

THE LAW FIRM OF THE FUTURE

YOUR FIRM'S POST-PANDEMIC WORKPLACE MODEL: HOW TO FIND THE RIGHT BALANCE

An MPF Webinar – April 7, 2021

by

Uri Gutfreund

Law Firm Group Leader, Risk Strategies Company

Rob Mattern

President and Founder, Mattern & Associates

John Remsen, Jr.

President, TheRemsenGroup

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BIOGRAPHICAL PROFILE

Uri Gutfreund

National Law Firm Practice Leader
Risk Strategies Company
New York, New York
212.826.9744 – ugutfreund@risk-strategies.com

Uri Gutfreund is The National Law Firm Practice Leader at Risk Strategies Company, a top 25 national insurance brokerage and The Founder and Moderator of The Managing Partner Round Table™, a regional peer-to-peer professional development group. This unique program has quickly become a leading venue for thought leaders in the legal industry.

At Risk Strategies, Uri is responsible for the development and execution of all insurance and risk management services to the company's law firm clients. He oversees all law firm specialty areas including: Health, Professional Liability, Property and Casualty, Cyber and EPLI. His practice leadership combines 20 years personal experience with cutting edge innovation remaking law firm insurance programs using the latest technology, peer benchmarking, and real-time best practices to serve the company's law firm clients.

He has been a Registered Professional Liability Underwriter since 2001 and a frequent speaker and is a writer on law firm leadership, law firm business practices and insurance and risk management at national and regional conferences.

September 2020



Rob Mattern is President and Founder of Mattern, LLC, the leader in law firm operations consulting. Mattern provides unbiased strategies for measurably improving the efficiency and cost-effectiveness of law firms' in-house and outsourced administrative resources, office services and information governance. Mattern has successfully led over 450 engagements among which include prestigious law firms in the Am Law 50, 100 and 200. Additionally, they produce key industry surveys, including the bi-annual and highly regarded Cost Recovery Survey, and the eDiscovery and Litigation Support Survey.

Mattern has developed the Mattern Method®, Mattern Plan B® Cost Recovery and the Mattern Near Site® solution which has helped Am Law 100/200 firms transform their office and administrative services.

The firm publishes widely including the *American Lawyer*, *Wall Street Journal*, *Law360*, *Law Technology News* and *Legal Management* magazine. Rob is an editorial board member of *Law Journal Newsletter's Accounting & Financial Planning for Law Firms*, and is a frequent speaker at key industry events including the Thomson Reuters COO/CFO Forum, PwC Law Firm Services Global Forum in New York City, ALA Financial Management Conference, ALA National Conference, ARMA International and Sandpiper Partners law firm conferences.

Mattern is also the author of the book [The Mattern Method® – Proven Strategies for Increasing the Value and Profitability of Your Support Services.](#)

For more information visit Mattern's website, www.matternassoc.com, and follow them on Twitter [@matternoffact](https://twitter.com/matternoffact).

BIOGRAPHICAL PROFILE

John Remsen, Jr.

President

TheRemsenGroup

Atlanta, Georgia

404.885.9100 – jremsen@therem sengroup.com

John Remsen, Jr., is widely recognized as one of the country's leading authorities on law firm leadership, management, marketing and business development. Since 1997 TheRemsenGroup has consulted with more than 400 law firms and thousands of law firm leaders to help them develop and implement long-term strategic objectives to improve cohesiveness, profitability and sustainability.

John is a frequent speaker and author on law-firm leadership and marketing topics. He has spoken at national and regional conferences of the Legal Marketing Association, Association of Legal Administrators, American Bar Association, and numerous state and local bar associations. His articles have appeared in dozens of highly respected legal publications, including the *ABA Journal*, *Law Practice Management*, *Law Practice Today*, *Law360*, *Legal Management*, *Marketing for Lawyers*, *Marketing the Law Firm*, *Managing Partner*, *National Law Review* and *New York Law Journal*.

Since 1988, John has been an active member of the Legal Marketing Association, and he has served as President of LMA's Southeastern Chapter, Executive Editor of *Strategies* (LMA's newsletter) and a member of LMA's national Board of Directors. He is also an active member of the Association of Legal Administrators and a popular speaker at ALA meetings and conferences.

In 2002, John created The Managing Partner Forum, a highly acclaimed conference series and community for managing partners and law firm leaders. More than 1,200 firm leaders from 900 law firms and 43 states have participated in 26 conferences. In addition, John distributes *The MPF Weekly*, an electronic newsletter to more than 10,500 firm leaders throughout the U.S., Canada and 28 other countries.

John's influence was underscored when he was inducted as a Fellow of the College of Law Practice Management in 2013, in recognition of his 25 years of demonstrated expertise in law firm leadership and management. Founded in 1994, the College honors those who "inspire excellence and innovation in law practice management." Membership is by invitation only and includes just 200 individuals.

And the College was not alone: in 2016, John was recognized by LawDragon as one of the "Top 100 Consultants and Strategists" to the legal profession; and in 2017, John was recognized as one of the world's top "leaders and influencers" in the business of law by the Association of International Law Firm Networks.

A native of West Palm Beach, Florida, John holds an MBA from The University of Virginia (1985) and a bachelor's degree in Business Administration from the University of Florida (1980). Prior to enrolling in graduate school, John was Executive Director of The Florida Council of 100, an organization comprised of Florida's top CEOs and other business leaders.

September 2020

MPF WEBINAR
Law Firm of the Future



The MPF Webinar Series: The Law Firm of the Future
Your Firm's Post-Pandemic Workplace Model:
How to Find the Right Balance for Your Organization
An MPF Webinar with Rob Mattern
April 7, 2021 – 2:00-3:00pm ET





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Uri Gutfreund

- National Law Firm Practice Leader,
Risk Strategies Company
- Prof'l Liability, Cyber, EPLI, Employee Benefits,
Property and Casualty Insurance Plans
The Managing Partner Roundtable
- Speaker:
 - American Bar Association
 - Association of Legal Administrators
 - Managing Partner Summit
 - MPF Annual Conference
 - Law Firm Networks
- Education:
 - BA – Yeshiva University



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John Remsen, Jr.

- President, TheRemsenGroup
- President & CEO, Managing Partner Forum
- Strategic Planning, Marketing/Business Development, Firm Retreats, COO/CMO Search
- Fellow, College of Law Practice Management
- Speaker:
 - American Bar Association
 - Association of Legal Administrators
 - Legal Marketing Association
 - MPF Annual Conference
 - Law Firm Networks
- Education:
 - MBA – University of Virginia
 - BSBA – University of Florida



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MPF PROGRAMS IN 2021

- MPF Webinar Series – First Wednesday @ 2pm ET
- MPF Virtual Conferences
 - The MPF Law Firm Leadership Survey – May 6
 - Women in Leadership – June 17
- MPF Listserv and Conference Calls
- *The MPF Weekly* – Friday mornings
- MPF Website – www.ManagingPartnerForum.org
- The MPF Fall Symposium – October 7 in Chicago



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TODAY'S WEBINAR

- Introductions
- Registrant Survey Results – 187 firm leaders
- Today's Topic – Finding the Right Balance
- Live Audience Polling
- Your Questions
- Next MPF Webinar – Wednesday, June 2nd



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Rob Mattern

- President and Founder, Mattern LLC
- Market leader in law firm operations consulting
- 500+ law firm engagements, including 70 of the AmLaw 200
- Frequent speaker
 - TR's Law Firm Leaders and COO Forum
 - ALA Annual Conference
 - PwC Law Firm Services Global Forum
- Frequent author
 - Wall Street Journal*
 - Law Technology News*
 - Legal Management*
- Education:
 - MBA – Drexel University
 - BA – Villanova University



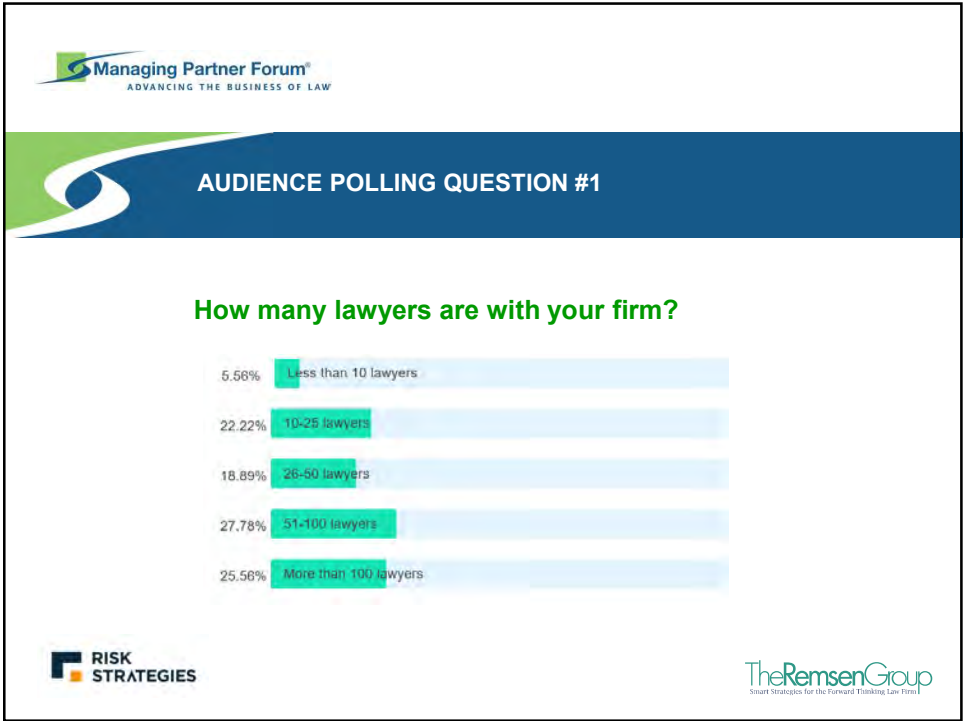
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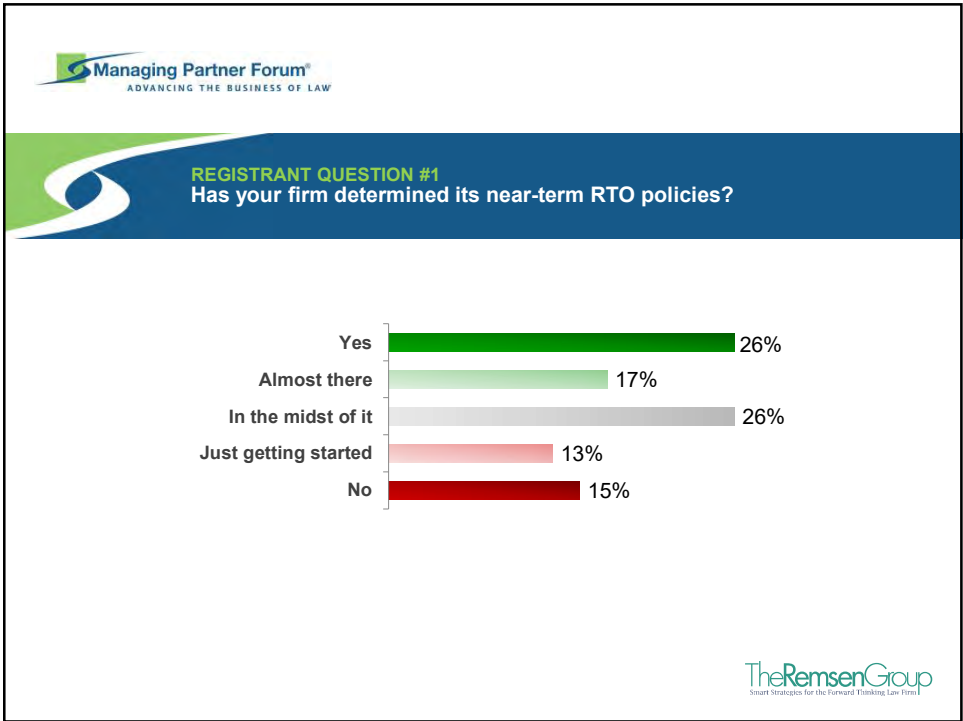
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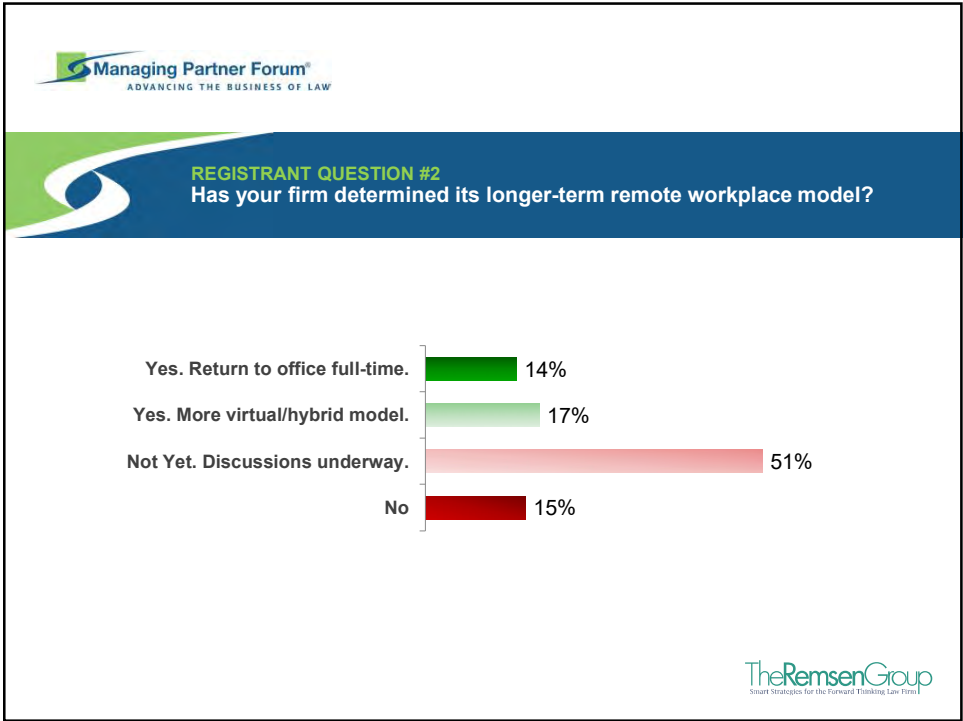


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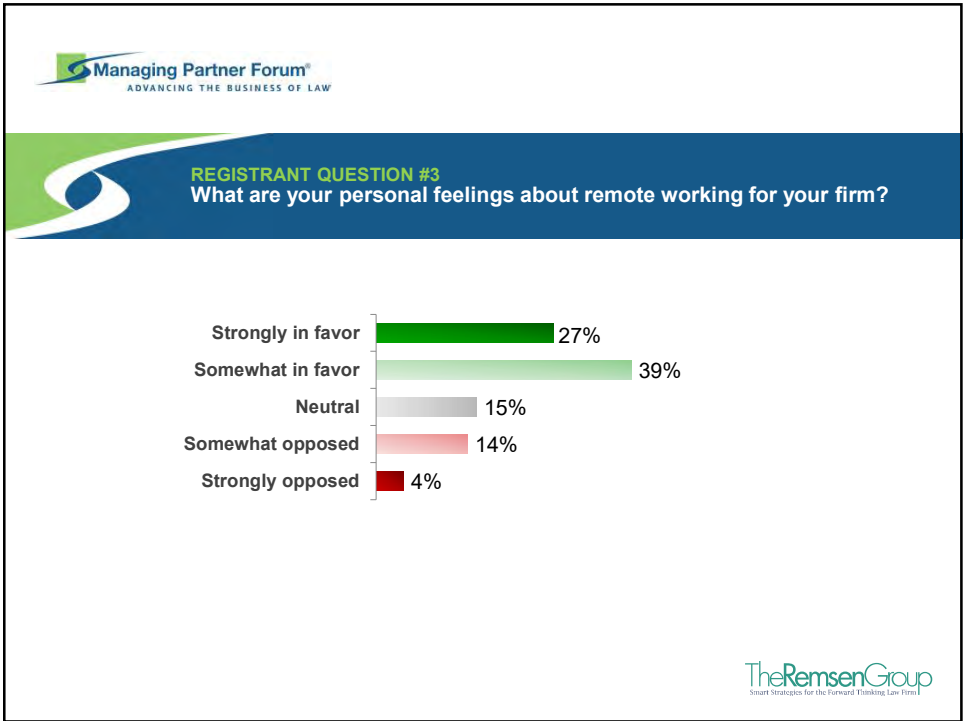


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RETURN TO OFFICE IS CRITICAL

- Firm Culture
- "Office Buzz"
- New Hires/Onboarding
- Productivity
- Collaboration/Teamwork
- Mentoring/Training
- Marketing/Business Development
- Social Responsibility

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COUNTERPOINT: HYBRID IS THE FUTURE



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THE TRADITIONAL LAW OFFICE IS DEAD

- Law firm evolution acceleration caused by COVID-19
- Technology and cybersecurity investment will continue to increase
- 30% to 50% reduction in office space
- Travel costs down significantly
- Hybrid remote workplace
- File-less, paperless and automated
- 100% cloud-based remote environment
- Focus on efficiency – some meetings could have been an email
- Centralized administrative services

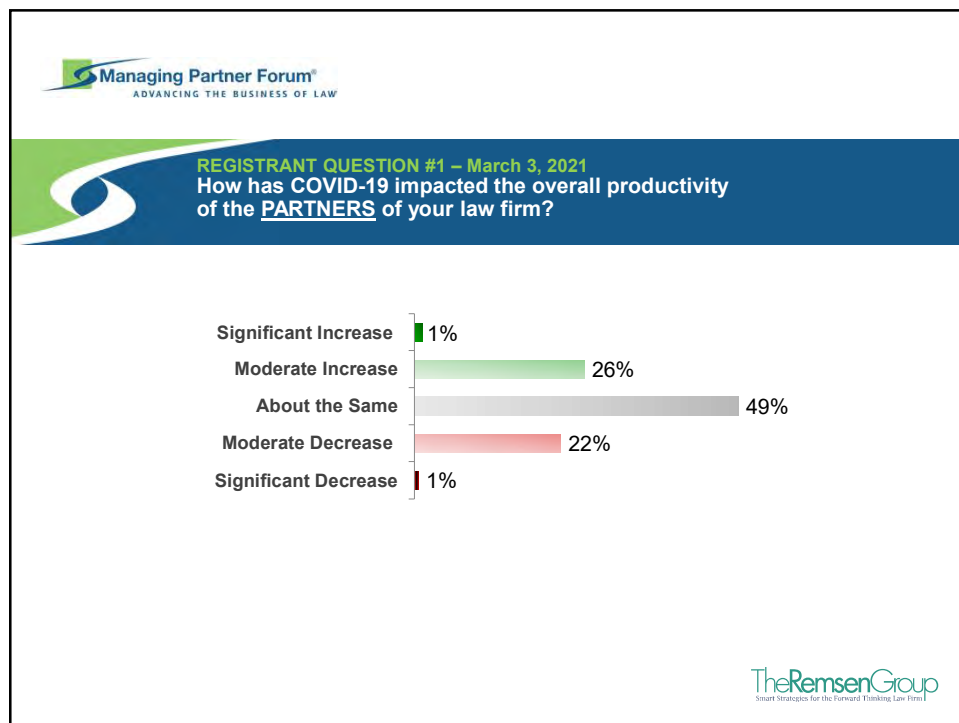
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IMMEDIATE & LONG-TERM IMPLICATIONS

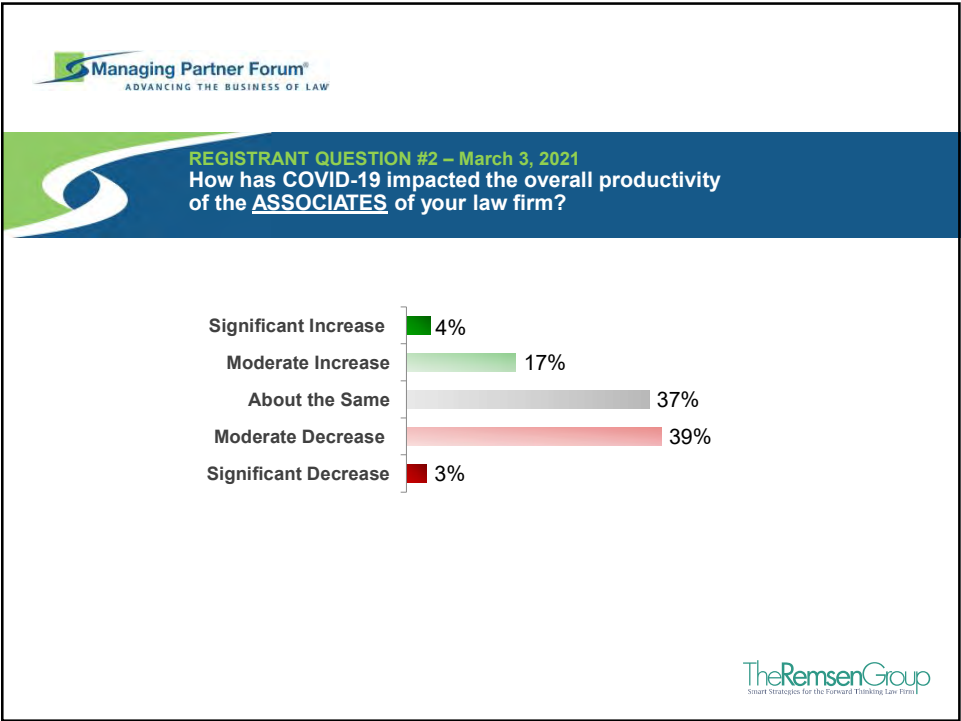
- Obsolescence has become apparent
- Cyber breach/ransomware attack heightened risk
 - Addressing data security necessary to stay competitive and retain client trust
- Culture/morale and training/mentoring challenges
- Marketing and business development strategies have shifted
- Law firms will evolve into quasi-technology firms
- ALSPs and AFAs will see continued growth
- Non-lawyer headcount will rise
- Remote work implemented within business structure
- Erosion of licensure jurisdictional boundaries

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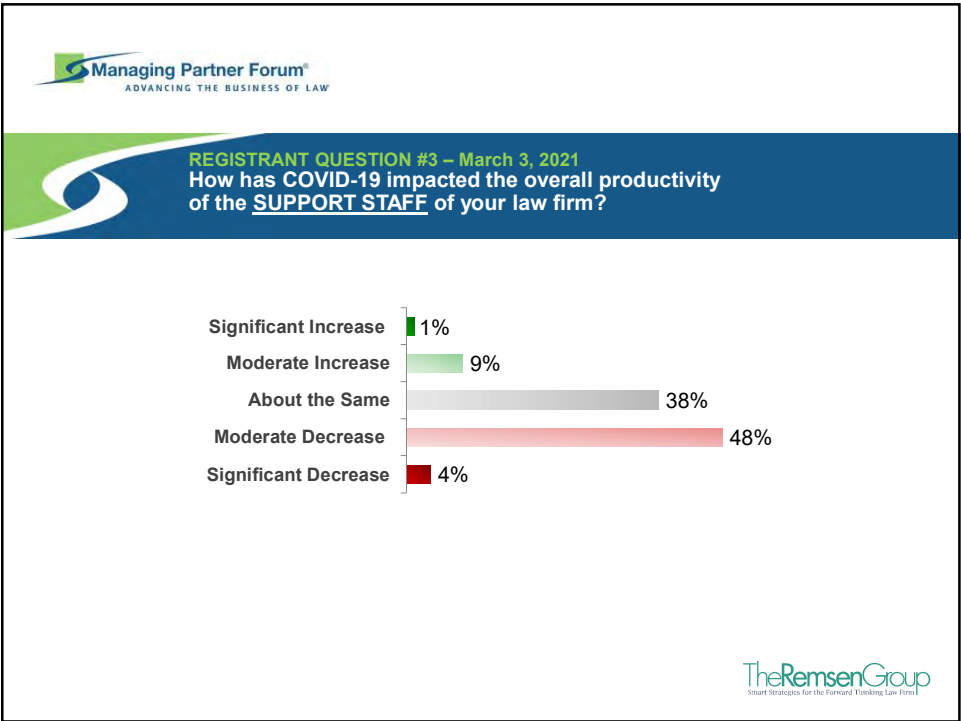


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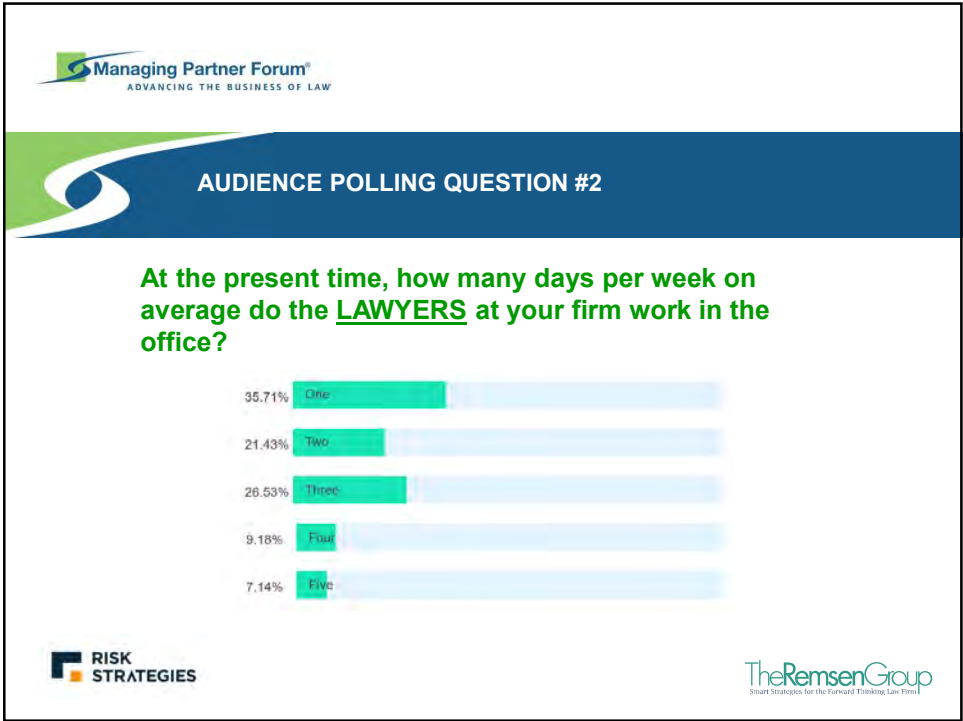


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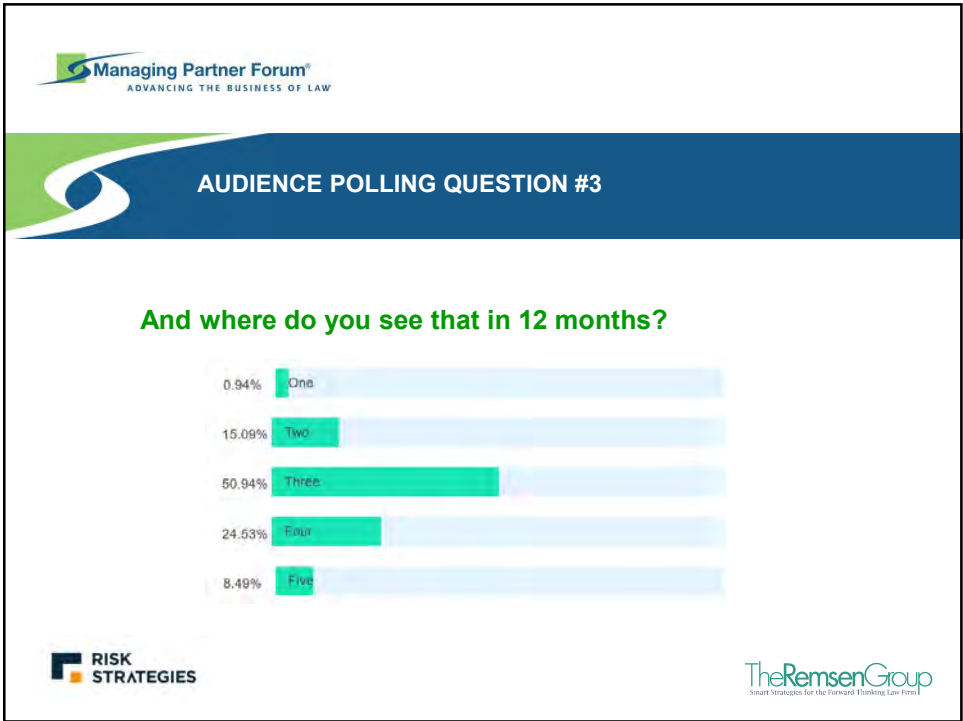


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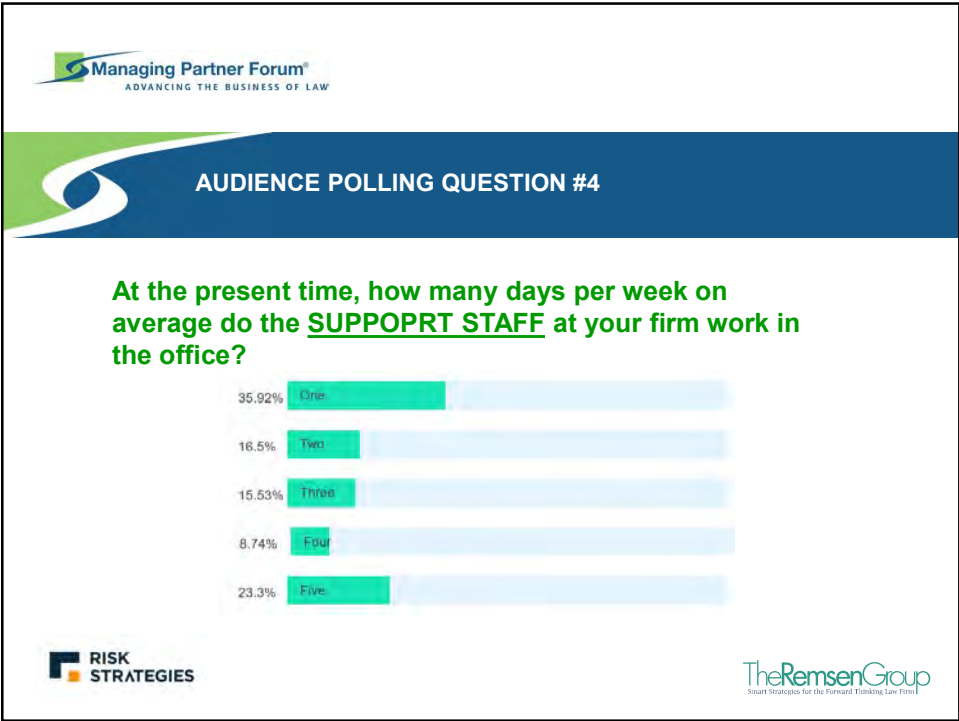


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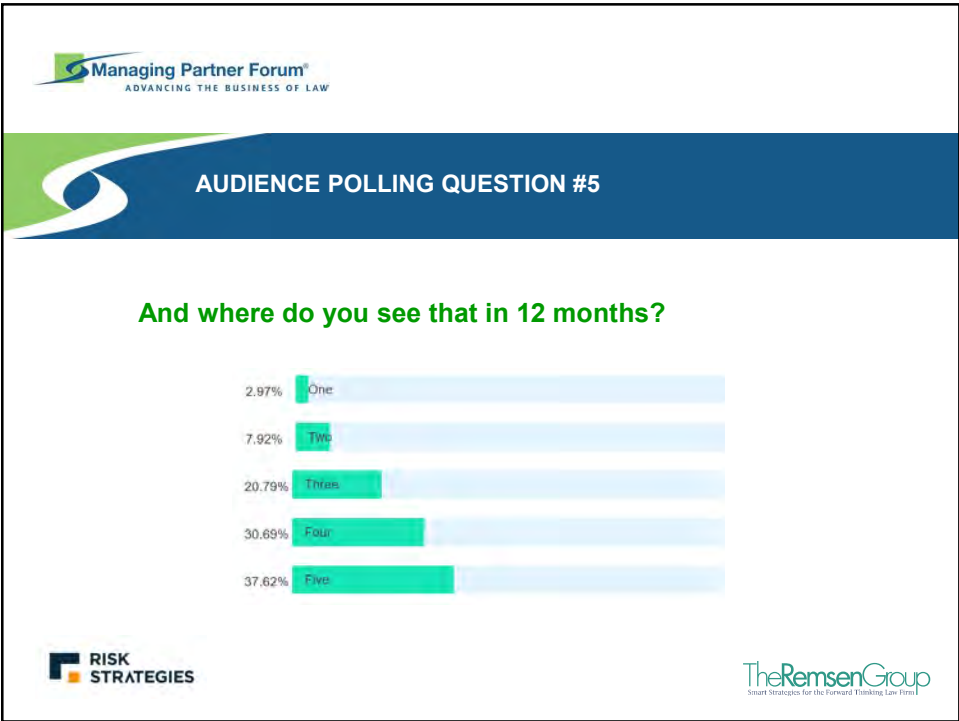


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76%

of lawyers prefer to work remotely

Source: 2021 State of the Legal Profession
Thomson Reuters/Georgetown Law

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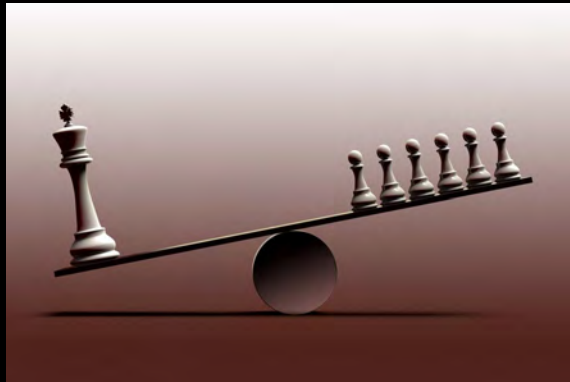


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FINDING THE RIGHT BALANCE



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RETURN TO OFFICE: YES, NO OR MAYBE? Unique Decision for Every Law Firm

- Firm Culture
- Firm Size/Demographics
- Geography/Office Location
- Productivity Concerns
- Types of Practice Areas
- Types of Clients
- Mentoring/Training/Onboarding
- Current Lease(s) Situation
- Technology Infrastructure

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RETURN TO OFFICE: YES, NO OR MAYBE? **Unique Decision for Every Law Firm**

Decisions that you make over the next few months will set the tone for how work will be done in the future, impacting the relationships that firm owners and employees have formed and their emotional connection with the company. These decisions should be made carefully, deliberately and strategically.

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- Law firm operations consulting
- Provide unbiased strategies for measurably improving the efficiency and cost-effectiveness of their in-house and outsourced administrative, office services and records/information governance

Managing Partner Forum **Workplace Model Considerations**

April 7, 2021

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Factors/Challenges to Consider in Deciding on Workplace Model

Physical

- Current and future lease status
- Access to work, status of public transportation
- What will the space be used for – clients?, attorneys?, staff?
- Hoteling

Technology

- Digital based workflow
- Cybersecurity
- Cost Recovery

Administrative Services

- In-House or outsourced?
- Same location or remote?

Opportunities

- Reduced expenses - rent, travel and marketing
- Digital marketing strategy - evens the playing field against the big guys
- Get rid of the paper!

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FIRM CONSIDERATIONS

- Size and jurisdictions
- Leases
- Security
- Insurance Considerations
- Technology infrastructure
- Back-office operations
- Bar rules and regulations

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CLIENT CONSIDERATIONS

- Practice mix
- Client mix
- Location
- Business v consumer

BUSINESS PARTNERS

- Bank
- Health care providers

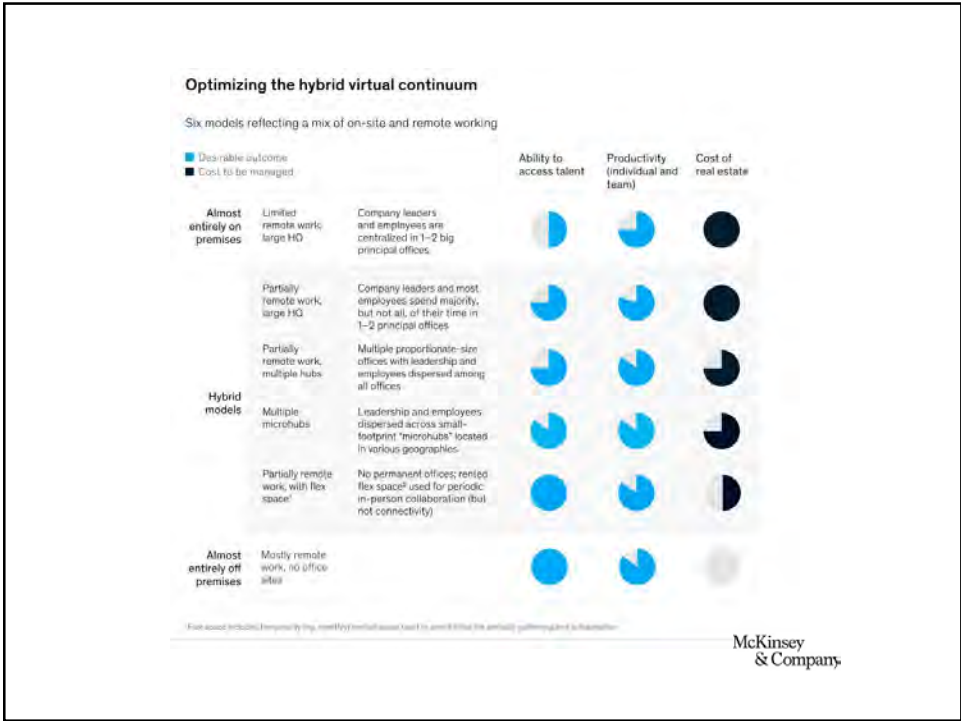
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PEOPLE CONSIDERATIONS

- Partners
- Associates
- Support Staff
- ASK!
- Online surveys, 1-1 conversations, research, other firms
- Case-by-case basis?

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FINDING THE RIGHT BALANCE

- Now is the Time
- Look Forward – Ride the Wave
- Can't Make Everybody Happy
- Be Thoughtful and Deliberate
- You Don't Have to Lose Talent

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RESOURCES

- [Association of Legal Administrators](#) (ALA)
- [National Assn of Law Firm Placement](#) (NALP)
- [Society for Human Resources Management](#) (SHRM)
- MPF ARTICLE: Survey for Attorneys and Staff
- ARTICLE: [Reimagining the Post Pandemic Workforce](#) - McKinsey & Co.



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CONTACT US

Uri Gutfreund
212.826.9744
uri.gutfreund@risk-strategies.com

Rob Mattern
610.459.7750
rmattern@matternassoc.com

John Remsen, Jr.
404.885.9100
jremsen@theremsengroup.com



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The Law Firm of the Future

Back to the Office or Work at Home?

Survey for Lawyers and Support Staff

Are your lawyers and support staff completely fed up with working from home or do they like the flexibility? Now that the lockdown measures are gradually easing, law firms are determining their approach to the post-corona way of working. Satisfaction about working from home varies widely, yet “hybrid” working culture is gaining ground for all non-vital professions: a balance between office and remote working.

But how exactly does that work? Research has taught us, for example, that a hybrid culture offers opportunities to boost enthusiasm and connections with colleagues again. However, scattered communication flows and lack of structure pose a risk. Now is the time to ask the right questions!

This survey can be utilized to help you assess the right balance for your firm. We suggest that your firm deploy separate surveys for partners, associates and support staff to learn where attitudes and opinions may vary.

Welcome Page

Your feedback is extremely important, and we are requesting that all members of the firm respond to this brief survey. We will use your responses to prepare for a smooth and phased return to the office as state and federal orders allow us to do so. As well, we are considering a more hybrid workplace model, allowing for more flextime and work-from-home arrangements on a permanent basis.

Thank you for your time and your assistance in developing a strong and healthy plan for the future.

About You

In which office location are you based?

In which practice group do you primarily work?

In what age range are you?

<30 30-39 40-49 50-59 60-69 70+

Your Work Preferences

Please answer “yes” or “no” for the following ten statements.

Overall, my home working environment is comfortable. Y/N

When I work from home, I am more motivated to do my job than in the office environment. Y/N

When I work from home, I experience a healthier workload than in the office environment. Y/N

When I work from home I experience just as much a sense of fulfillment from my work as I do in the office environment. Y/N

When I work from home, I know exactly what is expected of me by my colleagues and co-workers. Y/N

When I work from home, I experience a better work-life balance than in the office environment. Y/N

When I work from home, I feel more energetic than in the office environment. Y/N

When I work from home, I have more focus to do my job than in the office environment. Y/N

When I work from home, I can work just as well with colleagues as in the office environment. Y/N

When I work from home, I feel connected to my colleagues. Y/N

What has been your single biggest challenge working remotely?

- General anxiety
- Social isolation
- Keeping regular schedule
- Childcare/schools
- Staying motivated
- Too many distractions
- Inadequate staff support
- Technology

What is the single most important “soft skill” that you currently need to improve?

- Virtual communication
- Time management
- Stress management
- Empathy/emotional intelligence
- Sharing/teamwork
- Embrace change

On a permanent basis, what percentage of your typical work week would you prefer to work remotely?

0 10 20 30 40 50 60 70 80 90 100

How days per week would prefer to come into the office in a typical work week?

0 1 2 3 4 5 6

About Firm Issues

What can the firm do to make you more efficient/productive when working remotely?

- Office furnishings/equipment
- Technology
- More staff support
- Better intake and billing system
- Better document/forms library
- Online resources (LN, TR)
- Other

Since COVID-19, how well have we been communicating within the firm? (1-10 scale, with 10 the most important)

- From firm leadership
- Within practice groups
- Among offices
- Among partners
- Among associates
- Among support staff

Do you have any specific recommendations to improve our internal communication within the firm?

What concerns, if any, would you have if went to a more remote situation? (Select all that apply.)

- Impact on Culture
- Collaboration
- Mentoring/training
- Social isolation
- Lost productivity

Which statement best describes your feelings about permanent remote working policy for our firm?

- Strongly favor full-time return to office
- Prefer RTO, but recognize the need to adapt
- Strongly favor hybrid/remote working model
- Not sure

How important is it to you that the firm provide flexible remote working arrangements on a permanent basis?

(1-10 scale, with 10 the most important)

Question about RTO Protocols

Vaccines, masks, self-declarations, testing, distancing

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#



About the Author

John Remsen, Jr. is President and CEO of [The Managing Partner Forum](#), the country's premiere resource for managing partners and law firm leaders. He is also President of [TheRemsenGroup](#), a leading consulting firm for mid-size law firms. He can be reached at 404.885.9100 or JRemsen@ManagingPartnerForum.org.

It's 2025: What Did We Do to Successfully Shift Law Firm Operations?

By Rob Mattern

When the pandemic of 2020 hit, our firm, like most others, vacated our flagship mid-town Manhattan office along with our other domestic locations and, began the process of working and collaborating from home. Initially it was chaotic, but we learned to Zoom, work remotely, and the billable hours which decreased initially, came back and we ended up close to budget. Payments from clients were slow through 2020 but rebounded in 2021.

About 80% of the attorneys and staff at our New York location elected not to return to the office on a full-time basis, and about 50% of the attorneys and staff at our other locations decided the same.

When several vaccines were developed and things reverted somewhat back to back to normal around 2021, we found ourselves as a firm with too much space, too much equipment (and not the right kind), an underutilized administrative staff, and a fragmented, patchwork approach to the "New Normal."

As a firm, we decided that our operational plan moving forward was to develop an operational strategy that could withstand any kind of disruption, including new pandemics. The operational strategy we developed, therefore, was based on the following priorities:

1. Safety of employees and clients
2. Maintain excellence in the legal services we offer
3. Flexibility/scalability over services, costs and staffing even if there was a premium that had to be paid

Real Estate

We were fortunate that our lease in Manhattan was expiring in 2025 and provided a strong negotiation position. Since 50%-80% of our attorneys now maintain home offices, we had an opportunity to redo our space to reflect the new workflow.

We downsized our office space by 60% and set-up a hoteling concept for the 20%-40% of our attorneys who will be in the office at any one time. We also downsized our conference floor since, quite frankly, people are still reluctant to meet in person even with the vaccine. This had a ripple effect on reducing the need for hospitality staff as well and so we also outsourced the set-up for coffee/meals to a service provider located in our building.

We designed our office space to provide separate offices for each attorney, secretary and paralegal; widened all hallways to allow people to socially distance; set-up one-way corridors to reduce congestion; and reduced gathering spaces throughout the firm by creating more coffee/output stations.

In our other offices where we had a longer lease commitment, we created a similar plan to decrease space either through subletting or at lease renewal.

Servicing the Home Users

Half or more of our workflow is now home-based and this, we realized, would



require help desk assistance, and output support. We elected to standardize all our staff with an "office in a box." This included a color multi-functional printer (MFP) with scan, print, copy functions including a cloud-based cost recovery tool. As part of this rollout, we also negotiated a national break/fix contract for service. We piggybacked on to this contract all consumables for output (toner/paper) so everyone in their home-based offices would be standardized which made help-desk assistance much more streamlined.

The savings alone from standardizing paper and toner purchases more than made-up for the cost of the MFP purchases. We already had migrated all our applications to the cloud, so we were all set in this area. In conjunction with this redeployment of equipment to the home offices, we also dramatically reduced the output devices (MFDs and printers) in all our offices.

Administrative Services

To address the administrative support needs throughout the firm, we developed an in-house administrative

SWAT team made up of the best talent available. They were not centralized physically but were either located in their homes or in the firm's office that they wished to be located in. We had a single point of contact that "quarterbacked" the distribution of work assisted by a job submission tool that monitored workload and productivity.

This team was responsible for handling the followings tasks firmwide for all associates, and certain partners:

- Handling office tasks, such as generating reports and presentations, setting up for meetings (including video conferencing), and reordering supplies;
- Making travel arrangements and reservations;
- Preparing travel and expense reports;
- Attorney time entry;
- Screening phone calls and routing callers to the appropriate party; and
- Transcribing minutes from meetings.

Also, after an external unbiased assessment of our document processing department, we decided to outsource this entire function to a service provider that specialized in this area. After a Request for Proposal (RFP) process, we chose a provider that would service the firm 24/7 domestically.

Records

Our on-site records function, along with our off-site situation, has always been a mess. We brought in outside assistance to perform an unbiased assessment (the same company that reviewed our document processing). This company also developed our Information Governance policy with associated

retention schedules and mapped out a plan to implement the policy.

The implementation plan highlighted four keys areas of improvement:

- In-house paper-based and electronic records.
- Our off-site records storage contracts.
- The upfront digital pathway/workflow.
- The right structure and management of our in-house records.

With a "remote" workforce it was critical we move to the "electronic records" being the official record of the firm and get our paper records in shape.

We decided to outsource our records to the same company that we outsourced our document processing to. After that RFP, we did a firmwide RFP on off-site records which brought excellent results and assisted us in implementing a plan to be out of the off-site records storage in eight years.

Back Office Functions

After assessing our back office function (copy, mail, etc.), we decided we did not really need it anymore with a decentralized workforce. The elimination of this "need" which was more "perceived" than "real" enabled us to think outside the box on how some key services were performed. We decided to implement the following:

1. We established a national contract with an organization to scan all incoming mail and distribute it to the end-users electronically.
2. We established a national contract with another provider to provide overflow copy and finishing services. Users were able to use this service from their homes or the office. This

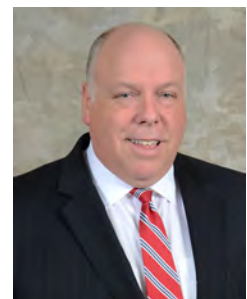
had a side benefit of migrating a lot of our work from a soft-cost recovery to a hard-cost recovery which greatly increased our recovery rate.

3. Lastly, for the miscellaneous services, we established a concierge to assist our staff.

A Look Forward

In examining the goals we outlined for ourselves to protect the safety of employees and clients, maintain excellence in the delivery of legal services, and to shift operations to optimize flexibility and scalability, I am happy to say we exceeded each one. We have the ultimate flexibility in every service area and are delivering services much more cost-effectively. Our firm is growing, we are now more profitable, and our overall morale is at the highest level since I became managing partner.

With our de-centralized approach and our work from anywhere mentality, we are attracting the best talent we ever had; for example, our Chief Marketing Officer is located in Wilkes-Barre, PA 100 miles from our nearest office. As Winston Churchill said: "Never let a good crisis go to waste," and that is exactly what we did in re-engineering the way our firm supported our attorneys in delivering the highest quality work.



Rob Mattern is President and Founder of Mattern, LLC, a legal business process consulting and cost recovery solutions firm. A member of this newsletter's Board of Editors, Mattern publishes widely, including in American Lawyer, Legal Management magazine and Wall Street Journal.



Law Firm's Adaption to Remote Working

The Findings Report

April 2020

At a Glance

Survey Summary

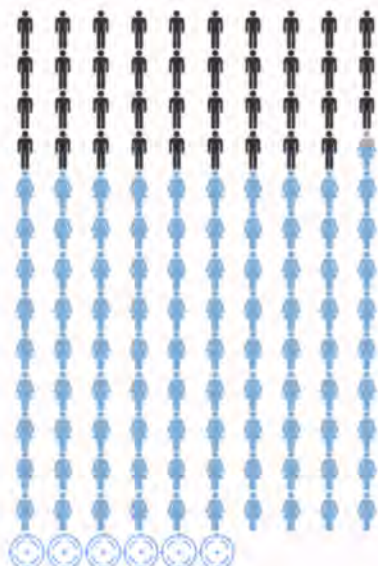
Loeb Leadership conducted a brief online survey to understand the degree to which law firms were adapting to a remote work environment, challenges to individuals and which soft skills would best support people's needs at this time.

Respondents

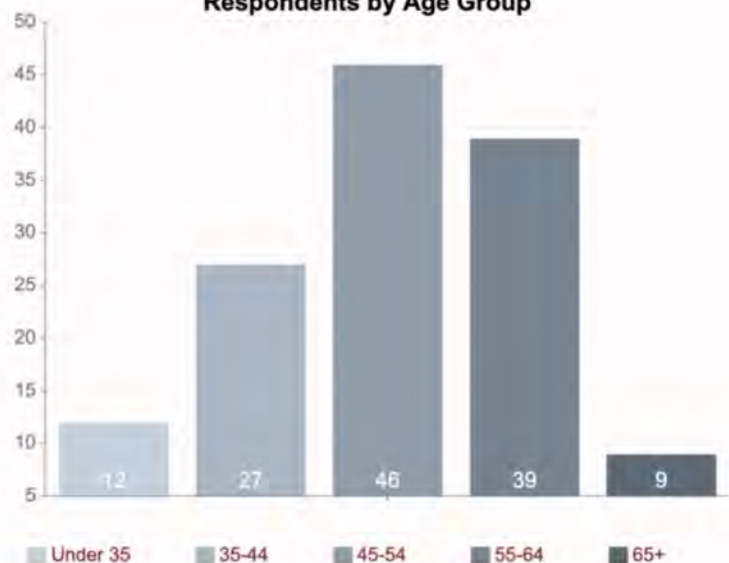
Over 200 invitations were sent to managing partners, partners, associates, and business services staff and leaders to participate – including many from Am Law 100 and Am Law 200 firms.

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RESPONSES



Respondents by Age Group



Three participants chose to not disclose their age group.

The Findings (Overall)

The Question: To what extent has your firm been successful in switching to remote working?



98% of respondents reported at least a moderate amount of success in quickly moving workers to a home office.

What these results tell us is that when forced to take swift action in response to a complex issue, law firms can adjust quickly and with success!

The Question: What is the single biggest challenge you are facing now that you're working remotely?



What the data suggest: First, we want to acknowledge that a handful of respondents reported either being sick with COVID-19 or taking care of someone who has been infected. We send our sincere wishes for a quick and fully recovery.

Not surprisingly, people are struggling with the health and financial uncertainties related to the epidemic. That, combined with fears of social isolation and communication challenges, can lead to potentially harmful mental health consequences, which can impede one's ability to reduce stress, stay focused and collaborate. Leaders need to lean in and be more accessible to their direct reports and colleagues. Don't underestimate the importance of checking in and offering simple, empathetic advice, support and asking for feedback.

The Question: What is the single most important soft skill you feel you need at this moment?



What the data suggest: Conflict Management usually ranks near the top of needed soft skills training, so its low ranking here suggests that, at this moment, people are focused on improving the most appropriate skills for dealing with the crisis: communicating in a virtual environment, managing time, reducing stress, embracing change, and collaboration.

The Findings (by Demographic)

The Question: What is the single biggest challenge you are facing now that you're working remotely?

Responses by Gender (top 3 responses):

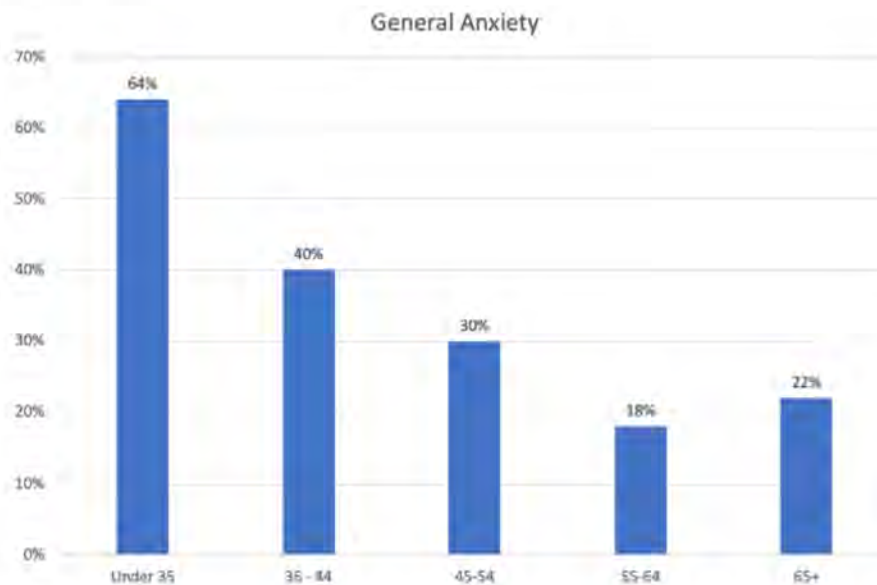


What the data suggest: Although female respondents outnumbered males by nearly 2 to 1, and thus could sway overall results, both male and female respondents cite general anxiety as their main challenge. It's also interesting to note that male respondents seemed to be struggling with staying connected and keeping people engaged.

The Question: What is the single biggest challenge you are facing now that you're working remotely?

Responses by Age Group:

The below chart illustrates the percentage of people in each age group who agreed that **General Anxiety** was their biggest challenge.



The table shows the top 3 responses for each age group, excluding General Anxiety (since that data are reflected above).

Under 35		35-44		45-54		55-64		65 and Older	
Social Isolation	27%	Childcare	36%	Communicating with Colleagues	23%	Social Isolation	26%	Keeping the Team Engaged	22%
Keeping a Regular Schedule	27%	Social Isolation	24%	Keeping a Regular Schedule	21%	Communicating with Colleagues	21%	Social Isolation	22%
Communicating with Colleagues	17%	Keeping a Regular Schedule	24%	Keeping the Team Engaged	14%	Keeping the Team Engaged	14%	Communicating with Colleagues	22%

What the data suggest: Across most age groups, general communication, team engagement and settling into a regular schedule are consistent challenges.

The Question: What is the single biggest challenge you are facing now that you're working remotely?

Responses by Gender and Age Group (top 3 responses):

Female Respondents

The table below shows the top 3 responses by females across each age group.

Under 35		35-44		45-54		55-64		65 and Older	
General Anxiety	70%	Childcare	41%	Keeping a Regular Schedule	35%	Social Isolation	30%	General Anxiety	40%
Social Isolation	30%	General Anxiety	41%	General Anxiety	27%	My Workstation	22%	Communicating with Colleagues	20%
Communicating with Colleagues	20%	Social Isolation	29%	Keeping the Team Engaged	19%	General Anxiety	22%	Keeping a Regular Schedule	20%

Male Respondents

The table shows the top 3 responses to the above question by males across each age group.

Under 35		35-44		45-54		55-64		65 and Older	
Childcare	50%	General Anxiety	50%	Communicating with Colleagues	35%	Communicating with Colleagues	25%	Keeping the Team Engaged	50%
Keeping a Regular Schedule	50%	Distractions	33%	General Anxiety	31%	Internet Connectivity	17%	Social Isolation	50%
		Keeping the Team Engaged	33%	Distractions	18%	Keeping the Team Engaged	17%		

What the data suggest: Males tend to be challenged more by improving communication, engagement and staying focused, while females more frequently cited social isolation and settling into a schedule.

The Question: What is the single most important soft skill you feel you need at this moment?

Responses by Gender (top 3 responses):



What the data suggest: Both females and males feel they need the same soft skills to best support them during this time. This makes it far easier from a training perspective as firms now have the information they need to narrow in on specific programming for their people.

The Question: What is the single most important soft skill you feel you need at this moment?

Responses by Age Group:

The below table shows the top 3 responses for each age group.

Under 35		35-44		45-54		55-64		65 and Older	
Stress Management	36%	Empathy	32%	Time Management	24%	Stress Management	21%	Time Management	22%
Virtual Comm.	27%	Virtual Comm.	16%	Virtual Comm.	19%	Time Management	18%	Virtual Comm.	11%
Time Management	18%	Stress Management	12%	Embracing Change	17%	Virtual Comm.	15%	Collaboration	11%

Responses by Gender and Age Group:

Female Respondents

The below table shows the top 3 responses by female respondents for each age group.

Under 35		35-44		45-54		55-64		65 and Older	
Stress Management	20%	Empathy	35%	Virtual Comm.	20%	Stress Management	23%	Stress Management	20%
Time Management	20%	Stress Management	18%	Time Management	20%	Time Management	18%	Time Management	20%
Empathy	20%	Virtual Comm.	12%	Embracing Change	17%	Virtual Comm.	14%	Empathy	20%

Male Respondents

The below table shows the top 3 responses by male respondents for each age group.

Under 35		35-44		45-54		55-64		65 and Older	
Stress Management	100 %	Virtual Comm.	33%	Time Management	29%	Virtual Comm.	17%	Virtual Comm.	33%
		Empathy	33%	Virtual Comm.	18%	Stress Management	17%	Time Management	33%
		Collaboration	17%	Collaboration	12%	Time Management	17%	Collaboration	33%

Question: Share your tips for staying productive and balanced at this time.

The following pages contain the verbatim responses from the survey.

Legal Industry's Reaction to Remote Working

#	RESPONSES	DATE
1	Stay focused and on a schedule, but be forgiving when it does not all go the way you want	4/10/2020 8:52 PM
2	Creating and maintaining a structured day and sticking to it. Not allowing emails to swallow up your entire day and definitely take breaks.	4/10/2020 6:50 PM
3	Try to stay healthy and keep a routine	4/10/2020 4:29 PM
4	Not losing site of the goal of productive work environment	4/10/2020 11:39 AM
5	I take each day as it is; work at staying focussed and follow a typical business day as much as possible. I also get a 30 min walk in when the weather cooperates!	4/10/2020 11:21 AM
6	Wearing work clothes at home so I feel like I'm in the office	4/10/2020 10:08 AM
7	I start my day at the computer by 9AM	4/10/2020 9:18 AM
8	Keeping on a schedule	4/9/2020 2:08 PM
9	Ensuring that me and the family are maintaining a structured and productive day. Getting sleep, excersize, enjoying family time together, making special moments, and ensuring that I am keeping up with work by working around challenges and focusing on them as challenges. Meditation and intentional recognition of what to be grateful for.	4/9/2020 12:49 PM
10	Taking a break and going for a walk outside	4/9/2020 11:10 AM
11	Busy out my calendar	4/9/2020 10:40 AM
12	making sure to get so exercise into my day. working from home has me working much longer days with everything going on. knowing I can make my own schedule and make sure I create time for myself to destress with exercise is key.	4/9/2020 10:26 AM
13	regular walking breaks outdoors	4/9/2020 9:43 AM
14	I am keeping a schedule every day and not deviating from it.	4/9/2020 9:23 AM
15	scheduling but being able to change to accommodate others	4/9/2020 8:47 AM
16	Limit TV news, go outside several times a day, take calls outside of home, hydrate, exercise daily, organize to do list on one pad	4/9/2020 8:39 AM
17	Spring cleaning.	4/9/2020 8:37 AM
18	Keep focused.	4/9/2020 8:23 AM
19	Take breaks, keep a routine, check in on others, eat healthy, get a good night's rest	4/8/2020 10:16 PM
20	spending time outside in tranquility for 30 minute breaks	4/8/2020 6:11 PM
21	Keeping a regular schedule along with making sure I take a break, I'm working longer hours now.	4/8/2020 5:20 PM
22	exercise and daily journal entries	4/8/2020 5:08 PM
23	after the first week, trying to conduct business as usual has helped tremendously. "meeting" regularly with my staff in a virtual environment to make they feel relevant and engaged has also helped. there are many days I don't get up from my chair until dinner time, so keeping busy has not been a challenge, just the deliverable and presentation has changed greatly.	4/8/2020 4:55 PM
24	Creating a routine.	4/8/2020 4:55 PM
25	exercise, deep breathing, me time, connecting with friends and family	4/8/2020 4:38 PM
26	Structuring each day, keeping a to-do list, scheduling regular video check-ins with my team.	4/8/2020 4:31 PM
27	Trying to keep a normal schedule	4/8/2020 7:14 AM
28	have a routine, structured work area, maintain normalcy through work	4/8/2020 2:02 AM
29	Take breaks and walk	4/7/2020 11:14 AM
30	waking up at a normal time, keeping a routine, having a desk/separate area for working	4/7/2020 11:07 AM

Legal Industry's Reaction to Remote Working

31	Setting a schedule and checking in with my team	4/7/2020 10:53 AM
32	Set a routine, do some things you haven't been able to do because of work demands, like organizing, cooking, board games, etc, AND and exercise.	4/7/2020 9:32 AM
33	breathe, communicate,	4/7/2020 9:27 AM
34	Channel anxiety into your work for clients. They need your assistance, and you will feel better.	4/7/2020 9:14 AM
35	Adapt. Quickly. Just go with it.	4/6/2020 11:16 PM
36	hot baths, deep breaths, and the amazing support of my firm	4/6/2020 5:22 PM
37	making a to do list and prioritizing	4/6/2020 2:06 PM
38	Daily reach out to other peers.	4/6/2020 1:56 PM
39	Stay focused and disciplined. Be sure to schedule time to step away/	4/6/2020 12:32 PM
40	I am dressed and start my day at 8:30 AM. House is quiet and sometimes the news is on low in the other room.	4/6/2020 8:56 AM
41	Yoga and meditation	4/6/2020 8:40 AM
42	Try to have a separate work area and log off at the end of the day to keep home life and work life separate.	4/5/2020 5:24 PM
43	Patience	4/5/2020 3:05 PM
44	Keep a work schedule at home.	4/5/2020 11:08 AM
45	Not leaving my workspace between working hours except for lunch and bathroom breaks	4/4/2020 12:36 PM
46	given the circumstances and committing to keeping all employees on payroll, arranging for client payments, day to day back office work it's hard to stay balanced	4/4/2020 10:24 AM
47	Productivity - use a critical eye when thinking about urgency and priorities. Set up a separate work space for work and go into "work mode" for blocks of time when you can. Balance: Work is coming in at all hours. When you have downtime, whatever time it is, do something just for yourself. Exercise, read, meditate, etc. It's important to take care of yourself mentally and physically.	4/4/2020 9:34 AM
48	Talking by phone with colleagues and clients has been helpful. Email is not enough.	4/4/2020 8:50 AM
49	Being super organized and making task lists	4/4/2020 12:10 AM
50	Find a secluded area. Tell others in your family that you are working and give a time range. Sometimes getting dressed will help.	4/3/2020 9:26 PM
51	Keep to regular work schedule. Start at the same time you would work on a regular work day.	4/3/2020 7:47 PM
52	None	4/3/2020 7:30 PM
53	getting up and stretching, walking away for a moment to clear my head and resume with a fresh mind.	4/3/2020 6:40 PM
54	Getting rest, healthy eating and enjoying a glass of wine at the end of the day. :)	4/3/2020 6:36 PM
55	Keep logged in and engaged throughout the day.	4/3/2020 6:34 PM
56	Working with my window open so I can hear the birds and smell the blossoming trees.	4/3/2020 5:16 PM
57	Maintaining a schedule, as if going to the office; making and sticking to a To Do list daily	4/3/2020 4:21 PM
58	As work has slowed trying to keep focus on furthering my firm's D&I initiatives, with the emphasis on inclusion.	4/3/2020 4:19 PM
59	Make a manageable to do list for each day; take breaks or handle distractions only when you get through a task.	4/3/2020 3:43 PM
60	Working less and getting a good night of sleep so that I can be maximally productive during my working hours	4/3/2020 3:10 PM
61	Accept that the world has changed.	4/3/2020 3:06 PM

Legal Industry's Reaction to Remote Working

62	Expressing gratitude for the positive things in my life; staying in touch with colleagues and friends; staying positive and focusing on what I can do right niw	4/3/2020 2:18 PM
63	Discipline and structure are key. Keeping a routine.	4/3/2020 12:27 PM
64	Having an established ritual to signify the beginning and end of the work day (in place of my commute, which used to be my transition signal) to help me feel ready to work when it's time to get started and help me disconnect and recharge when it's time to stop.	4/3/2020 9:31 AM
65	Schedule and stick to work hours, exercise workout time and family time	4/3/2020 12:54 AM
66	Eat well, stay active, create some structure/schedule	4/2/2020 4:54 PM
67	Self-compassion and giving myself permission not to be perfect	4/2/2020 4:49 PM
68	routine; walks; zoom meetings.	4/2/2020 3:49 PM
69	I try to be patient with myself and others. We are not going to be working the same way that we were when we were all in the office pre-global pandemic.	4/2/2020 3:00 PM
70	Try to keep to a schedule that is as normal as it can be.	4/2/2020 2:25 PM
71	I try to keep a regular schedule as much as possible. Online workouts in the morning before breakfast and I log on.	4/2/2020 1:50 PM
72	getting up early, showering and getting fully dressed.	4/2/2020 1:15 PM
73	Stay structured and remember that this is hard and unusual and expecting the same productivity is not realistic.	4/2/2020 1:06 PM
74	Try to stay calm and limit news	4/2/2020 12:10 PM
75	I would love to hear tips from others!	4/2/2020 12:07 PM
76	Set a regular schedule. Reach out to team members frequently	4/2/2020 11:25 AM
77	Making time to exercise or engage in other activities that help you recover and rebound: worship, meditation, reading, etc:	4/2/2020 9:57 AM
78	Keeping a routine	4/2/2020 9:43 AM
79	Task mgt, right task ti right resource	4/1/2020 7:44 PM
80	Connecting with colleagues via Zoom has created some normalcy and just knowing that we are all in the same situation helps.	4/1/2020 6:56 PM
81	Creating a routine that is active to include fresh air and working out. Keeping my body and mind active.	4/1/2020 6:35 PM
82	Try to get some exercise! Find a way and build it in.	4/1/2020 4:08 PM
83	I have set up my home office very comfortable and efficient. I have limited distractions and manage my calendar with few conflicts. I am probably working too long and hard during these intense times, but what I feel I need to do. I hope to gain some better down time soon.	4/1/2020 4:02 PM
84	Trying to stick to routine, getting exercise, being kind and showing grace to others and self.	4/1/2020 3:52 PM
85	task list	4/1/2020 3:20 PM
86	Stay in touch with co workers, clients, family and friends.	4/1/2020 3:11 PM
87	Exercise	4/1/2020 2:58 PM
88	Perspective. The situation is what it is and while we can't change it, we can embrace it to the best of our ability.	4/1/2020 2:51 PM
89	Regular breaks, lunch with my family, walks outside, avoid reading the news and social media	4/1/2020 2:50 PM
90	Staying on a regular schedule and exercise	4/1/2020 2:38 PM
91	Listen with the intent to understand. People are talking a lot more than normal.	4/1/2020 2:36 PM
92	Aged old saying, take one day at a time and keep your focus.	4/1/2020 1:53 PM

Legal Industry's Reaction to Remote Working

93	Tracking tasks	4/1/2020 1:51 PM
94	Stick to a routine and exercise daily!	4/1/2020 1:48 PM
95	Making a schedule for each day	4/1/2020 1:44 PM
96	Yoga	4/1/2020 1:37 PM
97	focus	4/1/2020 1:27 PM
98	Constantly trying to make lists and follow up with things that were pending before we started remote work. I was busy with recruiting so put things on the backburner. Can get to those now.	4/1/2020 1:19 PM
99	Keep as regular a schedule as possible including exercise and time outside	4/1/2020 12:54 PM
100	Call your colleagues -- even if you prefer to email. Once you are on the phone, you realize you needed to chat (and it is likely that they needed the interaction, as well).	4/1/2020 12:43 PM
101	Keeping a routine. Getting dressed in work clothes, working a regular schedule from home. Turning off at 5 pm.	4/1/2020 11:30 AM
102	Making many more phone calls - no more e-mails	4/1/2020 11:24 AM
103	I try to stick to a schedule, try to make time for fun emails/activities with my team	4/1/2020 11:21 AM
104	exercise and creating a schedule with breaks	4/1/2020 11:15 AM
105	Don't rely just on email; set boundaries and a schedule (i.e. have "working" hours); focus on those things you can control, and avoid getting drawn into the minute by minute of the news cycle	4/1/2020 11:12 AM
106	Schedule your day and stick to it.	3/31/2020 9:00 PM
107	Breathe	3/31/2020 3:31 PM
108	blah blah	3/31/2020 2:49 PM
109	Breathe	3/31/2020 2:39 PM
110	getting to work distracts me in a good way	3/31/2020 2:32 PM



Re-occupancy Assessment Tool V1.0

May 6, 2020

Background

Stay-at-home orders that began in California on March 19, 2020, quickly swept the nation. More than a month later, federal and state governments are debating the process by which businesses, schools, and other non-essential facilities can reopen. The CDC, WHO, OSHA, ASHRAE, and others have already developed administrative and behavioral resources for reoccupying buildings; however, guidance that holistically addresses the [CDC's Hierarchy of Controls](#) is needed to ensure the public's health, safety, and welfare.

Architects and allied professionals are in a unique position to coordinate a range of mitigation strategies that, in aggregate, reduce the risk of exposure to and transmission of COVID-19 within non-health care settings. Our goal is to promote best practices that protect the health, safety, and welfare of the public while creating opportunities for businesses, schools, restaurants, and other non-essential facilities to provide services.

The purpose of this document is to provide architects, private clients, and civic leaders a framework of strategies for reoccupying buildings and businesses that are in the process of transitioning from being fully closed to fully open. This document aims to provide a range of general mitigation measures to consider, with the understanding that the risk of infection can only be "flattened" and not eliminated entirely. Solutions require a coordinated approach between building features and operational practices.

It should be noted that certain COVID-19 measures listed within this assessment tool may be inconsistent with other site needs, such as security, accessibility, and sustainability; the totality of these considerations must be prioritized during this public health emergency. Furthermore, decision makers and design professionals are encouraged to evaluate the vulnerability of these buildings with a biological and natural disaster confluence.

1. It is recommended that businesses perform a rapid assessment to provide an initial determination of the ability and capacity of a building and its spaces to respond to and accommodate its occupants and the community in the event of a natural disaster as well as a biological disaster.

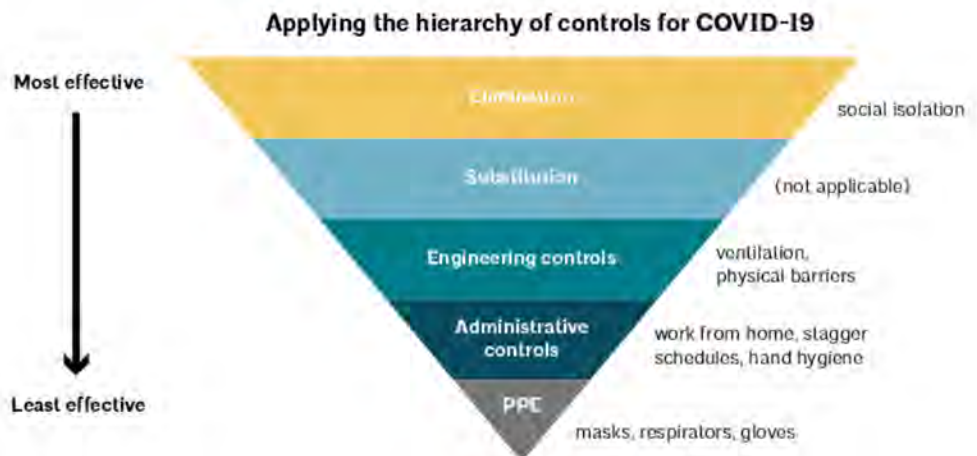
About the Re-occupancy Assessment Tool

The following assessment tool is structured on the Occupational Safety and Health Administration's "Guidance on Preparing Workplaces for COVID-19, OSHA Document 3990-03-2020." This planning guidance is based on both traditional infection prevention and industrial hygiene practices; it is advisory in nature and informational in content. The intent of the assessment tool is to describe basic steps to reduce the risk of occupant exposure to SARS-CoV-2, the virus that causes COVID-19, in workplaces and places of public accommodation. Fundamental to the assessment considerations are:

- Developing infectious disease preparedness and response plans.
- Preparation to implement basic infection prevention measures.
- Developing policies and procedures for prompt identification and isolation of sick people, if appropriate.
- Developing, implementing, and communicating about workplace flexibilities and protections.
- Implementing workplace controls.

The assessment tool uses the CDC framework of "hierarchy of controls" to select ways of controlling workplace hazards. It proposes that the best ways of controlling the hazards are to systematically remove them rather than primarily relying on workers or the public to reduce their own exposure. In most cases, a combination of control measures will be necessary.

Figure 1: Applying the hierarchy of controls for COVID-19 (adapted from NIOSH)



The Re-occupancy Assessment Tool is a list of considerations that includes engineering (physical) and administrative controls, as well as PPE, that apply to both essential businesses currently operating under restrictive orders and for currently closed non-essential facilities.

The following public health findings informed the Re-occupancy Assessment Tool considerations.

Physical distancing. COVID-19 is thought to spread mainly through close contact (within about six feet) from person to person in respiratory droplets.^[1]

Contact transfer. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly eyes.^[2] Based on studies of SARS and MERS-CoV, preliminary data on SARS-CoV-2, and CDC recommendations, it seems likely that SARS-CoV-2, the virus that causes COVID-19, can potentially persist on fomites (abiotic surfaces) ranging from a couple of hours to five days.^[3] There is also developing research on fecal/oral transmission of COVID-19, which makes bathroom environments especially important to consider from an occupancy, cleaning, and maintenance standpoint.^[4]

Aerosols. While HVAC systems in most non-medical facilities play only a small role in infectious disease transmission, including COVID-19,^[5] a CDC report cites an outbreak of COVID-19 possibly stemming from strong air conditioner airflow.^[6]

Waterborne contaminants. The virus that causes COVID-19 has not been detected in drinking water. Conventional water treatment methods that use filtration and disinfection, such as those in most municipal drinking water systems, should remove or inactivate the virus that causes COVID-19.^[7] However, other public health risks—such as Legionella—may develop in the stagnant water of unoccupied buildings.^[8]

Business owners are encouraged to communicate their mitigation measures to occupants to foster a transparency that could help the public make informed decisions about their own health and safety. Reduced public uncertainty may help bolster economic and civic activities.^[9]

A. General conditions— baseline parameters

If the intended operation of the facility cannot satisfy certain prerequisites, then the facility is likely not a good candidate for utilizing the following expansion/reopening considerations for minimizing the risk of spreading SARS-CoV-2. The below goals, operating authority, facility authority, and risk management categories are set forth as baseline prerequisites. The facility under evaluation may have additional prerequisites.

	Yes	No
Goals		
Provide a clear path for the restart of businesses to re-establish the economy.	☐	☐
Mitigate the risk of spreading pathogens, including SARS-CoV-2, among the business workers and the general public.	☐	☐
Operating authority		
Verify that the facility re-establishment orders come from the proper governing authorities.	☐	☐
Evaluate whether the authority instructions may or are intended to change over the implementation period.	☐	☐
Facility authority		
Verify that the business facility management has the legal authority to make physical alterations to the premises.	☐	☐
Determine the Authority Having Jurisdiction (AHJ) requirements for permitting facility alterations.	☐	☐
Risk management		
Comply with federal, state, and local laws including ADA, OSHA, and Department of Health regulations and requirements.	☐	☐
Does your facility require physical contact between occupants? Different facility or building types present different levels of contact intensity or modification potential. ²⁰¹ See Appendix A of Public Health Principles for a Phased Reopening During COVID-19: Guidance for Governors for building type-specific risk levels.	☐	☐

B. Workplace controls

The assessment tool does not describe mandatory requirements but lists general controls applicable to building attributes that architects may adjust depending on the differing building typologies. This listing of controls, ranked by efficiency, may be applied to essential facilities needing to expand their services when governmental restrictions are removed. It also applies to closed non-essential facilities that are to initially reopen with required limitations (short-term) and eventually operate without imposed restrictions (long-term). Not all controls may be applicable to all building types under all situations. Additional controls specific to the building type under evaluation may be required. The relevant controls may be further identified as “essential” or “desirable” to create a list of recommended design requirements to evaluate each particular building type and measure the overall effectiveness of adopted physical controls and policies.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
1. First priority: Elimination Institute social isolation. Wherever possible, occupant should work or access the business from home. This should include restructuring responsibilities to minimize the number of occupants that need to be physically present. ^{xvi}						
2. Second priority: Substitution Replace the hazard. There is no available substitution for COVID-19; thus the control measure is not applicable. ^{xvii}	N/A		N/A		N/A	
3. Third priority: Physical controls Involves isolating persons from workplace-related SARS-CoV-2 exposure. Where appropriate, these controls reduce exposure to hazards without relying on worker behavior and can be cost-effective to implement.						
3.1 Site and site arrival Convey recommended guidance for ride-sharing services, delivery services, and taxi services that define cleanliness standards and protocols. ²	☐	☐	☐	☐	☐	☐
Provide area for customer social distancing exterior queuing not subject to winds.	☐	☐	☐	☐	☐	☐
Provide temporary or permanent outdoor sun/rain covering to allow queuing outside of front door.	☐	☐	☐	☐	☐	☐

2. In recent years, the sharing economy has created environments and added new components related to how multiple people share the same spaces. Shared spaces and items, such as co-work environments, rooms in homes, cars, bikes, and other elements of the built environment, may increase the potential for environmentally mediated pathways of exposure and add complexity to enacting social distancing measures. For more, see: Dietz L, Horve PF, Coil DA, Fritz MA, Eisen JA, Van Den Wymelenberg K, Apr 2020. 2019 novel coronavirus (COVID-19) pandemic: Built environment considerations to reduce transmission. *mSystems*. 5(2).e00245-20; DOI: 10.1128/mSystems.00245-20.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
Ensure the designated building/space ingress and egress pathways support clearly separated directional traffic that also provide ADA accessibility. ³	☐	☐	☐	☐	☐	☐
Consider an exit separate from the entrance.	☐	☐	☐	☐	☐	☐
3.2 Building envelope						
Utilize natural daylight when possible. ⁴ x00 x00 x00	☐	☐	☐	☐	☐	☐
Install drive-thru and/or pick-up service windows.	☐	☐	☐	☐	☐	☐
Utilize operable windows for outside air intake if possible. ⁴ x00 x00 x00	☐	☐	☐	☐	☐	☐
3.3. Fixtures and furnishings						
Install physical barriers such as clear plastic sneeze guards. ^{x00x}	☐	☐	☐	☐	☐	☐
Utilize temporary, movable partitions to subdivide large working spaces. ^{x00x}	☐	☐	☐	☐	☐	☐
Reduce density and/or increase spacing of furniture.	☐	☐	☐	☐	☐	☐
Stagger work stations where possible.	☐	☐	☐	☐	☐	☐
Replace manual door locks with touchless RFID entry system.	☐	☐	☐	☐	☐	☐
Provide cleanable, transparent films over surfaces such as elevator buttons.	☐	☐	☐	☐	☐	☐
Consider installing antimicrobial coatings/surfaces where human touch is required. ⁵	☐	☐	☐	☐	☐	☐

³ Multiple paths will require consideration of supplemental surveillance/security provisions to address the public's proper usage, loss-prevention, and possible violent intruders (active-shooter scenario).

⁴ There are multiple side effects of altering or increasing the airflow in a space. Higher airflow rates could increase resuspension from fomites and increase the potential for contamination throughout the building by distributing indoor air more quickly, at higher velocities and volumes, potentially resuspending more ultrafine particles. For more, see Fahimipour AK, Hartmann EM, Siemens A, Kline J, Levin DA, Wilson H, Betancourt-Román CM, Brown GZ, Fretz M, Northcutt D, Siemens KN, Huttenhower C, Green JL, Van Den Wymelenberg K. 2018. Daylight exposure modulates bacterial communities associated with household dust. *Microbiome* 6:175. DOI:10.1186/s40168-018-0559-4.

⁵ Metal compounds, such as metal-based antimicrobials (MBA), can be used as toxics to communicable diseases. With exposure to copper, copper alloys (brass and bronze), and silver coating surfaces, the bacteria is viable for minutes to a few hours, an improvement over other surfaces such as stainless steel, PVC, and aluminum bronze. Both copper and silver are now found in numerous consumer products as a method to kill microbes. Keep in mind that some people have material sensitivities, particularly to copper. For more, see Bushmaker T, de Wit E, Gamble A, Gerber S, Harcourt J, Holebrook M, Lloyd-Smith J, Morris D, Munster V, Tamin A, Thornburg N, van Doremalen N, Williamson B. 2020. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. *The New England Journal of Medicine*. DOI: 10.1056/NEJMc2004973.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
3.4 Plumbing						
For buildings experiencing extended closure, flush and test potable water systems. ^{xxvi}	☐	☐	☐	☐	☐	☐
3.5 HVAC						
Increase ventilation and air changes.	☐	☐	☐	☐	☐	☐
Create negative air pressure. ^{xxvii}	☐	☐	☐	☐	☐	☐
Consider a fixed maximum number of occupants per HVAC zone.	☐	☐	☐	☐	☐	☐
Change HVAC air filters prior to re-occupancy. ⁶	☐	☐	☐	☐	☐	☐
Clean ducts that have been dormant.	☐	☐	☐	☐	☐	☐
Keep systems running longer hours, if possible 24/7. ^{xxviii}	☐	☐	☐	☐	☐	☐
Prioritize fresh air intake versus recycled air where possible. ⁷	☐	☐	☐	☐	☐	☐
Monitor and maintain relative humidity levels, preferably to RH 40–60%. ⁸	☐	☐	☐	☐	☐	☐
Disable demand-controlled ventilation (DCV). ^{xxix}	☐	☐	☐	☐	☐	☐
Consider the use of portable room air cleaners with HEPA filters. ^{xxx}	☐	☐	☐	☐	☐	☐

6. High-efficiency MERV-13 air filters are recommended if the existing HVAC system is designed to handle the MERV-13 level of resistance. For more, see Schoen LJ, Mar 24, 2020. Guidance for building operations during the COVID-19 pandemic. *ASHRAE Journal Newsletter*.

7. Higher outside air fractions and higher air exchange rates in buildings may help to dilute the indoor contaminants, including viral particles, from air that is breathed within the built environment. Higher outside air fractions may be achieved by further opening outside air damper positions on air-handling units, thus exhausting a higher ratio of indoor air and any airborne viral particles present. Be mindful of air quality in the surrounding area of the building. For more, see: Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, Van Den Wymelenberg K. Apr 2020. 2019 novel coronavirus (COVID-19) pandemic: Built environment considerations to reduce transmission. *mSystems*, 5(2). e00245-20; DOI: 10.1128/mSystems.00245-20; US Department of Labor, Occupational Safety and Health Administration. 2020. Guidance on Preparing Workplaces for COVID-19; Schoen LJ, Mar 24, 2020. Guidance for building operations during the COVID-19 pandemic. *ASHRAE Journal Newsletter*.

8. Based on studies of SARS-CoV-2 and MERS, the viability of the COVID-19 virus in aerosol form and on surfaces is highest at low relative humidity levels (i.e., 30–40 percent RH). Relative humidity (RH) above 40 percent is detrimental to the survival of many viruses, including CoVs in general. Although the current ventilation standard adopted by health care and residential care facilities, ASHRAE 170-2017, permits a wider range of RH from 20 to 60 percent, maintaining a RH between 40 and 60 percent indoors may help to limit the spread and survival of SARS-CoV-2 within the BE while minimizing the risk of mold growth and maintaining hydrated and intact mucosal barriers of human occupants. For more, see: Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, Van Den Wymelenberg K. Apr 2020. 2019 novel coronavirus (COVID-19) pandemic: Built environment considerations to reduce transmission. *mSystems*, 5(2). e00245-20; DOI: 10.1128/mSystems.00245-20.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
Consider installing UV germicidal irradiation (UVGI) in mechanical ventilation paths or in upper-room applications to indirectly treat air through convective air movement. ⁹	☐	☐	☐	☐	☐	☐
Consider utilizing ultraviolet C (UVC) during non-occupied hours for sterilization.	☐	☐	☐	☐	☐	☐
For larger buildings, check cooling and water tower condensate for bacterial growth. ¹⁰	☐	☐	☐	☐	☐	☐
4. Fourth priority: Administrative controls						
Requires action by the person or business and are typically changes in work policy or procedures to reduce or minimize exposure to hazard.						
4.1 Policies						
Develop an emergency communications plan.	☐	☐	☐	☐	☐	☐
Identify necessary revisions to human resources policies. ¹¹	☐	☐	☐	☐	☐	☐
Provide up-to-date education and training on COVID-19.	☐	☐	☐	☐	☐	☐
Identify occupants in higher health risk categories.	☐	☐	☐	☐	☐	☐
Allow paid time off for sick employees to reduce incentive to work while sick. ^{12a}	☐	☐	☐	☐	☐	☐
Establish a protocol for anyone not feeling well.	☐	☐	☐	☐	☐	☐
Establish procedures for immediately isolating those who have signs or symptoms of COVID-19.	☐	☐	☐	☐	☐	☐
Develop organizational policies to guide what happens if and when a person at the workplace is found to be COVID-19 positive. ^{12b}	☐	☐	☐	☐	☐	☐

9. UV light in the region of shorter wavelengths (254-nm UV C [UVC]) is particularly germicidal, and fixtures tuned to this part of the light spectrum are effectively employed in clinical settings to inactivate infectious aerosols and can reduce the ability of some viruses to survive. However, UV germicidal irradiation (UVGI) has potential safety concerns if the room occupants are exposed to high-energy light. For this reason, UVGI is safely installed in mechanical ventilation paths or in upper-room applications to indirectly treat air through convective air movement. For more, see: Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, Van Den Wymelenberg K. Apr 2020. 2019 novel coronavirus (COVID-19) pandemic: Built environment considerations to reduce transmission, mSystems, 5(2). e00245-20. DOI: 10.1128/mSystems.00245-20; Schoen LJ. Mar 24, 2020. Guidance for Building Operations During the COVID-19 Pandemic. ASHRAE Journal Newsletter.

10. Such conditions may pose a Legionella risk.

11. Policies may include hazard pay, the identification of essential personnel, flexible work schedules for caregivers, revised PTO carryover policy and/or travel policy, etc.

12. Strategies might include isolation, enhanced cleaning and sanitization, temporary office closure, contact tracing, etc.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
Establish procedures for returning to work after COVID-19 positive infections.	☐	☐	☐	☐	☐	☐
Establish an official guide of an approved protocol to manage employee and customer safety.	☐	☐	☐	☐	☐	☐
Institute social distancing strategies.	☐	☐	☐	☐	☐	☐
Create virtual communications and telework policies.	☐	☐	☐	☐	☐	☐
Implement occupancy-reduction policies. ¹³	☐	☐	☐	☐	☐	☐
Develop policies to reduce risk related to high-touch practices. ¹⁴	☐	☐	☐	☐	☐	☐
Establish procedures and places to quarantine deliveries.	☐	☐	☐	☐	☐	☐
4.2 Procedures to reduce the spread of pathogens						
Provide dedicated staff member(s) at building entrance to guide queuing of incoming occupants.	☐	☐	☐	☐	☐	☐
Institute workplace entrance screening. ¹⁵	☐	☐	☐	☐	☐	☐
Promote hand washing and personal hygiene.	☐	☐	☐	☐	☐	☐
Post hygiene signage.	☐	☐	☐	☐	☐	☐
Provide tissues.	☐	☐	☐	☐	☐	☐
Provide touchless hand soap and towel dispensers. ^{xxxx}	☐	☐	☐	☐	☐	☐
Provide alcohol-based hand rubs containing at least 60% alcohol disinfectants. ^{xxviii}	☐	☐	☐	☐	☐	☐
Educate occupants on respiratory etiquette.	☐	☐	☐	☐	☐	☐
Encourage self-monitoring for symptoms.	☐	☐	☐	☐	☐	☐
Provide safety training for staff to assist incoming occupants/customers. ^{only}	☐	☐	☐	☐	☐	☐
Conduct regular housekeeping.	☐	☐	☐	☐	☐	☐

¹³ Strategies might include alternate days or shifts that reduce the total number of employees in a workplace at a given time; class size; shop by appointment, or appointments to minimize waiting area crowding.

¹⁴ High-touch practices might include trying on clothing, alterations being permitted after a confirmed purchase, "quarantining" products that come back to the retailer through exchanges or returns for a sufficient period of time.

¹⁵ Screening may include practices such as temperature checks.

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
Consider periodic operational break(s) during business hours for cleaning. ⁽¹⁶⁾	☐	☐	☐	☐	☐	☐
Consider periodic third-party enhanced cleaning services. ⁽¹⁶⁾⁽¹⁷⁾	☐	☐	☐	☐	☐	☐
Where known infected persons were present, consider third-party deep cleaning (sterilization) services. ⁽¹⁶⁾⁽¹⁷⁾⁽¹⁸⁾⁽¹⁹⁾	☐	☐	☐	☐	☐	☐
Institute guidelines for cleaning and disinfecting the surfaces of chairs and tables, equipment, etc.	☐	☐	☐	☐	☐	☐
Provide disposable towels to clean work surfaces.	☐	☐	☐	☐	☐	☐
Install no-touch trash cans.	☐	☐	☐	☐	☐	☐
Provide additional rubbish bins at entrances to aid in disposing of masks and gloves.	☐	☐	☐	☐	☐	☐
Avoid and/or greatly limit the use of common equipment. ⁽¹⁷⁾⁽¹⁹⁾⁽²⁰⁾	☐	☐	☐	☐	☐	☐
Institute options for contactless payment processes for retailers to further limit contact with credit card readers, pens, or surfaces.	☐	☐	☐	☐	☐	☐
4.3 Procedures to support physical distancing						
Limit access to work areas.	☐	☐	☐	☐	☐	☐
Restrict number of persons in publicly designated waiting areas.	☐	☐	☐	☐	☐	☐
Restrict number of personnel entering isolated areas.	☐	☐	☐	☐	☐	☐
Limit the number of workers allowed simultaneously in break areas.	☐	☐	☐	☐	☐	☐
Use communication boards or digital messaging to convey pre-shift meeting information.	☐	☐	☐	☐	☐	☐
Design a process to ensure customers stay distanced while waiting.	☐	☐	☐	☐	☐	☐
Limit the number of customers in a space at a time.	☐	☐	☐	☐	☐	☐

16. Sterilization services are ideally performed by a HICRC-certified mitigation company.

17. Common equipment may include coffee pots, refrigerators, and drinking fountains as well as conference room technology and other shared devices.

Non-essential businesses

[illegible]

Actions	Essential businesses		Non-essential businesses			
	Maximize operations		Restricted occupancy		Full occupancy	
	Essential	Desirable	Essential	Desirable	Essential	Desirable
Regularly inspect, maintain, and replace supplies.	☐	☐	☐	☐	☐	☐
Secure necessary supplies and proper on-site storage facilities.	☐	☐	☐	☐	☐	☐
5.2 Procedures						
Select based on hazard to worker.	☐	☐	☐	☐	☐	☐
Ensure proper fit and periodically refit.	☐	☐	☐	☐	☐	☐
5.3 Equipment						
Provide gloves. ^{vi}	☐	☐	☐	☐	☐	☐
Provide goggles.	☐	☐	☐	☐	☐	☐
Provide face shields.	☐	☐	☐	☐	☐	☐
Provide face masks. ^{vi}	☐	☐	☐	☐	☐	☐
Provide respiratory protection.	☐	☐	☐	☐	☐	☐

C. Definitions

Essential and desirable: Planning actions depending on the level of priorities and resources generally required to implement them. This is for guidance only. State and national authorities should determine which actions are truly essential and desirable in their context, based on their own vulnerability profile and level of available resources.^{vi}

Very high risk: Persons with high potential for exposure to known or suspected sources of COVID-19 during specific medical, postmortem, or laboratory procedures. Includes health care workers, laboratory personnel, and morgue workers performing autopsies.^{vi}

High risk: Persons with high potential for exposure to known or suspected sources of COVID-19. Includes health care delivery and support staff, medical transport workers, and mortuary workers involved in preparing bodies.^{vi}

Medium risk: Persons who require frequent and/or close contact with people who may be infected with SARS-CoV-2 but who are not known or suspected COVID-19 patients. Include persons who are in frequent contact with travelers, often in areas of ongoing community transmission, involved with schools, in high-population-density work environments, and in some high-volume retail settings.^{vi}

Low risk: Persons who do not require contact with people known to be, or suspected of being, infected with SARS-CoV-2 nor in frequent contact with the general public. Includes those with minimal occupational contact with the public and other coworkers.^{iv}

SARS: Severe acute respiratory syndrome illness.^{svi}

SARS-CoV: The virus that causes SARS.^{svii}

SARS-CoV-2: The virus that causes COVID-19.^{xliiii}

COVID-19: Novel coronavirus disease-2019 is the disease.^{svix}

Coronavirus: A member of a family of single-stranded RNA viruses that infect people and animals. The disease COVID-19 is caused by a newly discovered coronavirus called SARS-CoV-2.^{i, ii}

Isolation: The separation of sick people with a contagious disease from people who are not sick.^{lii}

Quarantine: The separation and restriction of the movement of people who were exposed to a contagious disease to see if they become sick.^{liii}

D. Annotated bibliography

2019 Novel Coronavirus (COVID-19) Outbreak: A Review of the Current Literature and Built Environment (BE) Considerations to Reduce Transmission

Researchers from University of Oregon's Biology and the Built Environment (BioBE) Center and the CDC's online pathogen identification database, named MicrobeNet, moved quickly to aggregate multiple sources of both developing knowledge of COVID-19 and previous research focused on SARS-CoV-2. It also provides basic guidance for users and managers of the built environment (BE) to more effectively deal with pathogens in the built environment. This paper forms a critical text for this checklist in its interdisciplinary literature review, which aggregates a myriad of relevant sources from around the world, leveraging the diverse research team. We have used this source to help translate and coalesce developing COVID-19 research from multiple parties into actionable guidance that bases recommendations on minimizing infectious disease transmission through environmentally mediated pathways.

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1

An evaluation of the stability of SARS-CoV-2 and SARS-CoV-1 in aerosols and on various surfaces with estimates of their decay rates.

CDC: Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission

This document provides a framework for actions that local and state health departments can recommend in their community to prepare for and mitigate community transmission of COVID-19. Major building types are put forward as mitigation examples: individuals at home, schools and child care, assisted living, and workplaces. These mitigations are divided among three degrees of intensity: minimal, moderate, and substantial.

CDC: Guidance for Business Response to COVID-19

The CDC provides interim guidance based on what is currently known about COVID-19. The guidance is particularly focused on workplaces in non-health care settings. The key sections in this document include preparing workplaces for a COVID-19 outbreak, reducing transmission among employees, maintaining healthy business operations, and maintaining a healthy work environment.

WHO: Checklist for Pandemic Influenza Risk and Impact Management

This document provides the WHO's most recent pandemic guidance and recommendations prior to the COVID-19 outbreak. Section 4.1.2 "Facilities" mentions developing facility-level plans, including floor plans for essential facilities. Other key principles in this document provide the basis for more detailed guidance from other specialist groups.

Johns Hopkins Bloomberg School of Public Health, Center for Health Security: Public Health Principles for a Phased Reopening During COVID-19: Guidance for Governors

This paper provides guidance for the reopening of various building typologies and offers numerous matrices detailing modified occupancy loadings for a variety of building typologies and programming needs.

Considerations for Large Building Water Quality after Extended Stagnation

This paper was created to help public health officials, building owners, and water utilities managers better understand building water quality due to low or no occupancy. This will be a pertinent issue for buildings that were not completely decommissioned or have sat stagnant for long periods of time.

AIHA: Recovering from COVID-19 Business Closures

This document provides practical recommendations for preparing a closed building for re-occupancy, including maintaining mechanical and plumbing systems as well as cleaning and disinfecting surfaces.

OSHA: Guidance on Preparing Workplaces for COVID-19

While this seminal document creates no new legal obligations, its recommendations and informational content are intended to assist employers in providing a safe and healthful workplace. Important sections include: Engineering Controls, Administrative Controls, Safe Work Practices, and other administrative best practices for a facility's workforce.

ASHRAE: Guidance for Building Operations during COVID-19

This document provides specific HVAC-related recommendations for helping reduce the risk of COVID-19 within buildings, including fresh air intake and filter ratings.

Appendix

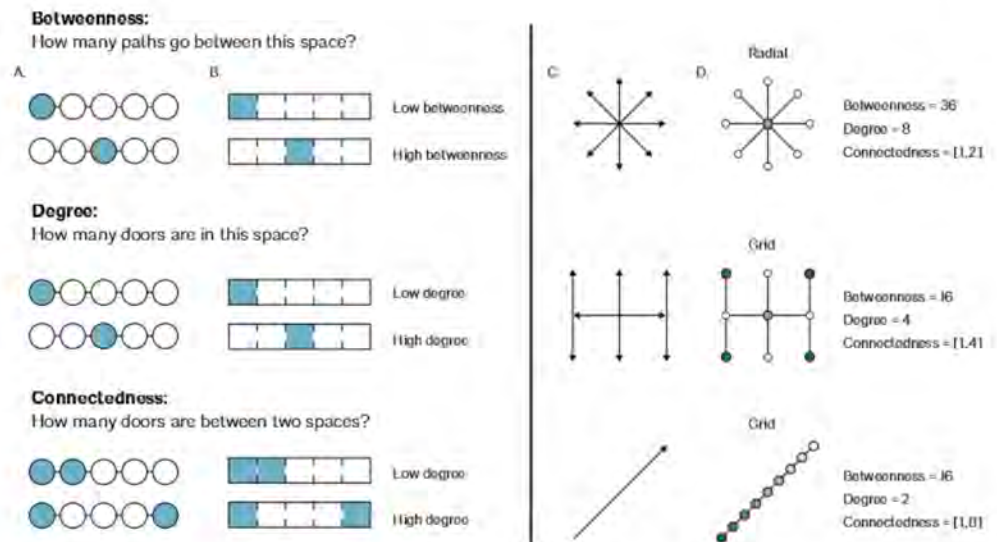
This appendix includes design tools and methods to support physical distancing guidelines.

Space syntax diagrams

While initially developed as a graphical tool to investigate the privacy, security, or connectivity/division of space at the urban to the building scale, the term “space syntax” is in actuality the combination of theories and techniques developed by Julienne Hanson,^{iv} Bill Hillier,^{iv iv kni} and colleagues at The Bartlett, University College London, in the late 1970s to early 1980s. As space syntax has evolved, certain measures have been found to correlate with human spatial behavior, and space syntax is now used to forecast likely effects of architectural and urban space on users.

In the paper *2019 Novel Coronavirus (COVID-19) Outbreak: A Review of the Current Literature and Built Environment (BE) Considerations to Reduce Transmission*,^{knii} the authors utilize this type of analysis to graphically describe the connectivity or exclusivity of certain spaces from one another from a vector-control perspective. Within complex built environments, this diagrammatic strategy could begin to base its operational flow models on rules gleaned from diagramming spaces in this way.

Figure 2: Spatial connectivity, highlighting betweenness and connectance of common room and door configurations



This figure about spatial connectivity, highlighting betweenness and connectance of common room and door configurations is from *2019 Novel Coronavirus (COVID-19) Pandemic: A Review of the Current Literature and Built Environment (BE) Considerations to Reduce Transmission*. (A) Circles and lines follow the classic network representation. (B) The rectangles follow the architectural translation of networks. Shaded areas correspond to a measure of betweenness (the number of shortest paths between all pairs of spaces that pass through a given space over the sum of all shortest paths between all pairs of spaces in the building), degree (the number of connections a space has to other spaces between any two spaces), and connectance (the number of doors between any two spaces). (C) The arrows represent possible directions of microbial spread

as determined by the layout of the BE. (D) The circles represent the current knowledge of microbial spread based on microbial abundance through BEs as determined by layout. Darker colors represent higher microbial abundance, and lighter colors represent lower microbial abundance.

Occupancy evaluation

The common measure recommended for social distancing in this COVID-19 pandemic is to keep six feet between yourself and others. That places you as the center of a circle with a six-foot radius. The area of that circle is 113.097 square feet with a close packing of those occupant circles. Let's call it 114 square feet, which is larger than a 10-foot by 10-foot room. The six-foot radius of social distancing allows for human access (i.e., travel) through an occupancy at the tangents of the circles formed by the radius.

If 100 square feet is used as a nominal social distancing measure, the occupancies impacted the most are the following, with current maximum floor area allowances per occupancy (International Building Code, Table 1004.1.1, various editions). Occupancies allowing 100 gross or net square feet per occupant are not listed here since they can be considered to meet a nominal 100 square foot social distancing.

- Airport: baggage claim—20 gross; waiting areas—15 gross
- Assembly: gaming floors—11 gross
- Assembly with fixed seats: refer to 1004.7 of International Building Code
- Assembly without fixed seats: concentrated—7 net; standing space—5 net; unconcentrated (tables and chairs)—15 net
- Bowling centers: 7 net; check with allowances of five persons/lane including 15 feet of runway
- Courtrooms: 40 net
- Day care: 35 net
- Dormitories: 50 gross
- Education: classroom area—20 net; shops, vocational rooms—50 net
- Exercise rooms: 50 gross
- Library: reading rooms—50 net
- Locker rooms: 50 gross
- Mercantile: areas on other floors—60 gross; basement and grade floor areas—30 gross
- Skating rinks, swimming pools: rink and pool—50 gross; decks—15 gross
- Stages and platforms: 15 net

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2020 Disaster Assistance Committee

J. Scott Eddy, AIA, Chair

Janine Glaeser, AIA, Vice Chair

Project team

Kenneth J. Filarski, FAIA

Christopher Kiefer, AIA

Lester G. Meu, AIA

Matthew Tierney, AIA

Peer reviewers

Andrew Dannenberg, MD, MPH

Robert Phinney, AIA

Molly M. Scanlon, PhD, FAIA, FACHA

Catherine Wemette, CAE

Editors

Lindsay Brugger, AIA, Sr. Manager, Resilient Communities

Rachel Minnery, FAIA, Sr. Director, Resilience, Adaptation, and Disaster Assistance

Questions, feedback, ideas? We'd love to hear from you. Email resilience@aia.org

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