Steelcase
EDUCATION

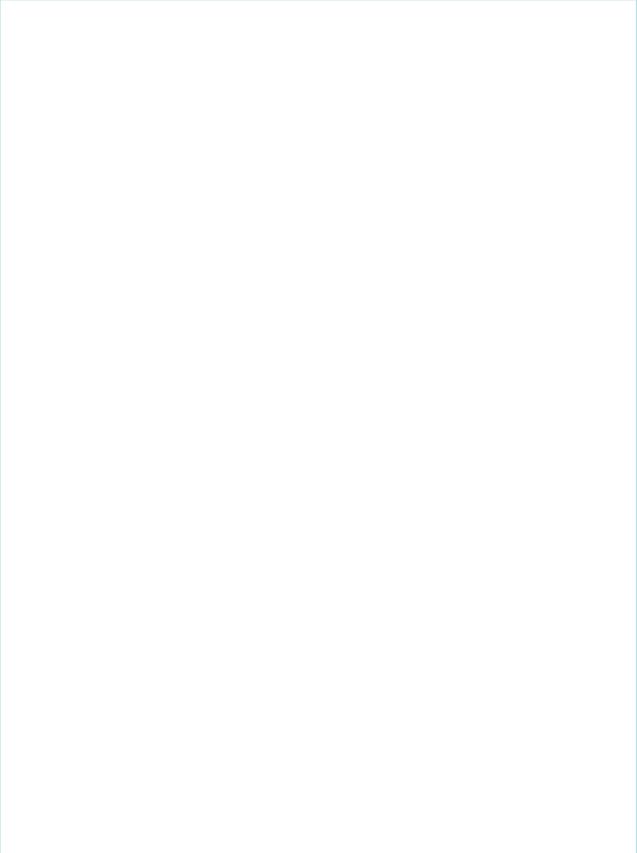
Class, Can I Have Your Attention?



Space can help improve student attention, engagement and learning outcomes.

Are colleges and universities adequately preparing students to be successful in the creative economy? This issue heated up again recently when a Gallup poll showed that only a third of executives believe colleges do a good job at graduating students with the skills businesses need. Another third say colleges don't do a good job at it, and one-third are neutral.

Educators counter with historical data that show the long-term financial advantages for college versus high school graduates. They also point out that colleges were never intended to be vocational schools and that companies need to take more responsibility for specific job training.



Part of the disconnect stems from the unique and daunting task that is education. Students are not uniform raw materials; they are human beings with diverse backgrounds, skills, hopes and dreams. Preparing students for the moving target of a creative economy, and jobs that often don't even exist yet, is no small feat.

The work is made harder because students don't seem to be engaged in the effort. According to Gallup research, just half of students in grades 5 through 12 are involved in and enthusiastic about school. Even sadder, student engagement scores decline steadily from the 5th grade well into high school, staying at their low point through grades 11 and 12.

"We believe, based on our own research, that engagement issues extend into the college years," says Andrew Kim, a Steelcase education researcher. "A big problem is that traditional learning experiences are not aligned with how the brain works, particularly as it relates to attention. This is a critical factor because engagement begins with attention."

Visit college classrooms and observe student behaviors, as Kim and his Steelcase WorkSpace Futures research colleagues do, and you'll see that students everywhere in the world are often more scattered than attentive. In class they converse with peers, check social media, send and read texts and sometimes pay more attention to digital devices than the coursework at hand. "There are more things vying for student attention today and that makes it harder to get the attention that leads to engagement," says Kim.

Building student attention begins with understanding the science behind it and applying those insights to the classroom.

Turn the page to see seven research-based insights about attention and learning that are, well, worth paying attention to.

Half of students in grades 5 through 12 are involved in and enthusiastic about school.

GALLUP



"A big problem is that traditional learning experiences are not aligned with how the brain works, particularly as it relates to attention."

ANDREW KIM
EDUCATION RESEARCHER, STEELCASE

1

Attention is a variable commodity

Average student attention spans are about 10 to 15 minutes long, right? That may be a frequently quoted statistic, but there's no empirical evidence to support it. Karen Wilson and James H. Korn researched the origins of the statistic in 2008, and say the 10–15 minute estimate is based primarily on personal observation and secondary sources.

Other research showed a pattern during class: a decline in student attention just 30 seconds into a lecture, reflecting a settling-in period.

- Declines also occurred at 4.5–5.5 minutes, 7–9 minutes, and 9–10 minutes into the lecture.
- Attention waxed and waned, with more frequent lapses as the lecture progressed. Toward the end, attention lapsed about every two minutes.

There's also recent research which shows that humans are capable of "sustained attention" for about 45 minutes to an hour, which may explain why various events run that length of time: TV and radio programs, class periods, church services, music CDs, even lunch breaks. However, despite what humans may be capable of, the speed at which a tedious lecture can lull a person to sleep demonstrates that sustained attention is a difficult thing to achieve.

Kim points out that attention varies based on the difficulty of the content and its relevance to the student, how conducive the environment is to paying attention, and each student's ability to sustain attention in class. What's encouraging to Kim is that "WorkSpace Futures researchers observed more success in maintaining student attention with active learning approaches that directly involve students in course content."

2

Active learning engenders attention

The WorkSpace Futures observations are bolstered by research by Diane M. Bunce, et. al. in 2010 ("How Long Can Students Pay Attention in Class?"), who compared a passive lecture approach and active learning methods. Researchers noted fewer attention lapses during times of active learning. They also found fewer lapses in attention during a lecture that immediately followed a demonstration or after a question was asked, compared to lectures that preceded active learning methods. This suggests active learning may have dual benefits: engaging student attention and refreshing attention immediately afterward.

3

Novelty and change get attention

As cognitive scientist Daniel Willingham points out in "Why Don't Students Like School?," change grabs attention. Something happening outside causes students to turn immediately to the windows. Similarly, when an instructor changes topics, starts a new activity or in some other way changes the learning process, "student attention returns, along with a new chance to engage them. So plan shifts and monitor your class's attention to see whether you need to make them more often or less frequently."

Our brains evolved to notice change as a way of staying vigilant for possible threats to individual survival. We naturally seek out what's new and different, and this curiosity is rewarded with dopamine and opioids in the brain that make us feel better. Thus, varying materials and breaks facilitate attention. A study by Kennesaw State University found that students paid more attention when the professor reviewed quiz answers, presented new information or shared videos, i.e., changed things up.

Novelty and change facilitate learning in another way, too. Repeating important points by engaging multiple senses helps to reinforce learning. That's because repetition strengthens connections between neurons. Our visual, semantic, sensory, motor and emotional neural networks all contain their own memory systems. "We have an amazing capacity for visual memory, and written or spoken information paired with visual information results in better recall," says psychologist Louis Cozolino. "There is a greater likelihood that learning will generalize outside the classroom if it is organized across sensory, physical, emotional and cognitive networks."

4

Physical movement fuels the brain

Research shows that aerobic exercise can increase the size of critical brain structures and improve cognition. Exercise pumps more oxygen through the brain, which stimulates capillary growth and frontal lobe plasticity. Exercise also stimulates the birth of new neurons in the hippocampus. Physical movement increases alertness and helps encode and trigger memory. Yet schools and teachers traditionally train students to be sedentary, and equate sitting still with greater attention and focus.

On the contrary, movement allows students to refocus and strengthen their ability to pay attention, as Lengel and Kuczala report in "The Kinesthetic Classroom: Teaching and Learning Through Movement." Simply allowing students to get out of their seats to move while learning provides the brain with much-needed novelty and change.

Schools are starting to incorporate more physical activity in the classroom, such as Delaney Connective, a high school in Sydney, Australia, where students do "brain pushups" each morning: five-minute, Tai Chi-like exercises that get the blood flowing and help students focus.

5

Seat location affects attention

The study by Kennesaw State University mentioned earlier also revealed that where students sit in the classroom impacts student focus. According to the study, students in the front and middle of the classroom stayed on task, while those in the back were more distracted. An active learning classroom where students easily moved and rearranged their seating enabled them to be more focused and stay attentive.

Classrooms configured with multiple “stages” (No fixed position where the instructor must stand), content displays and mobile seating offer even more flexibility. Here an instructor or student can address the class, lead a discussion and share content from anywhere in the classroom. There’s no front or back of the classroom, and since the seating allows students to change posture and position easily, every seat is the best seat in the room.

6

Environment influences thinking

Learning can be enhanced or hampered by certain environmental conditions, notes Cozolino: “Inadequate school facilities, poor acoustics, outside noise, and inadequate classroom lighting all correlate with poorer academic performance.” Even the chairs that students use can “hamper blood supply to the brain and impede cognition.”

“Individual study requires deep focus. The harder the task, the more easily we’re distracted, so the ability to screen out distractions is critical,” says Kim. Students need spaces where they can avoid unwanted distractions and stimuli that interrupt focus.

However there are times when low-level environmental distractions are welcome. The flip side of focus thinking is diffuse thinking, which complements learning and creativity. In diffuse thinking the mind meanders. “Distractions of a certain intensity at this point can actually help the brain wander across different topics. This allows the brain to build new connections between disparate pieces of information, and new insights and understandings emerge,” says Beatriz Arantes, a Steelcase senior design researcher and psychologist based in Paris, France.

Students need both the ability to screen out distractions or welcome them, depending whether they’re writing a paper or seeking inspiration through sensory stimulation.

7

Learning has a natural rhythm

The need for periods of both quiet focus and healthy distraction finds its parallel in learning. The brain is often viewed as a thinking machine, moving in a linear fashion. But the brain and body are not machines; they are organisms with a natural rhythm of activity and rest cycles.

Research has shown there is a “rest-activity cycle” while sleeping, during which we move in and out of five stages of sleep. The body operates by the same rhythm during the day, moving from higher to lower levels of alertness. Our brain can focus on a task for only so long, after which it needs a break for renewal to achieve high performance on the next task. Ignore this rhythm and we get drowsy or hungry, lose focus, start to fidget. Stress hormones kick in, the prefrontal cortex begins to shut down and we are less able to think clearly or imaginatively.

Researchers have found that people who respect this natural rhythm are more productive. Breaks for rest and renewal are critical to the body and brain, as well as to attention span. The work of education is similarly organic, changing at different times of the semester, week, even during a single class period. Support for the rhythm of learning, says Arantes, “should be incorporated into instructors’ pedagogies and course curricula, as well as through a variety of spaces for different rhythms: focus and interaction, individual and group work, socializing, and rest and rejuvenation.”

Strategies for Nurturing Student Attention

Getting and holding attention requires an approach to learning spaces that takes into consideration both the brain and the body. Here are some sound strategies for nurturing attention, based on research at colleges and universities by the Steelcase WorkSpace Futures team:

Active learning pedagogies generate more student attention and engagement than traditional passive approaches. An active learning ecosystem equally supports and incorporates pedagogy, technology and space.

More choice and control fosters greater engagement. Flexible learning environments allow instructors and students to quickly adjust their learning spaces to the work at hand.

Movement is empowerment. Avoid fixed and unmovable student learning spaces.

Provide spaces that support both focus and diffuse thinking. Give students the ability to adjust their learning environment to the needs of the moment.

Assure optimal connection between students and class content. Design classrooms with multiple stages, content displays and mobile seating that allows students to focus their attention wherever needed.

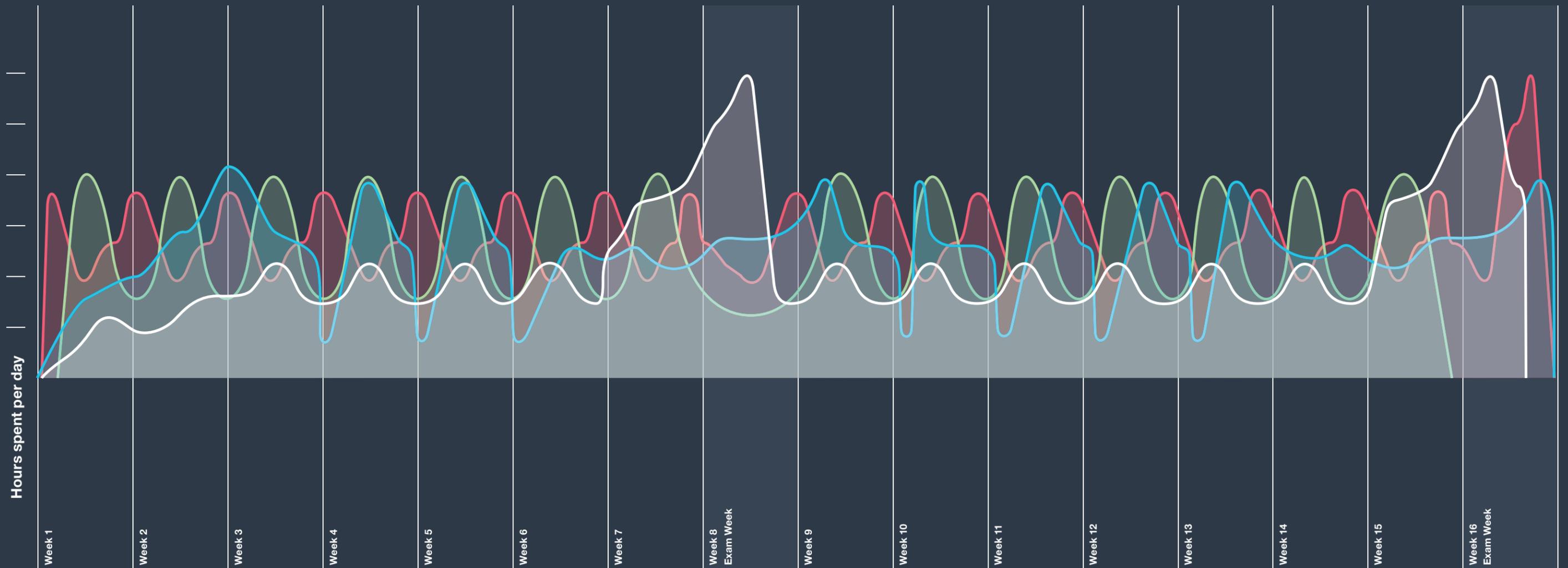
Support the rhythm of learning. Formal learning is just one part of the total experience; students’ learning needs and behaviors fluctuate significantly beyond the classroom. A range of spaces that are flexible and offer choices assures they can select the best places to match varying needs for individual focus, informal collaboration and social learning.

Learning doesn't happen just in the classroom

Student learning incorporates a range of behaviors, including informal collaboration, socialization and individual focus, as well as formal learning in a classroom.

This rhythm of learning demands a range of spaces that are flexible and offer choice so students can select their best place for learning.

Typical semester



This graphic is a conceptual representation of student activities during a semester.

There is a significant difference in needs between an average week and exam weeks. This requires schools to provide a range of spaces that offer students choices so they can select the best place to learn.

- Individual Focus
- Informal Collaboration
- Instructor Led
- Social

A Typical School Week

During the semester students distribute their time between formal classes, individual focus, collaborating and socializing.

Exam Period

As the semester progresses and exams approach, students spend more time doing individual focused learning.

THOUGHTSTARTERS FOR:
Flipped Classroom

In this multi-modal classroom, students can spend most of their class time engaged in “homework” — active and personalized learning that complements the videotaped lectures they’ve watched outside of class.



Flexible furnishings support movement and a variety of classroom activities. Group sizes can morph from small to all-inclusive, depending on the type of learning taking place, and the instructor can move about freely within the space.

- 1** A corner setting with lounge seating provides an alternative space for working alone or with others, while also supporting the movement and posture changes that positively impact attention.
- 2** Views to nature trigger diffuse thinking, allowing the mind to wander and build new neural connections.
- 3** A wall-facing worksurface with high stools is a space for individual assignments that demand focused attention.
- 4** Content can be displayed throughout the room on portable whiteboards, adding to the flexibility of the space and increasing student access to content.

THOUGHTSTARTERS FOR:
media:scape LearnLab

The LearnLab™ integrates furniture, technology and worktools to support a variety of teaching and learning methods, with a unique X configuration and placement of screens triangulates sightlines, giving equal access to content. With no front or back of the room, all students can stay engaged.



The unique furniture configuration supports varied sightlines and activities throughout the class period, keeping content relevant and maintaining attention.

- 1** Face-to-face seating encourages engagement and team collaboration.
- 2** Fixed and portable whiteboards and display screens provide information persistence and allow students to generate, capture and share their work. Placement at the perimeter encourages students to move around the room, activating attention.

THOUGHTSTARTERS FOR:
In-between Spaces

Between classes, these are touchdown spots for finishing a reading assignment, reviewing content before an exam or meeting one-on-one with an instructor or peer. During class time, they can be a breakout area for group work or discussions.



- 1 The media:scape® kiosk provides a way for students and instructors to continue lessons or collaborate outside of class via videoconferencing.
- 2 Proper lighting reduces brain strain, helping students maintain attention and focus on their work.

- 3 This nook is a comfortable, sheltering environment for activities that require controlled focus and minimal distractions, such as reading, homework or discussions.

THOUGHTSTARTERS FOR:
Library

This transformed library is a macro-environment that supports collaborative, project-based work and social needs, as well as individual focused work. The adjacency of open spaces to more shielded settings allows students to manage distractions as needed.



- 1 Benching workstations allow students to work alone while staying near others, appealing to their sociability and allowing them to easily take breaks as needed.
- 2 Temporary storage for personal items means students can focus on their work without worrying about their things getting in the way.

- 3 Shielded microenvironments for individual work block outside distractions while also providing the body and technology support students' need for work that requires sustained focus.
- 4 Outside views provide for moments of mental rejuvenation and inspiration when students need to give their minds a rest.

Writing + Whiteboard: More Relevant Than Ever



It's the golden age for content display, with hi-def cameras and monitors, and touchscreen digital devices of every size. So why are traditional dry-erase whiteboards more popular than ever?

Besides being multitaskers—you can write or project on them, attach material with magnets—they also come in any size, don't need power and they're inexpensive. But what really makes whiteboards great learning tools is how they engage both the body and brain in the learning process.

Whiteboard work is both kinesthetic and visual. The act of writing and drawing engages the user physically and mentally, and that boosts learning. For example, research at Indiana University showed that neural activity in children was far more enhanced in kids who practiced writing by hand than in those who simply looked at letters.

University of Washington research demonstrated a special relationship between the hand and the brain when a person composes thoughts. Finger movements activate regions of the brain involved in thinking, language and working memory.



There are group benefits as well. Writing information and ideas on a whiteboard frees users from having to remember important information. Displaying information helps create shared group knowledge. Portable whiteboards make it easy for two or three users to jot down thoughts, draw correlations and build on each other's ideas.

"Educators know the research, and they see the benefits of whiteboards every day. It's not surprising we've seen growth with use of our products," says Shawn Collins, director of new business development for PolyVision, the market leader in CeramicSteel whiteboard material.

Collins says schools are continually coming up with new ways to use whiteboards. Installing whiteboards in the classroom at different heights to accommodate different users is increasingly popular. A university recently ordered five-foot high whiteboards so they can be used while sitting or standing. Whiteboards that slide horizontally are used to reveal content in sequence or cover up a flat screen when it's not in use. Personal-sized whiteboards work as privacy screens during test taking, presentation aids and as individual note taking tools.

With nothing to power up and no apps to open, a whiteboard is often the easiest, quickest way to seize a teachable moment, capture someone's attention and engage students of any age. [◉](#)



A New Learning Curve

How to help teachers embrace active learning

Why is there so much passive instruction in classrooms today where instructors are still giving traditional lectures rather than adopting active learning pedagogies?

As an educator and researcher, I know that teachers can be reluctant to change. I also know that teachers can be flexible and adaptive because they are bombarded with changes: new laws and requirements, more demands on class time, new standards, directives, etc.

Overloaded, it's only natural that many teachers are wary of active learning. But if active learning is a genuine game changer, which I believe it is, and there's ample evidence to demonstrate that, how can we help teachers embrace active learning? How can learning spaces assist in the effort?

I find answers at teachers' colleges like the School of Education at Simon Fraser University, Burnaby, British Columbia.

Kris Magnusson, Ph.D., dean of the school, says colleges and universities should start by rethinking survey and introductory classes typical of a student's first two years of college. "They're considered weed-out courses. Usually they're in big lecture halls with tiered seats, a podium and a screen, so the instructor is limited to one mode of teaching. Students get droned in every class. If they survive and move on, they get smaller classes with more interaction and discussion. This is all wrong.

"We shouldn't be weeding out; we should be trying to draw students to our disciplines, and how we structure and present the material, and the environment the material is in, should be designed to engage people. If we engage people, they go deeper and they learn more."

For intro courses, with typically large sections to manage the costs associated with large numbers of students, Dr. Magnusson suggests a couple of different solutions. One is blended learning: "Lecture is not an inherently bad approach, but it's just one form of engagement. Use social media, the web and interactive experiences to create a powerful introduction to the content, followed by in-person experiences."

Active learning in large sections is both possible and necessary. "It encourages the engagement of the individual in the knowledge they're trying to acquire. That's where physical space is important: if the furniture is bolted down and inflexible, even if it's brilliant for one purpose, it's ineffective for others. Have furniture that's movable and comfortable, so students can lead discussions, engage with others, work comfortably in small groups."

To briefly summarize some of Kris Magnusson's suggestions:

- believe in the disruptive power of active learning
- encourage and train instructors to use active learning pedagogies; flexibility is an attitude
- provide space that signals to students "This a place where students are active, engaged and take ownership of their learning"; i.e., lose the "row and column" seating, use mobile furniture, share the stage
- unbolt classroom seats from the floor so students can move, connect and collaborate
- use technology to create a web-based version of the course, and use lectures as "keynote addresses" at mileposts in the semester
- punctuate the semester with small group discussions, breakouts, group projects

For more ways to help instructors embrace active learning, see the story on Ohalo College, a teacher's college in Katrin, Israel (p. 66). [◉](#)



Lennie Scott-Webber, Ph.D., Director of Education Environments for Steelcase Education

I've spent years researching educational environments and have seen the insides of more classrooms than I can count. My passion, and my job, is helping people understand the behaviors that come from different environments, and creating classrooms that truly support new ways of teaching and learning.

Email your ideas, questions or comments to lscottwe@steelcase.com or on Twitter to [@Lennie_SW](https://twitter.com/Lennie_SW).



Teaching the Teachers

Israeli Teachers' College Embraces Active Learning

Dr. Shimon Amar, president of Ohalo College, a teachers' college in Katzrin, Israel, knows first hand about employer dissatisfaction with new graduates. Before he joined the college four years ago, Amar was director of organizational development at Intel, and he agrees that the traditional approach to teaching is not delivering results.

"Students are not coming ready to do the work that they are intended to do. The traditional teaching approach is too artificial. It's an environment that is not at all similar to what they will be in."

By introducing new active learning classrooms and teaching pedagogies at this teachers' college, Amar and his staff are preparing a new generation of instructors, and ultimately their students, for the 21st century. At the same time, these dynamic new learning spaces are attracting students to Ohalo, one of more than two dozen teacher training colleges in Israel.

The classroom, Amar says, must be dynamic, mobile and fast-changing, "a place where things can be changed immediately and be adapted to the learning and to the outcome of what you want from the learning."



We're educating a new generation, helping students deal with the challenges of the modern world.

support more types of courses but also to allow other teachers not familiar with active learning to make a gradual transition to it.

Dr. Aviva Dan, one of the first Ohalo faculty members to teach in the new classrooms, says it's been a challenge to evolve from traditional teaching methods, but embraces the chance to influence young instructors. "We're educating a new generation, helping our students deal with the challenges of the modern world, the demands of a highly dynamic society."

One large classroom regularly hosts a class of more than 100 students led by three instructors. The room never stays in one layout for long; re-configuring the furniture happens regularly. For most of the class time, students work in small teams or one-on-one, tackle projects and hold group discussions.

Smaller classrooms are flexible and mobile enough to accommodate both active learning pedagogies and more traditional lecture formats, not only to

Each classroom works on a stand-alone basis or in combination with other rooms. Classes often move from one small classroom where, for example, the focus is problem-based learning, to another room with a media:scape setting for small group collaborations.

In a large classroom, the transitions all happen inside the space and the flow is very organic. "You are not moving from one classroom to another. You stay in the space and decide when to move physically, intellectually, emotionally to another space, and it's continuous. When it is continuous like that it means it's evolving, and once it's evolving you arrive to a higher level of competency," says Amar.



Soon after the classrooms opened, Ohalo hosted a conference of educators from colleges and universities in the region. Amar fielded many questions and concerns about the new spaces. "We heard some criticisms of our learning spaces: 'It's not scalable. You can't implement the technology. It's not a real classroom.'

"But soon we had a lot of demand for visits to see them. Two or three months after that, we hear about other schools creating classrooms like ours. Now everyone wants to learn from us—what we did and how we did it. This is really going to change teaching." ◉



Creating A New Learning Experience

Ohalo worked with Steelcase to design and outfit a series of active learning classrooms to bring their vision to reality.



Large Classroom

Supports up to 120 students where three teachers work in the space simultaneously.



Medium Classroom

Supports up to 36 students and can be easily reconfigured to support different learning modes and teaching pedagogies.



Small Classroom

Supports up to 16 students and can easily be reconfigured to support different learning modes.



LearnLab™

Supports up to 28 students, and removes the barriers to sharing information by democratizing how people access information.



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A POSITIVE PROGNOSIS

PATIENT ROOMS

Meet Jenny. When she gave birth to her second child a few months ago, she was exhausted and thrilled. Thanks to a new hospital policy, baby Carson stayed in the same room, never leaving for the nursery. The room was packed with well-intentioned family members as well as a wall-mounted computer for electronic medical records. All Jenny wanted was some quiet rest—and for the computer to stop waking up the baby.

Meet Meredith. When her mother was dying from cancer, Meredith practically lived at the hospital, ensuring her mom was never alone. That meant she had to make tough trade-offs. Not enough time for her husband. Or her dog. Or her job. What she didn't expect was all the trade offs she was forced to make in her mom's hospital room just to maintain some semblance of normalcy.

Meet Ansley. A nurse who deals with a lot of orthopedic patients, she's constantly checking on patients and encouraging them to move around. She prefers to talk with her patients face to face, but navigating around a walker and a wheelchair makes it tough for Ansley to even get to her patients' beds, much less find a chair she can use.



The patient room, that often overcrowded yet under-performing space, is experiencing a long overdue reinvention. The next generation of patient rooms, being built and renovated now, will incorporate technology for the patient and family as communication and learning tools.

Here's what's fueling the move:

- 1 A healthcare construction boom in the last several years, combined with renovations of existing facilities, has brought thousands of new rooms onboard.
- 2 Medical errors, infection control and clinician injuries necessitate safer, more efficient patient rooms.
- 3 New healthcare laws directly link patient outcomes and satisfaction scores with reimbursement levels, so every square foot must deliver profitability.
- 4 With outpatient procedures gaining popularity and complexity, patients who are admitted to the hospital exhibit more acute symptoms, so the space must be able to respond to critical care needs.
- 5 Years of research confirm that the patient room plays an important, yet largely overlooked, role in positive outcomes. This body of research is literally transforming patient rooms with built-in ability to flex for the future.

Safety First

Patient safety is every healthcare providers' first priority, and with good reason: Medical errors and hospital-acquired infections are among the leading causes of death in the U.S., where one in 20 patients develops an infection while in the hospital, according to the Centers for Disease Control and Prevention, costing more than \$10 billion a year. Europe is not immune either: one in 19 patients has at least one hospital-acquired infection, amounting to nearly 3.2 million patients a year, according to the European Centre for Diseases Prevention and Control.

Transmission is directly linked to clinicians' failure to consistently wash their hands and contact with exposed surfaces. Design can support infection control processes by:

- Creating a clinician zone at the room entrance featuring a sink and alcohol-based hand cleaner to reinforce the importance of diligent handwashing.
- Specifying materials and surfaces that are easily cleaned and maintained, from high-performance upholstery to solid surface casework.

But it's more than just washing hands and making sure surfaces are clean and cleanable. Designing to prevent patient falls is a high priority as well, ensuring unimpeded access to the bathroom and recliners that afford easy, independent egress. Falls are the most common adverse event in hospitals around the world, with approximately 3–20 percent of patients falling at least once during their stay, according to one report. A 2013 Agency for Healthcare Research and Quality report found that every year in the U.S. somewhere between 700,000 and 1 million people fall in the hospital, with more than a third of those considered preventable. Nearly half of patients who fall experience injuries ranging from bruises to bone fractures. Human-centered design can help encourage patient mobility and clear potential obstacles for safe ambulation.

Building on the Body of Research

From universities settings to hospital boardrooms, innovation consultancies to equipment and furniture manufacturers, the patient room of the future has been the focus of intense research. Architects and designers, clinicians and patients have intuitively understood the impact of space on healing, and now there's a body of supportive research. Today, multiple studies indicate that well-designed rooms often lead to increased patient satisfaction rates, fewer accidents, lower infection rates, shorter stays and even a decrease in pain medication. Once a theory, the field has reached a tipping point and crossed over into mainstream design practices.

"More than ever, patient rooms are more than just a place for a bed and medical equipment," says Michelle Ossmann, director of Healthcare Environments for Steelcase Health. "The patient room is where you have to get everything right for the patient, family members and clinicians. When you incorporate literature-based design principles and truly create a space that's people-centric, everyone benefits."



It's also about protecting clinicians' health. A World Health Organization report states that 37 percent of lower back pain is attributed to occupation, and healthcare workers are more prone to experience it. In fact, recent U.S. Department of Labor studies show that nursing assistants suffer roughly three times more back injuries than any other occupation. These injuries can be traced to the repetitive heavy manual lifting associated with moving patients and working in awkward postures. Room design that integrates mechanical lifts or helps clinicians access patients without assuming uncomfortable and potentially dangerous postures has been shown to help reduce the frequency of clinician back injuries.

The Multi-Functional Room

For patients, it's a healing space, bedroom and dining room. For clinicians, it's a workspace and procedural environment. For family members, it's a living room, and sometimes even a bedroom or office. The competing demands on patient rooms stretch their usability and create inherent tensions among all occupants. Without any space to spare—the average patient room is about 300 square feet (28 square meters)—multi-functionality is essential.

Just ask Jenny, who recently gave birth to her second child, a son, a few months ago. After a complicated delivery, Jenny's experience in her patient room failed to deliver on almost all measures. The hospital's new policy of in-room baby care meant little Carson never left the room creating extra-cramped quarters. And the hospital's new electronic medical records computer, attached to the wall, didn't stay tucked in and out of the way. The keyboard hit the bathroom

door and the monitor's lights came on and woke up the baby every time it hit. No wonder she was seriously sleep deprived. "I couldn't charge my cell phone, I couldn't reach my water on the table without asking someone, and I had no idea where my things were. I felt like I wasn't in control of anything," she reports. "The room was not conducive to healing."

By designing patient rooms that encourage healing, provide modern conveniences and give patients a quiet respite, patient perspectives on care improve and experiences like Jenny's become less common.

Encouraging Educational Interactions

There are few things as anxiety-inducing as a serious medical issue, and teaching and learning are essential parts of alleviating that worry. Valuable exchanges happen between patients, clinicians and family members but not always at the same time, so it's important to consider design elements that foster communication.

Clinicians, patients and family members are beginning to expect more personal, private and frequent communication, and the physical environment can impact the quality of those interactions. For example, a clinician who often counsels patients and family members on radiology procedures recently described how the hospital where he works hasn't fully completed patient room renovations. "About 85 percent of the time, I have to stand over the patient to talk with them," he said. "Where the chair is located in the older rooms isn't a place where I can talk with them eye to eye."



A woman who lost her mother to cancer after several weeks in the hospital echoed a similar experience, but from a family member's perspective. "There wasn't a good space for me to talk with the doctors," she said. "They wanted to give me an update, but I didn't want to disturb my mom while she was resting. So we had to go in the hallway. There was no privacy. I wish the room was more calming so I could think of the right questions to ask."

In newer settings, creating a sense of shared presence helps establish informational transparency around the patient's medical status and treatment plans. Design can create multiple communication channels and opportunities to make important information accessible to everyone involved in patient care.

Whiteboards convey vitals, staff changes and contact numbers for clinicians. They also provide a place for clinicians to sketch and visualize information for patients and families.

Comfortable, easily moveable chairs make it easier for clinicians and family to sit next to patients, allowing a more natural way to connect.

Some hospitals are starting to experiment with tablets and apps to digitally communicate with patients and share information about their conditions, medications and lab results. This data can be shared on in-room screens to spark conversation and questions.

Recognizing Family Needs

Kate, a pancreatic cancer survivor who's been an patient at three hospitals and undergone eight surgeries in the last 15 months, put it plainly: "You want your family there with you all the time," she said. "You're not in a state of mind where you can ask questions and remember. You need that backup." But she also witnessed how they had to create workarounds and juggle responsibilities. "My poor brother and sister," she said. "They were trying to work and take care of me and talk with the doctors and I know it wasn't easy."

Friends and family expect to feel engaged and welcomed in their loved one's hospital room. But all too often, tightly packed rooms aren't equipped for larger family groups, overnight stays or even basic levels of self-sufficiency.

Progressive hospitals understand that healing isn't just for patients; it's also for weary family members.



By designing patient rooms that encourage healing, provide modern conveniences and give patients a quiet respite, patient perspectives on care improve.



Choice, Control and Comfort

Hospitalization challenges patients and their families physically, cognitively and emotionally, as feelings of vulnerability intensify and create a need for personal control and comfort, which are key components in the healing process. Innovative design creates environments that are less institutional and more customizable to help people process the strains of the experience.

Today, many up-to-date patient rooms feature individual lighting and temperature controls in addition to the traditional bed and television controls. One hospital is even experimenting with colored LED lights so patients can add more visual interest to their rooms. Some hospitals are expanding this idea beyond room design, allowing patients to choose menu items and meal serving times.

“The best thing about the hospital room where my mom was treated was the lighting,” one family member said. “There was lots of natural light, but, more important, we could control the room lighting. We could even control different zones in the room, so if my mom was sleeping and I wanted to read, we had options for that.” 

NEXT-GENERATION PATIENT ROOMS

For more than 70 years, patient hospital room design and experience has remained fairly static as new medical advances and technology have eclipsed the space’s efficiency, comfort and safety. Thankfully, a human-centered perspective is now influencing patient room design—one that focuses on the needs of patients, clinicians and family members.

The applications that follow are thoughtstarters that address these needs in inboard patient rooms and outboard patient rooms.

THOUGHTSTARTERS FOR:
Inboard Patient Room

With everything close by, this room design makes family feel comfortable and more involved in their loved one's care. An efficient space where clinicians can move around freely and engage effectively, this layout amplifies the quality of interactions.



1 The Sieste® sleeper sofa and table allows family members to carry on with their daily activities like work while remaining in the room so they can provide comfort and advocate for the patient. The table allows note-taking, fostering collaboration with the clinician and patient, while the sleeper sofa easily converts to a bed, allowing visitors to sit, lounge or sleep in comfort.



2 A combination of open and closed compact storage allows patients to keep items secure, and also display flowers, cards and photos to personalize the space.

3 With a large, high-definition monitor, clinicians can quickly engage with patients and family members by displaying health information or videoconferencing with a specialist or family member.

4 Whiteboards convey staff changes and contact numbers for clinicians. They also provide a place for clinicians to sketch and visualize information for patients and families.

5 Pocket™, a mobile clinician workstation, enables clinicians to engage in face to face communication while documenting in the patient's chart, all while holding technology in a tight footprint.

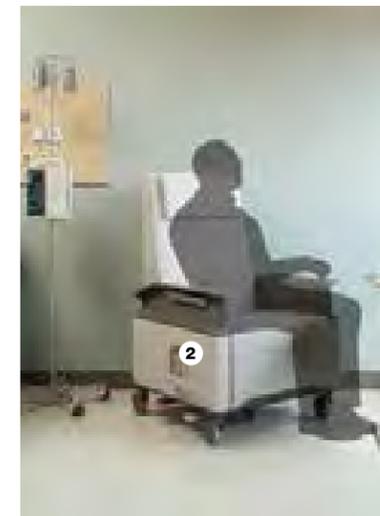


THOUGHTSTARTERS FOR:
Outboard Patient Room

Clinicians are afforded ample circulation space around the bed in this patient room, allowing them to position themselves appropriately for procedural activities as well as meaningful interactions with the patient and family. A low traffic corner of this patient room provides a cozy zone where family can remain close to the patient while carrying on with life's activities.



1 The overbed table does double duty and acts as a consultative space.



2 Empath recliners, featuring break-through design features including safe, easy and quick cleaning upholstery and pass-through design that avoids trapping liquids and debris, provides versatile seating, encouraging family members to stay in comfort.

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THE HUMAN SIDE OF MODERN CRAFT

Have you ever given much thought to buttons?

If not, take a moment. Chances are, you're imagining a small, round, clear plastic disc with four perfectly placed holes. It's utterly utilitarian in its design, and universal in its appearance. But what if a button could be more than just a fastener? Something inherently useful but also beautiful, even provocative. Something imaginative with a story. What if a button were made of carved wood with a seemingly random and yet artfully placed pattern of thread holes? Chances are, it would be the coolest

button you've ever seen. It would make a statement. You'd want to touch it and feel the texture. You'd want to pull all your old buttons off and sew these new buttons back on, each one with a slightly different stitching pattern between the holes. You'd never look at buttons the same way again.

This is the essence of craft: the artisanal vision, combined with sophisticated technique that transforms a utilitarian object into an expression of beauty and humanity.

Carbon fiber (shown here)
has become a new material for
the furniture industry.

“CRAFT DOESN’T NECESSARILY MEAN A ONE-OFF. IT’S SOMETHING THAT CAN BE REPLICATED, CAN BE MASS-PRODUCED BUT STILL HAS INTRINSIC VALUES.”

Matt Clayson
Director, Detroit Creative Corridor

But the sad truth is, like the common button, many of today’s workplaces are void of craft. Many leaders measure the value of their work on managing costs and increasing productivity, so there’s not always a lot of attention paid to creating more inspiring or beautiful work environments. Consideration for issues like aesthetics, wellbeing or employee engagement sometimes slips to a lower priority.

Yet those same issues have been shown to contribute to an organization’s overall performance, whether it’s talent recruitment and retention, employee engagement or stock prices.

Leading organizations understand that connection, and they’re beginning to realize how an infusion of craft can help define their space and express their culture. Modern craft is becoming an antidote to uninspired workspaces, not only heightening functionality and aesthetics but also humanizing the workplace experience.



New technology is making modern craft more accessible to more people than ever. Digital designs and programming abilities allow us to rethink the meaning of craft.



Molds for the <5_MY seat await layers of hand-assembled carbon fiber sheets that will become the light—but incredibly strong—chair frame.



New makers are likely to use traditional hand-building and finishing techniques as well as computer-controlled cutters, carvers and drilling machines.



The Maker Movement

The need to make things with our hands defines us—it’s a vital expression of our humanity. When we transform ordinary materials into something new, we reimagine what’s possible and change how we experience the world around us.

In the past craftsmen were tinkerers, builders, inventors, masters of their tools and medium. They transformed raw materials into useful and beautiful objects with their hands. They produced one-of-a-kind goods over a long period of time.

Today, the Maker Movement is capturing people’s imaginations with the idea of crafting things once again, only this time in more modern ways. The idea of handcrafted goods is taking hold across diverse facets of culture from craft beers to community creation labs. Community-based Maker Faires are happening all over the globe.

From the success of online marketplace Etsy, featuring handmade and customized goods, to the increasing popularity and affordability of 3D printers, people are finding more ways to make things powered by shared resources and knowledge. They are beginning to see the inherent differences between crafted goods that spark the imagination and those designed solely to serve a utilitarian purpose.

“I think the Maker Movement is tapping into a really basic fact about us as human beings,” says University of Virginia Professor Matthew Crawford. “From infancy we learn about the world by manipulating it, by poking it and seeing how it pokes back.”

Today modern craft is more accessible to more people than ever before thanks to new technologies. It represents the nexus of the digital and physical worlds, where technology converts digital designs into physical artifacts. Programming abilities are now as equally valued as hands-on tinkering skills while their inseparable combination provokes us to rethink the meaning of mastery. The crafters’ toolbox may still contain traditional machining and woodworking implements but it also likely includes computer-controlled cutters, carvers and drilling machines. The New Makers are just as likely to program a robot as knit a sweater.

“Craft doesn’t necessarily mean a one-off,” said Detroit Creative Corridor Director Matt Clayson. “It’s something that can be replicated, can be mass-produced but still has intrinsic values. It tells a story of the person designing it, making it, but it is something that can reach a broad marketplace. That’s the beauty of what technology is bringing to this movement.”

Craft is becoming big business.

Craft In The Workplace

Perhaps not surprisingly, furniture is the top category on Etsy, but when you turn your attention to furnishings for the workplace, there's a visible lack of craft. Many workplaces are designed with a bias toward pragmatism and can feel utilitarian. When craft is included it's used sparingly and not very democratically, found mostly in leadership spaces.

"Craft can combine utility and beauty to become a distinct alternative to mass produced goods," explains Coalesse's General Manager Lew Epstein. "The role of craft in the workplace may combine the refined selection of materials, or seamless mix of digital machine and handwork. In this role, craft becomes a dynamic medium that can be applied to personalize the workspace and express cultural values—ultimately enriching our environments and work experiences."

Coalesse considers modern craft as both a noun and a verb, according to Epstein. It's a noun when craft is identified as a useful object. It's a verb when crafting that usefulness into a repeatable or customizable solution that reflects a distinct capability and its maker's mark. Either way, craft remains a central theme of the brand.

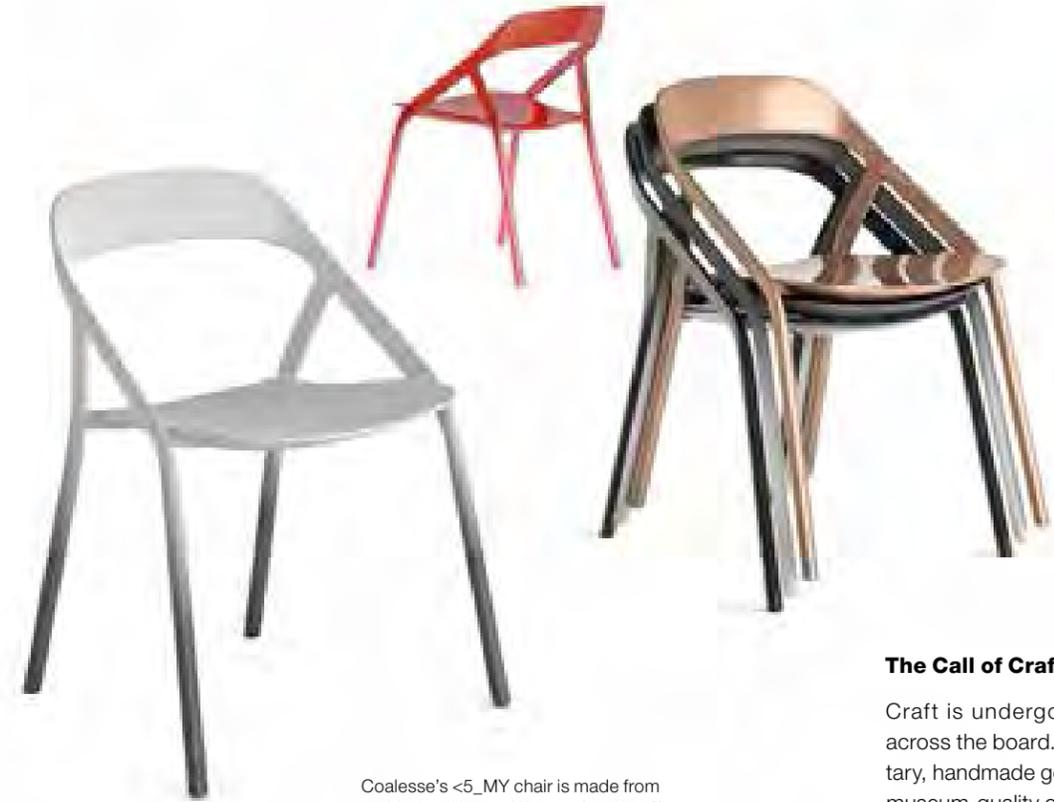
"We're a brand that's about bringing inventive ideas to life," says John Hamilton, Coalesse's design director. "We're experimenting with the idea that craft is now a combination of using new materials, new technologies and new methods that blend machines and handwork. We're looking to master these new ways of doing things."

"WE'RE EXPERIMENTING WITH THE IDEA THAT CRAFT IS NOW A COMBINATION OF USING NEW MATERIALS, NEW TECHNOLOGIES AND NEW METHODS THAT BLEND MACHINES AND HANDWORK."

John Hamilton
Design Director, Coalesse

Take the <5_MY chair, a recent introduction by Coalesse. Don't be fooled by the name—this chair is no lightweight. Although it weighs less than five pounds, it can hold more than 300 pounds. That's because it's made from molded and heated layers of carbon fiber, a new material for the furniture industry. The new manufacturing process builds in plenty of handwork to complement the mechanized steps. "It's hand built and hand finished," Hamilton said. "It looks like it just popped out of a mold, but it's handcrafted in almost every dimension starting with the digital design and ending up with the final product. Through another form of digital design, we're experimenting with a new color app that can help customers visualize and then co-create the final steps that complete a <5_MY chair. This new experience may include simply selecting a standard color, customizing a color (PMS) or matching the color seen in a photograph taken with a camera phone. Such combinations are intended to explore new ways to push the boundaries of modern craft and take it further."

In this way, craft can extend beyond the final product, explains Epstein. It's a way to engage others as participants in a creative journey. The result is a deeply satisfying experience, full of stories and choices.



Coalesse's <5_MY chair is made from molded and heated layers of carbon fiber. The manufacturing process builds in plenty of handwork to assemble and finish each tooled component to produce each chair.

The Call of Craft

Craft is undergoing a dramatic reinvention across the board. From its heritage as rudimentary, handmade goods to its more sophisticated museum-quality offspring, craft is now a cultural movement touching multiple categories and, ultimately, our work lives. Its modern manifestation skillfully combines artful handwork with the accuracy of machines, bringing together the digital and the physical to produce, and reproduce, works that are as useful as they are beautiful.

In the workplace, craft is an antidote to the impersonal, an expression of individuality and a celebration of creativity. As brands such as Coalesse continue to remain at the forefront of exploring new materials, technologies and manufacturing methods, craft will continue its natural evolution and bring more inspiring experiences to the workplace for decades to come.

Welcome to the world of 21st century makers. ◉

THE GROWTH DILEMMA

Creating Human-Centered Spaces in the Midst of Rapid Change

AT A GLANCE

Issue

Fast-growth markets such as India and China present a host of special challenges for global enterprises and ambitious local firms alike. The type of work many companies perform is growing more sophisticated, putting a premium on creating workspaces that can help keep valued employees happy and productive. But gaps in infrastructure, limited resources and relentless change can make that a tough task.

Insight

As companies in fast-growth markets move from simple task-based work to higher-value functions like process engineering, the flexibility and adaptability of workspaces is critical. Offices that facilitate collaboration, provide employees with a sense of personal space and offer a respite from hectic city life can make a big difference in retaining employees and building a productive and positive company culture.

Action

Enhancing employee wellbeing even in a very high-density workplace begins with offering small features that enable people to customize their spaces, change positions at a workbench, store personal items and feel in control. A “palette” of different types of spaces can spur creativity and foster teamwork, and a “modular” approach to office design can assure resiliency in the context of constant change.

When tech consulting giant Accenture first set up shop in India more than two decades ago, managers were mostly focused on costs. Price competition in the industry was intense, with local upstarts like Infosys starting to challenge the big global players.

But competition for skilled employees was intense. Accenture knew it had to do more to both attract and retain the best people. An evolved and progressive workplace played a key role in helping to keep and attract these valuable workers.

“In the early years, the only thing we had to compete with was compensation,” says Patrick Coyne, global director for workplace solutions at Accenture. “We then realized that we needed to think more broadly in order to keep these people. That led us to look hard at creating an ‘employee experience’—how can we create community, build a sense of connection.”

Accenture’s experience is an increasingly common one in the rough and tumble business environments of India, China and other growth markets around the world. With their booming economies and burgeoning populations of well-educated workers and prosperous consumers, these countries are reordering the global economy and forcing businesses of all stripes to rethink their strategies.



Current Growth Markets

Defined as countries or regions whose economies are expanding more rapidly than the world average, and which are large enough to account for at least one percent of global gross domestic product, such as:



- | | |
|--------|-------------|
| Brazil | China |
| Mexico | India |
| | Indonesia |
| Russia | South Korea |
| Turkey | |



WHAT IS A GROWTH MARKET?

Growth markets are generally defined as countries or regions whose economies are expanding more rapidly than the world average, and which are large enough to account for at least one percent of global gross domestic product. They also have a favorable business environment, with enough physical and financial infrastructure to make them attractive to international investors. In Asia, countries including South Korea and Indonesia are part of the club, along with the two regional behemoths, India and China. Mexico, Brazil, Turkey and a number of Eastern European countries fit the definition too.

The emergence of these economic dynamos has shifted the landscape for multinational businesses, simultaneously complicating their challenges and creating new opportunities. Companies that once saw the developing world as primarily a source of low-cost labor are now shifting higher-skill work to places like India and China, while moving more basic operations like call centers to cheaper locales such as the Philippines. Local companies, meanwhile, are quickly climbing the value chain, in many cases evolving from subcontractors into full-fledged global competitors in fields ranging from software engineering to advertising.

This article explores the specific growth market forces impacting China and India today.

What's Happening

84%

percent of the world's population that resides in emerging economies today

600 million

China is adding 400 million to its urban population and India is adding over 200 million in the next 10 years

70%

By 2030, as much as 70 percent of India's projected population could be middle class

400 kilometers

India will need to add 350 to 400 kilometers of metropolitan railways and subways each year to keep up with the need

THE CHALLENGES

Steelcase researchers recently completed an in-depth study in India and China to better understand the unique challenges of operating in growth markets. The team identified three broad forces that are having an enormous impact on businesses and work.

Infrastructure Voids

Services. Systems. Expertise.

First, there are the obvious infrastructure voids in areas such as transportation and utilities, but also voids in areas such as reliable legal systems and bureaucracy. Hard infrastructure, such as roads and bridges, is essential for low-cost movement of goods. It's also a prerequisite to efficiently get people to and from work. India needs to add 350–400 kilometers of metropolitan railways and subways each year just to keep up with the need, according to a McKinsey & Company study. Accenture, for one, has created its own private bus fleet to get employees to work.

Unreliable electricity, arbitrary or inadequate planning processes and building codes, legal systems that can't always be counted on, patchy Internet and other communications services are just a few of the infrastructure problems that can foil a company's best-laid plans. Lack of good data and market intelligence adds to the uncertainties.

Rate of Growth

Population. Shifts. Swings.

Second, the unprecedented rate of urbanization in India and China is creating unpredictable challenges; China is adding 400 million people to its urban population over the next 10 years and India is adding over 200 million in the same period.

Growth also comes from a burgeoning middle class. By 2030, as much as 70 percent of India's projected population could be middle class. This group will include hundreds of millions of millennials who "haven't been exposed to the types of problems that their parents have," says Steelcase Researcher Elise Valoe. The millennials in China are eager for change, especially as the country continues to interact more with the rest of the world. This younger demographic is optimistic, having been exposed to consumer products instead of dramatic political tension, according to Valoe.

Limited Resources

Time. Budget. Space. Talent.

Third, there is a lack of resources. The intense competitive environment means that margins are thin in the best of times, and a commitment to keeping costs down is baked into the DNA of many a local manager. Nobody is going to throw out the old furniture, or even move offices, just because the working quarters have grown more crowded—managers often have more than a full plate, and little time for anything not deemed absolutely essential. At the same time, in the case of multinationals at least, those same managers have to wrestle with the need to maintain a firm's global values and standards while keeping costs low.

"There's a tension between the local versus the global idea of how to do things," says Scott Dorn, retired managing director, global property operations, General Electric.

Competition for talent in these fast-growth markets is intense. India's workforce is growing rapidly—in the next 25 to 30 years, it could add as many people to its working population as there are people, total, in the United States—but

there's still a lot of demand for college grads who have technical skills and are fluent in English. China has a different demographic dynamic: Its aging population means the country will face a shortage of 23 million high-skilled workers in 2020, according to McKinsey, despite extensive training and education programs. In both countries, Steelcase research shows that attracting and retaining skilled workers is a huge concern for employers.

Both China and India are also facing real estate constraints. Seven of the 10 most expensive real estate markets are in Asia. As a result, businesses in growth markets have limited space for large employee populations, hindering their ability to create effective workplaces and forcing tough decisions about how to maximize space.

THE CHANGING MIX AND TYPE OF WORK

When Westerners think about the office work being done in India and China, they often assume that it's all about call centers and other routine tasks. But even as call centers continue to operate in these markets, many companies are taking on more sophisticated work as the availability of highly skilled labor increases. Accenture's India operations, for example, evolved from a call center to more complex activities such as analytics and software development.

"There is an increase in local product development which is creating new demand for more creative, highly skilled knowledge workers and changing the behaviors at work. Businesses are not only striving for high-quality efficiency but also growing creative expertise. The mix and type of work people are doing in these markets is changing and this has great implications for the workplace," Valoe explains.

The Steelcase study identified four organizational types: Task, Process, Functional, Matrix (for detailed explanations of each type, see opposite page.)

While task and process excellence is still the goal for many growth market businesses, the nature of the work can shift with remarkable speed. Indeed, no matter what type of work a particular company or office performs, they all face the common challenge of constant change at both an organizational and individual level. That places a lot of demands on the workplace. Understanding the nature of the work being done will allow organizations to create work environments that will help them compete.



Organizational Types

FUNCTIONAL-BASED ORGANIZATION

Organizations focused on spurring the creativity and discipline needed for leading local firms or business units to become global challengers, or to serve as global centers of excellence for specific business functions

CHALLENGES

Lack of specialized talent limits expertise and business growth

FACTORS

Growing expertise; retaining talent; supporting multiple work modes

WORKPLACE GOAL

Enable High Performers

TASK-BASED ORGANIZATION

Organizations focused on optimizing costs in order to be a viable resource for comparatively simple business processes and services, such as call centers

CHALLENGES

Active employee engagement is difficult to achieve with repetitive tasks

FACTORS

Intense focus on cost per person; tightly dense workstations; low employee motivation; high turnover rate

WORKPLACE GOAL

Increase Employee Engagement

MATRIX-BASED ORGANIZATION

Organizations focused on becoming a truly integrated enterprise that can seize global opportunities and lead distributed, highly collaborative, multi-cultural teams

CHALLENGES

Complexity of globally distributed work restricts speed and agility

FACTORS

Distributed collaboration; hierarchical command and control; poor or restricted information flow

WORKPLACE GOAL

Build Trust

PROCESS-BASED ORGANIZATION

Organizations focused on becoming an efficient and high-quality source of expertise in areas such as engineering, procurement and analytics

CHALLENGES

Unpredictable work conditions impede consistent quality outputs

FACTORS

Training a large workforce quickly; evolving work processes and teams; unforeseen disruptions

WORKPLACE GOAL

Establish Resilience

CHANGING THE STEREOTYPE

The stereotype of the call center would not seem to leave a lot of room for creativity in office design: a crowded office, lined with row after row of identical workstations, manned by interchangeable employees. But even a call center has a complex sociology, and the subtleties of how it is set up and run can make the difference between a productive, efficient operation and one that's constantly struggling with low morale and high turnover. A happy, engaged call center operator is going to give much better service than a miserable, alienated one.

"Attracting and retaining employees is something we think about it every day," says Bruce Bundgaard, director of real estate at United Health Group, which has large call center operations in China. "Overall design, quality of delivery and amenities play an important role in how employees perceive their work environments. Our goal is to develop an office work environment that is flexible and adaptable to support the businesses we serve for the complete duration of the lease."

Still, he said, companies "have to be careful when you approach the line where the capital is weighing down the competitiveness." To put it another way, the key is to make the call center more pleasant and productive without making it more expensive.

One of the key challenges in a crowded call center is facilitating what Steelcase researchers have identified as a crucial mode of work in many growth market companies: dyadic, or one-on-one, collaboration. If a call center operator is having



One of the key challenges in a crowded call center is facilitating dyadic work, or one-on-one collaboration.

trouble with a customer, she might turn to a manager or a more experienced colleague, who will slide her chair over to help. The more physically comfortable that is for everyone, the better.

Dyadic collaboration is also central to more sophisticated operations that focus on process excellence, such as Cummins Inc.'s engineering center in Pune, India. There, workers process engine analysis results for other Cummins engineering groups around the world; efficient, accurate and predictable workflow is crucial.

Unlike work in a call center, the engineers and analysts work together in small teams, with the supervisor at the same workbench. But informal one-on-one collaboration is still very common, reflecting the healthy tension between the need to tightly manage an exacting, complex process and the flexibility to enable efficient problem-solving.

The Cummins teams often need to be in touch with colleagues around the world, which creates yet another set of workplace requirements to foster connections globally. Further, the teams frequently shrink or grow or change, based on projects, requiring a lot of flexibility in office configurations.

Mahendra Bangalore, chief information officer for Willis Processing Services (India), a unit of the international insurance brokerage Willis Group, says the college graduates the company recruits want a "lively, bright and colorful" workspace. "We want to give them the feeling of, 'Wow, I want to come to the office today and every day,'" he added.

Willis is currently in the process of developing a new, 130,000 square foot headquarters office that could serve as a model for company offices around the world. In the new office, some spaces are set aside for formal and informal collaboration.



INSPIRING AND MOTIVATING EMPLOYEES

For organizations that strive for functional excellence, the primary assets are highly skilled knowledge workers. The challenge for these companies is to keep key employees not just comfortable and productive, but also inspired and highly motivated. “Employees’ individual skills, expertise, and opinions are critical to establishing the business’s functional excellence,” Valoe says. “Keeping employees inspired is just as important as keeping them engaged in their work.”

TV broadcaster Tata Sky, a joint venture between the Indian conglomerate Tata and Fox’s Sky Television, created a space for its 190 headquarters employees that features designated areas for game playing and socializing. Its unusual circular floor plan gave a feeling of openness, with the company’s branding prominently displayed. The effect was a vibrant space designed to encourage creativity and spontaneous interactions, while instilling a strong sense of company pride.

To accommodate the pace of change, companies need to start integrating different types of workspaces in order to support people properly. “As these growth markets mature, office space needs to adapt and mature, also,” says Jason Heredia, Steelcase’s vice president of marketing for Asia Pacific.

But a major hurdle to providing diverse workspaces is density, an overriding fact of life in Asia that often governs not only working conditions inside the office, but also employees’ daily experiences outside of it. “The everyday challenges

experienced by employees just getting to work can create new problems in the workplace,” notes Heredia, pointing to long, harried commutes and often-difficult living conditions. The office, he says, can be something of a sanctuary for employees, compared to the everyday challenges they experience in life, and so it’s especially important to “humanize the density.”

In much of India, for example, public transportation can be a nightmare and personal safety concerns loom large. Thus a company that wants happy, engaged employees has to worry about their experience—not from the moment they enter the workplace, but from the moment they leave their homes.

They also have to recognize that those employees, unlike many of their Western counterparts, may not have the luxury to choose where they do their work. While in some parts of the world employees might go down the street to a coffee shop to think or meet, the reality in growth markets is that these places might not exist or be difficult to reach across a 6-lane road—not an option for a quick break. At Willis Group’s new facility, the company canteen is being designed to accommodate working and informal meetings—a sort of in-house Starbucks.

“The office can be something of a sanctuary for employees.”

Jason Heredia
Vice President, Marketing
Steelcase Asia Pacific

OFFICE DESIGN: A CATALYST FOR CHANGE

Eighty-four percent of the world's population resides in emerging economies today. The opportunities in these markets are limitless, but the challenges are daunting. And while there are many market issues that businesses can't control or even influence, there are many strategies that companies can deploy to thrive in volatile conditions. Among those, the workplace can be designed as a catalyst for change. If created to support the kinds of work that people need to do today and tomorrow, it can foster both efficiency and creativity and inspire people to do their best work, unleash their potential and help their organizations win. [o](#)



THE REALITY

Unending
change

Limited
resources

Infrastructure
obstacles

Three broad ways the workplace can address these challenges:

- 1. Enhance employee wellbeing even in high-density workplaces**
- 2. Create a palette of place in limited space**
- 3. Provide for maximum resiliency in the face of fast-changing demands and limited resources**

1 ENHANCE EMPLOYEE WELLBEING EVEN IN HIGH-DENSITY WORKPLACES

To keep employees engaged, it's vital that the workplace be designed to nurture their physical, cognitive and emotional needs. This is true of work environments everywhere, but it's becoming even more critical in growth markets as worker expectations rise even as they struggle to keep up with the rapid change happening around them.

“Work today is both physically and cognitively demanding, and work environments should be designed to help people deal with the stress it causes,” says Michael Held, director of design, Steelcase Asia Pacific. “You may not be able to make the space less dense but you can do things that will make it a better experience for the people working there.” For example, at call centers a simple “touchdown” space at the end of a workbench can provide a spot for employees to put down their things and wait more comfortably during a shift change.

Giving people a sense of comfort and control in their individual workspaces also helps to create a better experience, says Held. At a call center, something as small as a marker board at their desk to make lists or a nametag on a chair can give a sense of order and ownership. In fact, space to stow a backpack or a change of shoes can be especially important when the office—even a crowded one—is a home-away-from-home for workers with long shifts and long commutes.

Adding some privacy elements into the space can also help humanize the density. According to Held, these do not need to be physical or even visual boundaries. “Something as simple as a small screen between people at a workbench can give people a sense of personal space. Allowing people to customize their workspace even a little bit—a pin board for pictures of friends and family, choices in how they position themselves at the workstation—can also humanize even a very crowded space.”

Held also recommends providing options for employees to change postures throughout the day, such as lounging, sitting and standing, which is critical for physical and cognitive wellbeing and to help employees stay focused and engaged. Plenty of natural light will always create a better overall mood.



Strategically place standing-height areas to leverage natural human cues of standing to foster socialization and create quick meeting areas.



Make distributed collaboration/connections more seamless to help distributed teams feel equal and build trust. Incorporate settings that encourage changes in posture and help users stay engaged.



Embed leaders into the open plan to expedite problem solving and foster knowledge sharing.

See 360 Magazine, Issue 67 Wellbeing: A Bottom Line Issue for more information about wellbeing in the workplace.

2 CREATE A PALETTE OF PLACE IN LIMITED SPACE

A range of spaces that provide employees options for different modes of work can promote individual employee wellbeing—and thus improve retention—as well as advance other business goals.

But this palette looks very different in high-density growth markets, for the simple reason that there's less space available. "The idea of a single-purpose space is too luxurious within a high-density culture," says Held. "When space is really, really limited, a palette of place is confined to fewer places and one space has to do more. Spaces need to be designed to be multipurpose."

A benching work environment, for example, can be designed to support both individual and collaborative work.

"More space does not make a space better," Held emphasizes. "Optimization of space and adjacencies are the critical factors to consider." For managers, the individual spaces need to allow for one-on-one mentoring. And even when a manager is at the same workbench with the staff, a slightly bigger desk, a second work surface, a larger storage area, or a second chair for collaborative work can all serve to both express the manager's more senior position (hierarchy is still an important consideration in India and China) and facilitate quicker learning.

An extra, open space at the end of a workbench can also provide a natural area for informal conversation or one-on-one collaboration.

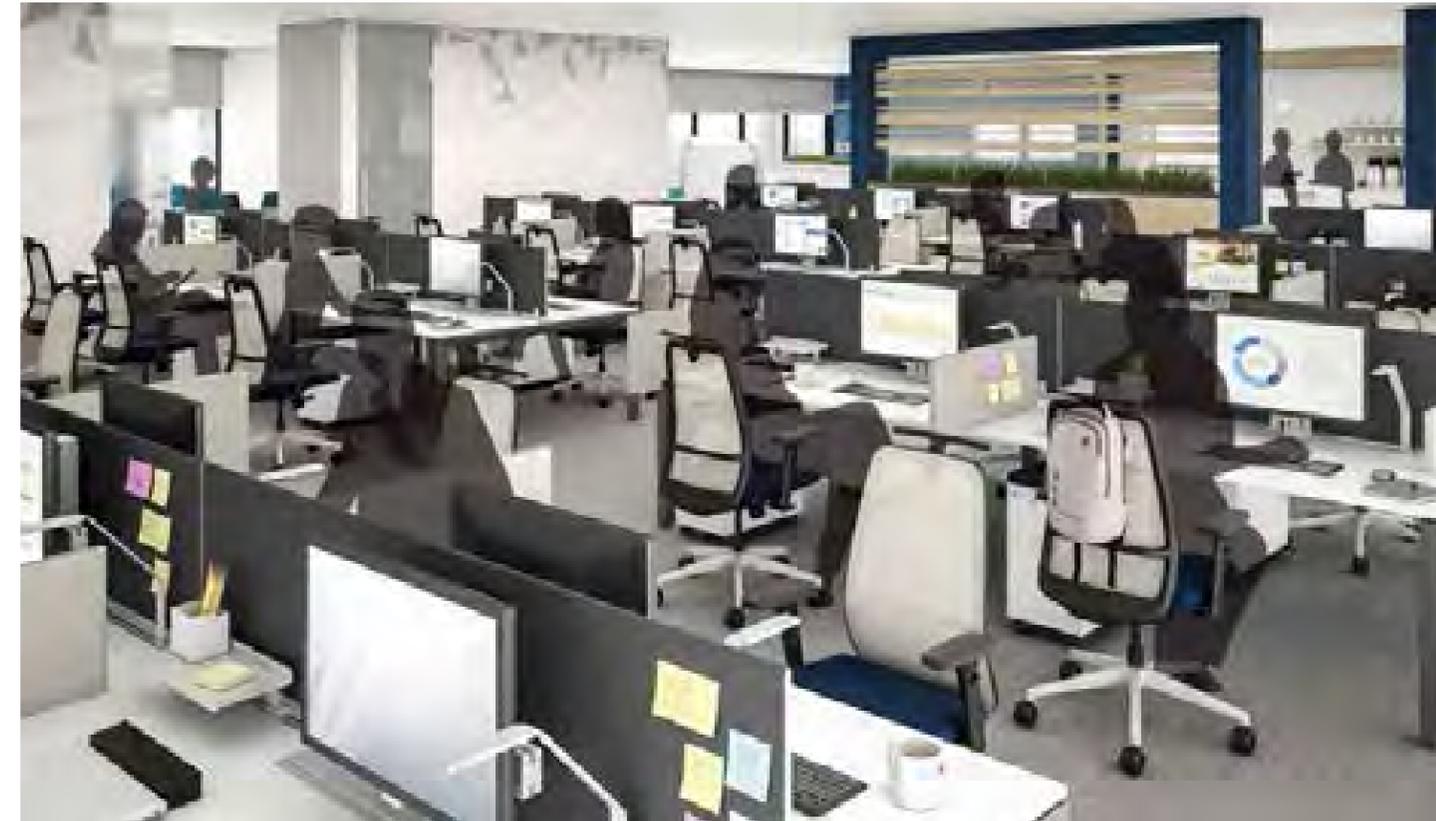
Informal spaces can be especially important for creative work: at the ad agency Ogilvy & Mather's offices in Mumbai, a pantry is the locus for birthday celebrations and socializing—crucial to the company's culture. Small teams also use this space to collaborate informally, and there's a feeling of freedom and vibrancy in the office.



Include spaces with shielded boundaries to allow workers to concentrate alone or have a quiet one-on-one conversation without taking up valuable real-estate. These spaces can be co-located throughout to provide areas for on-demand team collaboration.



Design spaces to be multifunctional: Use reception areas, lobbies and cafes as spaces for informal collaboration and socialization.



Create a zone for focused work using benching. The integrated accessory rail frees up valuable real-estate by getting items like monitors off the worksurface.

This also allows dyadic connections at the individual space, promoting quick trouble shooting among peers.

3 PROVIDE FOR MAXIMUM RESILIENCY IN THE FACE OF FAST-CHANGING DEMANDS AND LIMITED RESOURCES

The final critical factor in designing spaces in growth markets is resiliency. How can space help organizations respond to rapidly changing business processes, evolving work needs and large populations? Rapid growth and shifting work patterns make it imperative that office changes can be made quickly and easily without starting from scratch.

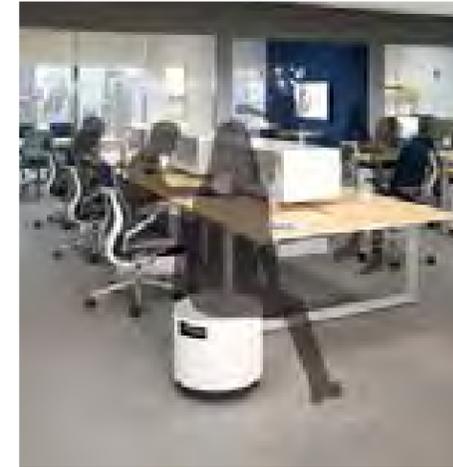
According to Held, the key is flexibility or modularity. Modular structures, made from components that can be easily reconfigured, make it easy to change spaces to accommodate evolving business needs. For example, benching solutions that allow you to add or subtract elements without moving the base bench units enable quick changes. Work surface extensions and privacy screens can all be added to support changes in team size or to shift the focus from individual to collaborative work.

Multipurpose spaces that can support more than one activity are also a key part of the mix. Work environments should also be designed to help bring a diverse range of people, resources and tools into close proximity with each other. This is referred to as clustering, and it can promote the cross-pollination of people, ideas and experiences through places that bring them together.

See Resilient Real Estate: Space as an adaptive system, 360 Magazine, Issue 66 for more information on modularity, clustering and developing resilient real estate strategies.



Design harder working social spaces to be multifunctional: integrate social settings that encourage social networking, respite and moments of rejuvenation throughout the day. Provide opportunities to connect socially to build trust while creating a sense of community.



Use modular planning principles: Rapidly respond to changing needs with benching that easily allows for adding or subtracting elements, without moving the base bench units. Worksurface extensions and privacy screens can be added in the field to support changes in team size.



Create more dynamic work environments: Integrate informal team spaces into the overall design to support more complex work and the need for spontaneous collaboration.

IGNITING A SENSE OF STARTUP CULTURE

AUTHENTICITY. PERSONALITY. AGILITY. PASSION.

Startups have them all in spades, powering innovation, pushing boundaries and propelling the dramatic impact entrepreneurs have on the marketplace. They run their companies with heart and transparency, fueling a special kind of culture that has become the envy of established organizations searching for that same energy and vibe. Startups are small and nimble, and they like it that way. Because, let's face it: their unique, infectious culture makes it easy to get things done.

But what happens when larger leading organizations want to activate more grit, authenticity and passion in their environments? How do "intrapreneurs," the innovative team leaders and space-creators in big businesses, reconnect with that startup mindset without getting weighed down by the sheer scale of a large enterprise?

Is it possible to ignite an entrepreneurial spirit—or reclaim—a sense of "startup culture" no matter what size the company?

For the past year, turnstone has been asking these questions of entrepreneurs in startups and of intrapreneurs within ecosystems of large organizations. Our exploration of culture and its organic link to the physical workplace has produced compelling observations about shifting behaviors.

Here's what we're learning about entrepreneurs looking to accelerate business results by leveraging their culture and space, and about intrapreneurs looking to reinvent the culture of their large organization.



Fusionary, a digital studio in Grand Rapids, Mich., embodies startup culture with a variety of posture options for their team.

Fostering “Non-Corporate” Cultures

A casual, non-corporate environment, or what we’re calling “startup culture,” is a highly prized component of countless entrepreneurial ventures. It puts personalities on display and allows people to have fun together and work in ways that best suit them. This culture translates as “unbuttoned and non-corporate”—a flexible, authentic environment that engages employees, allowing them to experience a sense of meaning and belonging.

“We believe that space is a tool to build culture, engage human capital and, over time, improve a brand,” says Kelly Ennis, founder and managing principal at Baltimore’s The Verve Partnership, a client-focused architectural firm dedicated to marrying design-driven conversations and strategic business opportunities. As a designer, Ennis recognizes that achieving startup culture requires intentionality.

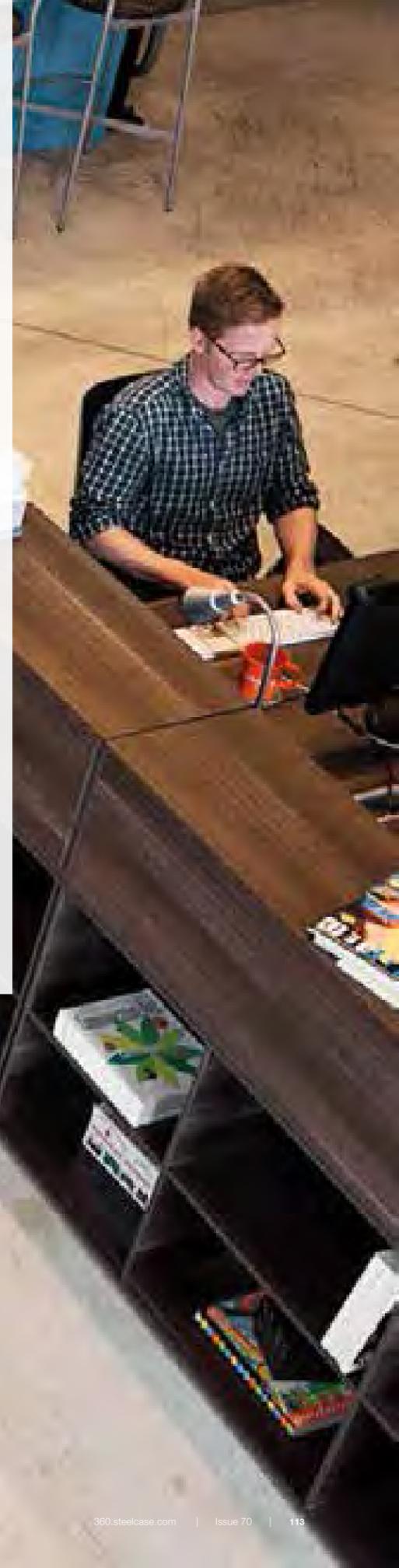
“Brand is more than just a logo on the wall or a certain color of paint. It’s who you are at the heart and perhaps more importantly, who others think you are,” says Ennis. “Culture and identity are so intertwined, and that’s where architects and

designers can really help by providing a place that reflects and engages both of those things equally and authentically.”

Sam McBride, co-owner, RxBar, Chicago, recognizes the role space, culture and brand play in client relationships and company growth.

“Our protein bars only have six to eight ingredients. They’re very clean and include only the highest quality ingredients. When we planned our office, we wanted to reflect the very thing we are delivering to the market, so we created a physical space that’s really clean, modern and simple,” explains McBride. “Our customers can see that for us, quality and simplicity extend beyond what’s inside the wrapper and into our daily surroundings. It’s authentic because we’re living what we sell.”

A recent study conducted by turnstone of over 500 small business owners confirmed this important connection. The study found that 80 percent of respondents recognize that physical space plays a direct role in fostering vibrant culture, while 90 percent stated that culture is not just a great perk but an important contributor to the success of the company.



“You’re trying to appeal to people going beyond sawhorses and a door. To appeal to people who don’t want to lose that edge, but who want some sense of organization, some sense of order. Not necessarily neat. But just not chaos.”

Tom Polucci
Director, Interior Design, HOK
A global design, architecture, engineering
and urban planning firm

Though small companies often start out with a cool office vibe, we’ve learned that maintaining it over the long haul is more difficult—especially once companies hire their 10th employee. As founders begin to worry about instituting norms, policies and procedures to keep their businesses running smoothly, some find that the pressures of growing a successful business curb the carefree nature they once had when approaching life in the office.

At the same time, intrapreneurs within larger leading global organizations are feeling a similar, yet distinct, pressure to be more nimble and agile. And although well-appointed surroundings, ample resources and years of experiences separate them from some younger companies, intrapreneurs are like-minded in their willingness to challenge the status quo.

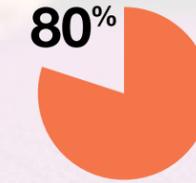
Enrique Godreau III, senior vice president of development at UPGlobal, a nonprofit dedicated to strengthening communities by spurring grassroots leadership and entrepreneurship, has spent years interacting with startups and innovative thinkers within large organizations. He notes that many financially successful companies continue down the path that first brought them to the top, staying focused on optimizing their product or service offerings. Intrapreneurs, on the other hand, push boundaries and ask tough questions.



Turnstone recently conducted a survey with 515 companies employing no more than 100 people each.



90 percent identify culture as foundational to the success of their companies



80 percent believe their physical environment plays a role in fostering vibrant culture



32 percent of Gen Y want to work in lounge postures

10th Employee

When business leaders start worrying about maintaining culture

Fusionary team members
gather around Campfire Paper
Table with glass top for
impromptu collaboration.



“Giving people the freedom to do what they want is a surefire way to drive culture. It’s incredibly important and appeals to both a younger and older demographic. Giving people freedom, while also managing quality, goes a long way in ensuring your desired outcome.”

Ryan Walsh
Partnerships Manager, MassChallenge
A non-profit accelerator responsible for propelling over 600 new businesses since 2010.

“It’s so easy to believe that the way things are, are the way they’re supposed to be. Intrapreneurs recognize that successful businesses have to be willing to question what they’re doing today—not merely to optimize what’s been done in the past,” says Godreau. “Having a vision for this kind of culture is not rebellious, it’s disruptive. And pursuing this culture doesn’t just authorize, but charges people, to be disruptive and authentic and innovative.”

Intrapreneurs also realize they are competing with startups to attract, retain and engage talent. Whether they lead teams in product development, HR, IT, marketing, sales or the C-suite itself, intrapreneurs know that if their spaces don’t reflect cultural ideals, their organization won’t stay ahead.

New Postures in Startup Cultures

Sitting in diverse postures, especially lounging, is an immediate cue to workers that the culture is different and more relaxed. Turnstone research has shown that offering employees choices of where and how they work and giving them control over their day is a pivotal component of startup culture. Encouraging a variety of postures is vital to creating an engaging workplace.

Alternative work postures can provide that freedom and help nurture a startup culture vibe. Turnstone research has revealed that of professionals aged 18–34 years, a whopping 32 percent prefer to work in lounge settings filled with ottomans, stools or other casual options that offer comfort and enhance productivity.

Brian Hoffman, head of business development at Startx, a non-profit accelerator located in the heart of Silicon Valley, noted this trend with his own staff.

“We wanted people to work upstairs in the space we had designed for them and at the desks we had installed for them to use, but people naturally wanted to be in lounge settings.”

The pace of today’s office has also made standing-height tables and desks sought-after destinations, as teams iterate and think in snatches of time between meetings. Rather than settling in at seated workstations to respond to emails, we’ve seen people regularly gravitate to height-adjustable tables or standing-height work surfaces where they can quickly move in and out of tasks.

“Why should you need a doctor’s note to get a standing desk?” asks J. Kelly Hoey, New York City-based angel investor, speaker and networking strategist. “If we want the best from our people, why don’t we create a work environment that can evolve with changing workstyles? We should recognize that people work in different ways, and at different times of the day you might have different needs to be most effective.”

Campfire Slim Table, Skate Table and Footrest create a lounge environment that allows for easy collaboration.

Embracing a DIY Spirit

There's a strong link between curation and the "do-it-yourself" spirit of many entrepreneurs and intrapreneurs. Whether applying unique choices in materiality or blanketing offices with artifacts that represent the founder's passions, entrepreneurs have ignited a race for the most exciting workplaces. They leverage social media photo sharing to highlight what they like and what inspires them, and then relentlessly pursue curating a space to match.

Dana Verbosh, interior designer for global design firm Gensler, shares a story about a young tech startup in Baltimore. Originally working from a

basement, this client recently acquired space in an up-and-coming Baltimore neighborhood where they will occupy the third floor of a 1900s theater building rich with architectural details and open 23-foot ceilings.

She explains, "This group knows that being thoughtful about design helps move a space toward culture, so we're helping them curate reclaimed wood from old Baltimore row homes to create a one-of-a-kind feature wall and some other special pieces. Our job is to make sure we tell a visually compelling story while ensuring the space delivers commercial durability." ◉





GETTING STARTED

What do these trends mean for entrepreneurs, people in real estate, space creators in larger organizations, facilities managers, incubators and disruptive thinkers everywhere? Is it really possible to ignite—or reclaim—a sense of “startup culture” in your workplace?

We believe the answer is, “Absolutely.” Here’s how you can get started:

Tip #1: Make Space Reflect Culture

Push the envelope with materiality and choose progressive finishes to create an energetic vibe or a warm, residential feel with commercial-grade quality. Embrace a DIY spirit by adding unique statement pieces into your space that reflect your inner-artist and put your passions on display.

“People are trying to express themselves. To create an identity. To define a brand. And it manifests itself in the space and the collection of objects they curate.”

Tom Polucci
Director, Interior Design, HOK

Tip #2: Champion Disruption

Support the intrapreneurs in your ecosystem by giving them a space devoted to unleashed creativity and true freedom to innovate. If possible, physically move intrapreneurs away to help activate a new sense of startup culture. Champion their disruptions as vehicles that will move you toward a stronger, more relevant company.

“Intrapreneurs communicate their new ideas with flip charts, post-it notes and drawings. You need a space that supports this kind of interaction. You need a space to showcase all these things so the innovators can tell the story of how their ideas will come to be.”

Enrique Godreau III
Senior Vice President, Development, UPGlobal

A non-profit dedicated to strengthening communities by spurring grassroots leadership and entrepreneurship

Tip #3: Embrace Authenticity and Agility

Add lounge spaces and standing-height elements to complement ergonomic seating. Send the message that you trust and support your team to choose the places and postures that best encourage productivity and focus for them. Intentionally design other spaces that promote quiet, collaboration and fun, so that people can truly love the way they work.

“The most popular areas are the cafés, which are more like casual bistros with lounge areas. When it comes to ideation and teams working together, casual gathering opportunities are more powerful and more effective.”

Benjamin Dyett
Co-Founder, Grind

A Chicago and NYC-based coworking facility dedicated to creating “frictionless” work experiences

say hello to shortcut

We don't need research to tell us the workplace is busier than ever. And when deadlines loom, you want an easy-to-use chair that will support quick sits between meetings and focus time. That's why we created Shortcut. With built-in flexibility and surprising comfort, Shortcut proves it isn't just easy to use—it's easy to love.

make a statement: Shortcut's seven shell colors let you design a space to match your personality without compromising style. Dozens of fabric options make it easy to create your one-of-a-kind chair.

detail: Because we believe that small things have the power to make a big impact, we designed Shortcut's cushion with bold seams to add visual interest.

comfort: Shortcut's signature cutout is designed to offer flexibility and increased comfort during short sits. Elbow rests stay out of the way, allowing you to pull close to your work surface.



C O N N E C T I N G P E O P L E + P U R P O S E

Imagine you've just been assigned to work on a high-profile team. Your job is to lead culture change at your company to help build transparency, trust and collaboration. It's a CEO directive based on his future vision as well as some expensive research from a well-respected consultant. But one of the first things you're required to do is sign an internal non-disclosure agreement, ensuring you won't share what your team is doing with the rest of the organization.

Or you walk into the corporate headquarters of a large manufacturer that's seeking to revitalize its iconic brand with new products. Its leaders are trying to bring more style and cache to the company's image with a new design-focused advertising campaign, challenging employees to think innovatively to bring new energy to the culture. Yet, this company's workspace dates back to the 1920s, punctuated by rows of highly traditional, dated private offices converted from manufacturing space.

Stories like these—where employee realities contradict the organization's purpose—are all too commonplace. "We see this all the time," says Jennifer Jenkins, leader of practice of the Steelcase Applied Research + Consulting team (ARC). "Purpose, or meaning, is one of the key components of employee engagement."

With the new economic realities of intense global competition, employee engagement is a must-have for today's organizations.

"We see purpose as living at the intersection of strategy, brand and culture," she explains. "When those three converge, engagement thrives and ultimately so does the organization. We identify strategies to improve the everyday work experience and help organizations express their purpose so they can truly thrive."

THE PURPOSE
EQUATION

Surprisingly, according to Gallup, only three in ten employees worldwide are actively engaged with their jobs, a ratio that's barely budged in a decade. Only one in ten are considered good managers, and the cost impact to business is pegged in the hundreds of billions.

But when employee engagement is healthy, Gallup says, stock performance surges with nearly 150 percent higher earnings per share. Employees generate significantly higher productivity, profitability and customer satisfaction, and fewer safety incidents.

So what's the calculus for organizations to arrive at purpose? There's no single answer, no silver bullet to instantly transform an organization. But there is a potent mix of strategies proven to improve workplace experience and bring daily realities more in line with organizational goals. And it often starts with purpose or meaning, Jenkins says.

Today's conversations around meaning are vibrant and fluid, touching aspects of wellbeing, economics and psychology. They're happening everywhere, from the most recent World Economic Forum in Davos to the boardrooms of some of the world's most progressive companies that seek to integrate purpose into all facets of work. Whole Foods co-founder John Mackey stated in a recent interview, "People want more than to just earn a living. They want meaning, they want purpose, they want to feel like their work is making a difference in the world."

Another prominent voice in the dialogue is Aaron Hurst, author of "The Purpose Economy." "People gain purpose when they grow personally, when they establish meaningful relationships and when they are in service to something greater than themselves," he writes. "People pursue personal, social and societal purpose."

This quest for meaning isn't new, according to Hurst; it dates back to ancient Greek philosophers. What's different about it today is that it's driving an entire movement, or as Hurst argues, an entire emerging economy. The Purpose Economy is propelled by the failures of the old one, where cash was king and meaning a distant consideration. The global recession fundamentally shifted values and priorities, magnifying peoples' need for stability and purpose. People today are looking for work that does more than simply pay their bills; it must contribute to something better—better selves, better relationships, better communities. We're all looking to climb the pyramid of human needs to the top, to self-actualization.

Steelcase researcher Nicolas de Benoist has studied worker wellbeing and engagement for several years. "When people are engaged in something greater than themselves, than the project they're working on, they have more resilience to face the stresses of everyday life," he says. "Without purpose, you get stuck in the small details of everyday life and forget the larger goals."

But meaning shouldn't be confused with supporting a cause. It's more about finding work that aligns with your personal beliefs and strengths and understanding how your work contributes in the larger scheme of things. All too often, employees are directed to improve their weak areas instead of building on their strengths. But research shows that when employees are encouraged to use their best skills, the chance for disengagement practically disappears.

When this happens, employees are their most authentic selves. "It's hard to talk about meaning without authenticity," de Benoist says. "It's about sharing our gifts and talents with others with a sense of shared purpose."

That sense of working toward a common goal drives fulfillment when even the smallest tasks can be connected back to a larger purpose. Too often, especially in large organizations, individual work can feel disconnected, irrelevant or underappreciated. "Without purpose, people can feel frustrated and even a sense of shame," de Benoist explains. "When companies can express their values in a pure, explicit way, it helps employees feel there's a connection to their work."

“ WE SEE PURPOSE AS
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Jennifer Jenkins
Leader,
Applied
Research and
Consulting

“ WE IDENTIFY STRATEGIES
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EXPRESS THEIR PURPOSE
SO THEY CAN TRULY THRIVE . ”

Tim Quinn
Vice President,
ARC

S T R A T E G I E S
F O R
C H A N G E

Cultivating purpose in organizations requires a multi-pronged approach, according to Tim Quinn, ARC vice president. “We’re looking at how space, process and technology can influence or support behavior and open up new conversations with our clients about how to create great work experiences,” he says.

Quinn references Google and Apple as examples of companies whose new headquarters are intended to reinforce their strategy, brand and culture. Google’s purpose is discovery, and its culture is one of transparency, so their new campus design prominently features translucent canopy roofs that cover green spaces, retail spaces and workplaces that easily shift to accommodate emerging needs. Apple, on the other hand, is famous for taking a protective approach while they incubate ideas, and its new headquarters design reflects this.

“Space is only one of the tools we leverage,” Jenkins adds. “We’re helping clients take a three-dimensional look at how they encourage purposeful behaviors both individually and organizationally. That means our work can impact not only space, but other influencers such as HR and IT processes to infuse purpose in every work experience.”

Take the manufacturer mentioned earlier. The original request was to help them transition from their outdated space to a more inspiring, flexible environment in a new building. “We talked with the CEO and explained why he really needed to be focused on the behaviors and culture he wanted to build, not just the physical space,” Quinn says. The result was a holistic assessment revealing the company had cultural gaps in trust, transparency, risk-taking and empowerment.

“These are very common problems we see in our work with clients pursuing purpose,” Quinn says. “Employees are asked to be more collaborative, but measured or rewarded for individual achievements. Employees are asked to be more innovative, but aren’t encouraged to take risks. Employees are asked to be strategic, yet they’re confused about the overall direction of the company.”

In this case, the company designed its new space to foster behaviors and experiences that build trust, transparency, risk-taking and empowerment. In the new space, leaders are more mobile and visible, information is shared on digital displays throughout the space, and cross-team relationship-building is encouraged with the addition of a WorkCafé, where employees are free to work, socialize, meet or just get away. With these changes, employees are better able to connect with the company and contribute to fulfilling its purpose.

Or consider a company that developed an idea for a new product that changed the industry years before the competition, but it never came to market. The competitor got there first, rewrote the rules and reaped all the rewards. Why do the best ideas lose traction here?, asked the CEO. ARC’s assessment found disconnects between the behaviors and outcomes that leadership was

asking for and results that employees were being reviewed against. New product developers were encouraged to generate ideas, but the culture and performance assessments didn’t reward or support fast failure. As a result, no one wanted to share poor results during development and the best ideas never made it to the shelf. One solution, Quinn says, is to carefully examine where expectations and success measurements intersect, and ensure the organization is encouraging and rewarding purposeful behaviors.

A C A L L
T O P U R P O S E

As momentum for the emerging purpose economy continues to mount, organizations will be challenged to re-examine practices, beliefs and values. They’ll be challenged to overcome behavior versus expectation gaps, to create new policies and rethink their spaces to reinforce a purpose-driven culture. As the drive for meaning permeates culture, it will redefine how we work, the organizations we prefer to work with and how we make choices. In response, vanguard companies are rediscovering their purpose, learning to articulate it clearly, and putting tools in place to ensure employees are connecting with it every day. In this new era of meaning, purpose is the new job description. ●

Sustainability Spotlight

The Circular Economy: Rethinking the Way to Move the World Forward

A recent analysis by the multinational management consulting firm McKinsey & Company estimates that a rapidly trending business model could create 100,000 new jobs within the next five years and add \$1 trillion to the global economy by 2025. That model is known as the circular economy.

Steelcase was recently asked to participate as one of 100 sustainability leaders in The Circular Economy 100, an international multi-industry group established by The Ellen MacArthur Foundation to explore this exciting concept. Other well-known participants include Unilever, Phillips, Cisco and Renault.

The goal is to accelerate transitions to business systems that minimize waste, maximize resource recovery and create economic growth through innovative products, services and approaches that trump the currently prevalent “take, make, and throw away” business model and mode of consumption.

Created in 2010 by Dame Ellen MacArthur after setting a world record as the fastest person to sail single-handed around the world, the Foundation and the circular economy are gaining recognition in the business world. Forbes recently featured the circular economy as “an idea whose time has come,” and MacArthur was invited to be a presenter at the 2015 TED Conference in Vancouver this past March.

As MacArthur tells it, her sailing experience fundamentally changed her perspective on how the world can, and should, work. When you sail around the world for three months, she says, you take everything with you that you need, and that’s all you have—there is no more.

In a way, we’re all navigating through a world of finite resources. Though businesses are using energy and materials far more efficiently than ever before, as a world economy we’re consuming far more, dipping deeper into our fixed resources. With nearly three billion consumers from the developing world expected to enter the middle class by 2030 and resource prices continuing to grow, the linear economy model will be insufficient to meet consumers needs.

At Steelcase we know firsthand that disruptive innovation is complex and challenging; moving forward means leaving past solutions and “business as usual” behind. For example, when we launched our Think® chair in 2004 it was iconic: the world’s first Cradle to Cradle™ certified product designed for the circular economy. By 2012, we were inspired to rethink Think, in the process achieving more innovation and creating more value through fewer parts, more durability and improved ergonomics. Likewise, our innovative reuse and recycling programs, Phase 2 ReMarket™ in North America and Eco’Services in France, Switzerland, Belgium and Luxembourg, are evolving to redefine waste streams for our customers by providing alternatives to landfills.

There are dramatic opportunities for innovation and growth in the 21st century. By decoupling ourselves from an obsolete economic framework, we might realize positive change at a scale and speed rarely experienced before. ◉

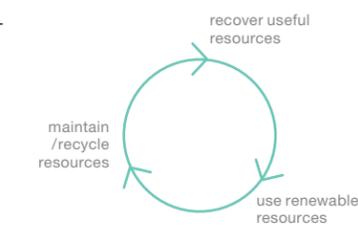
What is the circular economy?

A new approach for rethinking and redesigning how products are made.

Traditional Linear Economy



Sustainable Circular Economy



What is its impact on the world?



environment
focuses on effective design and use of materials, energy and resources to optimize continued availability.

economic
reduces risk and builds resiliency with new business opportunities and products/services shifts.

social
establishes a framework for creating a world in which everyone can thrive.

Go Deeper

Towards the Circular Economy
ellenmacarthurfoundation.org

WHAT'S YOUR PURPOSE?

When working with clients to help express and strengthen a sense of purpose, ARC asks them to consider their current state. Often these conversations reveal gaps between the reality and an ideal state, leading down a strategic path to infuse purpose into everyday workplace experiences.

If your organization seeks to guide culture and behaviors toward a greater sense of purpose, here are some questions to ponder.

By addressing these questions at all levels, organizations can begin to infuse purpose into their everyday workplace experiences.

QUESTIONS FOR THE ORGANIZATION

1. Is the purpose clear? Do people at all levels understand it?
2. Does achieving the purpose seem both aspirational and feasible?
3. Does it motivate action?

QUESTIONS FOR LEADERS

1. Is our work experience designed to link our skills/capabilities to accomplish something for the organization?
2. Does the purpose build community? Do people believe that we are better together?
3. Is it safe to challenge the status quo?

QUESTIONS FOR THE INDIVIDUAL

1. Do I understand our purpose?
2. Is there a clear line of sight? Can I see my contributions impacting our purpose?
3. Do I find the work personally compelling and meaningful?
4. Do I believe in the work that I do?
5. Do I have an opportunity to learn and grow?



TAKING THE LEAD

Ergonomics Consulting Firm Embraces Palette
of Place to Nurture Employee Wellbeing

Inside an unremarkable building in an office park in Ann Arbor, Mich., not far from Detroit, something quite remarkable is taking place: the largest professional ergonomics consulting firm in North America is reinventing its workplace and looking for new ways to meet the needs of its people and business.

It's a reinvention that had to happen. Humantech had seen their work change dramatically in just a few short years. Some were macro changes that all business were experiencing, such as a more global economy, highly mobile workers, rapid technological change and generational shifts in workstyles and worker expectations.

“Our company and the ways we worked had been transformed. Now it was time to transform our office.”

James Good
President, Humantech



It Works For Tomorrow, Or We Don't Do It

There were also changes in how the company operated. Their work became increasingly project- and team-based. Consultants traveled to client sites in North America and Europe so often that half the consulting team was on the road at any one time. A fifth of the company's employees worked out of other cities or was embedded at client locations. Employees were so mobile and distributed that teleconferences and online meetings had become routine.

What hadn't changed was Humantech's work environment. It was ergonomically designed, as you'd expect, but it relied on outdated real estate strategies such as providing all employees with dedicated offices, spaces that were now frequently empty. Work had become more collaborative but there were few collaborative workspaces.

The company's own business model had changed, too. From full-time management consultants, Humantech had transitioned in a few years to equal parts consulting firm and software company.

Since Humantech works with many Fortune 500 companies, leadership knew they were not alone in dealing with change at so many levels. But their standing with these clients presented a challenge. “We'd positioned ourselves for a long time as workplace ergonomics experts. Now we felt that we needed to take the lead on other fronts as well: supporting mobile and collaborative work, providing a healthier and more desirable work environment, a place that attracts great talent and makes better use of technology. Our company and the ways we worked had been transformed. Now it was time to transform our office,” says James Good, president.

Good and a team of five of the company's managers sourced ideas and input from the staff to develop their workplace strategy. In addition to creating an environment that better supported worker mobility and made it easier for people to collaborate, they recognized the need to create space that nurtured employee wellbeing, beyond just ergonomics. This included creating private spaces where people could do focused work or escape to reflect or rejuvenate.

Most important was an overriding principle: “If it doesn't support how we'll work tomorrow, we're not going to do it,” says Good, to emphasize an ability and willingness to adapt to future change. “The transformation of our work environment doesn't stop when we occupy the space. It continues to evolve.”

For example, since 80 percent of workspaces are unassigned and anyone can use them on any given day, all worksurfaces are height adjustable so they support people in both seated and standing postures.

Good points to the company's seating selections as “a metaphor for how we changed our business. Ergonomic seating used to be designed for time at focused tasks, orientation to the worksurface, that sort of thing. But people don't work that way anymore. You work on a tablet or smartphone, you twist, contort and swing around. That's why Gesture works so well.”



Casual collaboration happens in Humantech's new WorkCafé, a combination cafe, workspace and meeting area.

Collaboration Everywhere

Collaboration spaces abound: in addition to individual workstation support for collaboration, several informal meeting spaces create flexible work areas for large or small groups; client presentation and conference rooms come in varying sizes and configurations; lateral files placed back-to-back offer stand-up spots for collaboration; casual collaboration happens at lounge spaces or in the company's new WorkCafé, a combination cafe, workspace and meeting area.

There's also a media:scape collaborative setting. “My favorite part is video collaboration,” says Kent Hatcher, director of business development and planning team member. “No more projectors. No more Function F5. It's just so quick and easy now to plug in and show what's on your screen. It's a new way to interact and share information.”

Buoy stools are a favorite because of how they support collaboration through ergonomics and mobility. “We get asked all the time, ‘What do you think about sitting on one of those medicine balls?’ We prefer Buoy, a really functional, well designed

answer to that question: five degrees of static stability and then 12 degrees when you start getting leaning, yet it doesn't go beyond that. There's adjustability so that a big person and a small one can use the same buoy. It weighs 14 pounds. I can hand it to you. It's an amazing product, one of the killer pieces in our office.”

On the other hand, Humantech realizes that mobile, collaborative workers also require places for individual focus and concentration, so the workplace includes five fully or nearly-enclosed quiet spaces. “Some people get their intellectual energy from a different type of space and it's our obligation to provide for that. Plus, it doesn't matter if you're an extrovert or introvert, people need privacy sometimes,” says Good.

Nurturing Wellbeing

To evaluate its workplace ergonomics, Humantech used their Ergopoint® software “to make sure we didn’t have any issues with discomfort or ailments that we hadn’t recognized.” But ergonomics are just one way this workplace nurtures wellbeing. Daylight floods the interiors and everyone has a view to the outside. Employees have a wide range of possible places, postures and workstyles. Sustainability is a way of life here: the project has received sustainability certification from the National Science Foundation (NSF). Similar to LEED, the NSF protocol uses a points-based system with certification at four levels. Humantech earned platinum, the highest level. The company is also just the third professional services firm to receive sustainability certification by NSF.

Fueling the Company’s Culture

A workplace that supports workers, work processes and wellbeing not only boosts productivity and effectiveness, it also nurtures company culture. The WorkCafé, for example, is an ideal place for working, eating or meetings, but its most valuable contribution may be as a place that supports collegial relationships. Winnie Ip, director of consulting,



Humantech realizes that mobile, collaborative workers also require places for individual focus and rejuvenation, so the work environment includes five fully or nearly-enclosed quiet spaces.



Relationship Building

and planning team member, says that after a recent two-week business trip she was eager to reconnect with colleagues. “I plopped myself in the WorkCafé and worked there the entire day because I wanted to see the action, people coming to get coffee, water, whatever. Even though I was still working it gave me that coffee shop vibe.

“Because I hadn’t been in the office it gave me a chance to basically say hello to everybody that day. Everybody is using it like that. One day I didn’t even sit at a workstation. And then by the third or fourth day when I was back into my rhythm I picked a spot and that’s where I can interact with the other consultants.”

The space is a hit with clients, too. “Clients used to come here and we’d work eight hours in a conference room that was not very comfortable. Now we can work in a room with couches and we have a much more intimate discussion with them, more of a working relationship than when you’re working across a table. Our clients are generally Fortune 500 and coming from corporate America, big grey boxes. They come into this environment and they’re blown away,” says Ip.

Humantech’s business is built on relationships, which are nurtured by this new work environment, itself the result of a relationship developed with Steelcase. “What drove us to Steelcase,” says Ip, “is the fact that they’re not a furniture company, they’re a research company. Humantech is a very science-based, research-based organization. The match between who we are as a company, and Steelcase, that really comes through in this space.”

Businesses, markets and industries change, talent and technology are more mobile than ever. In this fluid economy, Humantech uses its work environment as both a flexible asset and a firm mooring, a place that adapts to perform, attracts and engages people, activates its culture and burnishes its brand. It’s a work environment that will likely be widely imitated by companies near and far. 



Meeting spaces, both formal and informal, include media:scape collaborative settings and whiteboards where employees can easily share information.



by Allan Smith
Vice President, Global Marketing,
Steelcase

A Journey to What's Next

In my role at Steelcase, I am often asked about the future of work and the workplace and what's next. People want to know what lies ahead, how work, learning and caring for patients might change and how that will impact our physical environments. The answer is not in the distance, but lives at the edges of today.

As we seek to understand the issues people face at work today it's critical that we look deeply and go beyond simply asking questions. We need to watch closely and listen actively, anticipating needs before they can be expressed, looking for early signals and seeing changes before they become manifest.

This season Steelcase and our family of brands introduce new additions to our product portfolio that are indicators of where we see the future. We see a fundamental change ahead, where our physical environments don't add to our stress, but mitigate it. Place will actually enable our wellbeing, and help us manage our most scarce resources—our time and attention. Technology will be integrated in smart

ways, to help people feel even more connected. Our sensibility of what work looks like will change, as leading organizations get comfortable with seeing people be comfortable at work—stiff postures will give way to lounging, standing or simply moving throughout the day. The office will experience a renaissance, as it becomes a destination of choice for people to do their best work. Students will become more engaged as schools and universities embrace active, rather than static, learning. Healthcare experiences will be more compassionate as patients, caregivers and technology become more connected.

We invite you to explore the future with us. This section of 360 showcases our newest products—but trust me: you're going to want to experience these in person.

Please join us at one of the Steelcase WorkLife Centers, or one of our dealers around the world to begin the journey toward what's next.



BRODY™
WORKLOUNGE

Introducing the Brody WorkLounge. The first lounge designed to be good for your body and your brain.

Designed for your body. Providing best-in-class comfort and support, the Brody WorkLounge features patented LiveBack® technology—bringing thoughtful ergonomic design to the lounge posture. The adjustable, personal worksurface holds your technology at eye level, reducing neck and shoulder strain.

Designed for your brain. Maintaining focus is difficult in today's offices and campuses. The Brody WorkLounge creates a shelter from visual distractions, providing privacy and an enhanced sense of psychological security.

It thoughtfully integrates power, ergonomic comfort, personal storage and optional lighting—so you can focus your attention, get into flow and get work done.

www.steelcase.com/brody



THREAD™
POWER DISTRIBUTION SYSTEM

People need technology. Technology needs power. Yet access to power remains fleeting. We find ourselves running outlet to outlet, often sacrificing our own needs in search of power.

Introducing Thread.
Finally. Power made simple.

Thread simplifies power distribution, providing power to the devices we use and the places we work. A workplace solution unlike any other, Thread's ultra-thin design lies underneath the carpet, providing power wherever it is needed.

Ultra thin. Ultra simple. Ultra fast.

www.steelcase.com/thread





OLOGY™

Designed with workers in mind, Ology brings physiology and biology together to support wellbeing in the workplace. It offers height adjustable desk solutions, providing users the flexibility to shift postures throughout the day.

Ology can be personalized with various ergonomic features and an optional antimicrobial treatment to create a more health-conscious work environment.

www.steelcase.com/ology





VERB®

The Verb family is growing. New additions to this integrated collection of classroom furniture include media tables, personal tables and a standing-height leg that encourages posture changes in the classroom.

Unique shapes promote interaction, while a variety of sizes allows Verb to work in any active learning environment.

www.steelcase.com/verb



EMPATH®

Introducing Empath, now available with a tablet.

Empath keeps patients comfortable and safe, designed to empower them and meet their needs.

With its new pivoting tablet surface, it allows barrier-free patient transfers from either side of the chair while also providing a clean aesthetic that integrates seamlessly with the recliner.

Empath. Empowering patients.
Meeting their needs.

www.steelcase.com/empath



SHORTCUT™

Sleek, modern and incredibly versatile, Shortcut is at home in the office, educational environments and healthcare settings.

With a comfortable plastic shell and a range of options, Shortcut is the perfect choice for short-term sitting.

myturnstone.com



CAMPFIRE™ SLIM TABLE

The perfect complement to any lounge setting, Slim Table provides space to get organized, and a discreet power outlet makes it easy to stay fully charged all day long.

myturnstone.com



CAMPFIRE™ FOOTREST

As a place to put your feet up, prop the backs of the legs or encourage a shift in weight while standing, Campfire Footrest is a small product with a big impact.

myturnstone.com



CAMPFIRE™ SKATE TABLE

Skate Table is the perfect companion for lounge settings, with smooth-gliding wheels that allow your work to adjust to you, rather than you adjusting to your work.

myturnstone.com



CH468 OCULUS

Designed by Hans J. Wegner, the CH468 Oculus armchair delivers contemporary comfort with a refined sense of style and sophistication. Its roomy back embraces you as its gently sloping armrests indulge relaxation or reading. Designed to provide comfort in different postures, it gracefully supports the head, neck and upper back.



SIXFIVEZERO_CO

The sixfivezero_CO collection is a versatile and comprehensive offering of contemporary tables and seating. Seating (designed by Lievore Altherr Molina) is lightweight and stackable—available in a range of upholstery and finish options. Tables (designed by Coalesse) deliver power and performance with a refined aesthetic in multiple sizes and heights.



CH88

A handcrafted side chair designed by Hans J. Wegner, the CH88 chair is a classic testament to materiality and design. Its blend of wood and steel materials and its minimalist design result in a light, organic and yet, industrial expression that fits any setting. The stackable design, numerous finish options, and choice of wood or upholstered seat make the chair versatile, functional, and elegant.



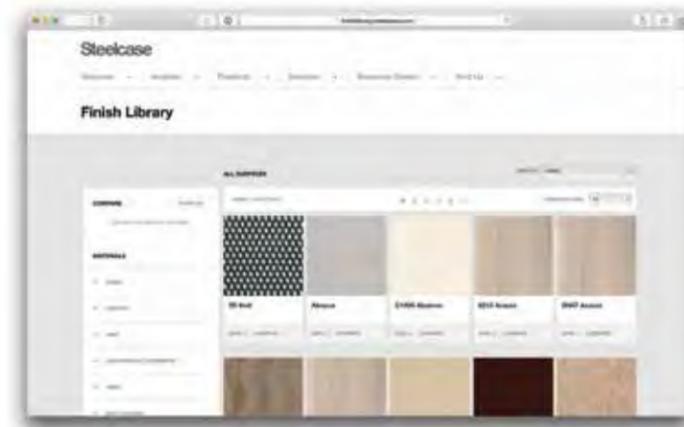
MASSAUD CONFERENCE

Designed by Jean-Marie Massaud and Coalesse, the Massaud Conference is the newest introduction to the Massaud Collection, which already features a lounge, worklounge and storage ottoman. Available in standard, signature and duvet upholstery, the Massaud conference chair balances luxury and utility with residential sensibility.



<5_MY

Designed by Michael Young and Coalesse, the <5_MY chair is composed entirely of carbon fiber, allowing it to support up to 300 lbs. while weighing less than five. With its modern form and customizable color palette, <5_MY invites personal expression and channels modern craft.



FINISH LIBRARY

Introducing the new and improved Finish Library. The new site provides a clean, more robust search functionality, with browsing by material type and the ability to dial in your search with filters. We've added a tab called Product Line Availability, showing which products are compatible with the finishes. The images are high resolution and have zoom capability, allowing you to view texture and grain details. Order samples directly from the site using your Steelcase login.

finishlibrary.steelcase.com



LAMINATE

Our new series of Wenge-inspired laminate choices offer a range of color selections for use across multiple environments. The new finishes come in HPL, LPL and matching edge bands.



COMPOSITE VENEER

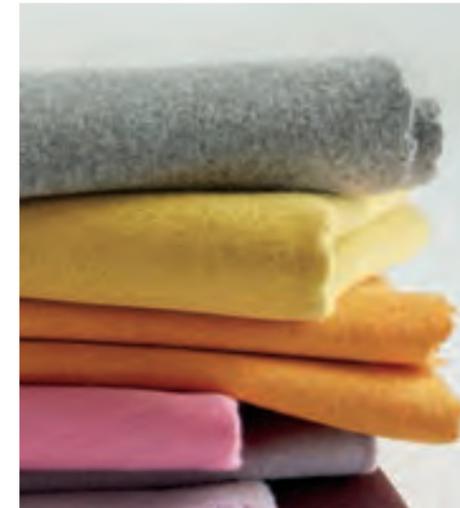
We're expanding our selection of materials choice through the introduction of several new composite veneers and matching edgebands. These new finishes offer engineered wood selections that create a consistent grain pattern and exhibit many desirable wood characteristics. Composite Veneers are easy to order and have established pricing on pre-tested, pre-approved product lines.

WANNABE

A contemporary felt for wallcovering applications, Wannabe combines a soft texture with joyful colors at an affordable price. While featuring a plush surface characteristic of wool felts, the polyester construction provides superior performance in flammability testing.

Wannabe contains 100% recycled polyester, contributing to LEED requirements for recycled content. In addition, the fabric comprises 100% solution-dyed fibers, which results in less water usage than yarn-dyeing processes. Ideal for creating a private space within a public setting, Wannabe is perfectly suited for the modern corporate environment, higher education, or as an accent in the communal areas of hospitality projects.

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**TEXTILES 101: HEATHER**

For Textiles 101 we go back to basics, with a twist. Following the success of our Color Wheel collection, which offered a comprehensive palette of hues, in Textiles 101 we explore another fabric fundamental—the varied looks and feels offered by a full palette of textile constructions.

In Heather, the exceptional quality of the wool—sourced from the oldest wool-producing region in Italy—is testament to the local manufacturers' unparalleled experience in handling the fiber. The soft hand results from a subtle felting process applied at the end of the weaving, while the refined heathered effect is produced by the careful combination of different color stocks.

**THE ELEMENTARY COLLECTION**

The Elementary Collection introduces a suite of fabrics taking their inspiration from classic textile typologies, reimagining traditional artisanal techniques from a contemporary perspective. These statement upholsterys are equally suited for boutique hospitality, luxury or modern corporate environments.

The collection includes a traditional houndstooth motif woven with lustrous wrapped yarns to replicate the effect of embroidery, an épingle construction exploded to an exaggerated scale and the beautiful textures produced by chunky

**THE ELEMENTARY COLLECTION: AINSLEY**

Ainsley features an unexpected mash-up of two traditional weaving structures, as ovals of bold color in épingle construction are raised against the woven grid of a multihued plaid background.

Colorways range from delicate neutrals to vibrant contemporary hues, such as cobalt blue, scarlet, orange and pink.

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