International Journal of Workplace Health Management

367

How a United States Air Force wing built a hybrid work model that balances organizational needs and employee wellbeing

Melanie M. Lazarus
US Air Force School of Aerospace Medicine, Wright-Patterson AFB, Ohio, USA, and
Joseph P. Nalepka
Air Force Research Laboratory, Wright-Patterson AFB, Ohio, USA

Received 13 February 2024
Revised 14 April 2024
26 May 2024
Accepted 27 May 2024

Abstract

Purpose – The results of the COVID-19 pandemic rendered the traditional work environment model obsolete for the United States Air Force, resulting in the need to create a new hybrid work model that fits unique employee needs in a complex organization. This practitioner article discusses how the 711th Human Performance Wing (711 HPW) built the Mission-Focused Agile Work Environment (MFAWE) using a combination of human and mission-focused strategies to ensure a more flexible work environment without compromising excellence or its employees' well-being.

Design/methodology/approach – Using an action research approach, data was collected by 77 diverse stakeholders in six working groups. Five perspectives were examined – employee, operations, infrastructure, leadership and mission – using a combination of literature and policy reviews, interviews, surveys and personal experiences to deliver recommendations to leadership for implementation.

Findings – The MFAWE addressed hybrid work transition requirements, including employee guidance, permanent workspace guidelines and facilities. Lessons learned from implementation included the need for a change management and communication strategy. An employee playbook was found to be an effective modality for information sharing but not for policy enforcement. Employee preference for permanent space regardless of time on site due to sanitation and mental health concerns was also discovered.

Originality/value – This article showcases how a large, complex organization built a new hybrid work model using employee-inclusive practices, filling a gap in the literature. This project also uncovered complex interdependencies when transitioning to a hybrid work model, including employee preferences.

Keywords Hybrid work, Military, Employee health, Telework

Paper type Case study

Introduction

In 2020, the COVID-19 pandemic caused unprecedented disruptions in the workplace. In the United States (US), nearly all states issued stay-at-home orders to curtail the spread of the

The authors thank the members of the United States Air Force 711th Human Performance Wing, including Mr. Charles Cambron, Mr. Todd Nelson, Mr. Michael Newman and Ms. Victoria Soulliere, for their support.

Disclaimer: The views expressed in this material are those of the authors and do not reflect the official policy or position of the US Government, the Department of Defense or the United States Air Force.

Institutional clearance: The material was assigned a clearance of CLEARED on 3 Jan 2023, Case Number: AFRL-2024-0603.

International Journal of Workplace Health Management
Vol. 17 No. 4, 2024
pp. 367-384
Emerald Publishing Limited
1753-8351
DOI 10.1108/IJWHM-02-2024-0029

highly contagious virus, shutting down jobs deemed "nonessential" such as entertainment, personal services and retail (Dey and Loewenstein, 2020). For those jobs capable of conversion to the at-home environment, the COVID-19 pandemic spearheaded the necessity for the ubiquitous implementation of telework, with the US Census Bureau estimating that roughly 27.6mn people or 17.9% of the employed population were working from home, tripling the number of at-home employees from 2019 to 2021 (United States Census Bureau, 2022).

Telework is "a work flexibility arrangement under which an employee performs the duties and responsibilities of such employee's position, and other authorized activities, from an approved worksite other than the location from which the employee would otherwise work" (US Office of Personnel Management, 2022). During the height of the pandemic, US employees were teleworking almost exclusively at home. Still, as governments lifted restrictions with vaccinations becoming available, additional flexibilities such as hybrid work models allowed a combination of working from home and in-person work in the office (Beno, 2021).

Unlike many industries in the US that were introduced to the practice of telework and hybrid work models for the first time during the COVID-19 pandemic, the United States federal government's history with telework and hybrid work has spanned over 70 years, with the earliest reference noted in 1957 (Joice, 2000). In 1973, the terms "teleworking" and "telecommuting" were coined by consulting rocket scientist to the United States Air Force (USAF), Jack Nilles, when he began to telecommute between Los Angeles and Washington, D.C. (Nilles *et al.*, 1976). Almost 30 years later, on December 9, 2010, US President Barack Obama signed into law the Telework Enhancement Act (TEA), legislation that mandated the implementation of telework and hybrid work policies by all executive agencies to increase employee job satisfaction and retention while boosting productivity and addressing environmental concerns (Telework Enhancement Act, 2010). Despite this mandate, the implementation of the TEA was sporadic within much of the federal government (Randall, 2014), and it was not until the pandemic that telework became ubiquitous. Today, results of the 2023 Federal Employee Viewpoint Survey (N = 67,000) indicate that 68% of federal employees still telework in some capacity, with 17% teleworking one or two days per week and 14% every other week (Weisner, 2023).

Today, the COVID-19 pandemic's dramatic effect on the way people work has pushed telework and hybrid work to the forefront of research, with many factors under examination, including hourly wage differentials (Pabilonia and Vernon, 2022), health and productivity (Criscuolo *et al.*, 2023), work intensity and emotional demands (Antunes *et al.*, 2023) and more. In an extensive systematic review by Mele *et al.* (2023), 120 studies across multiple disciplines were examined, with self-reported productivity and work-life balance found to be the most widely studied outcomes related to telework. Telework case studies have also been reviewed in a handful of industries since the inception of the pandemic, such as an exploration of the experiences of nonclinical hospital staff in telework status (Dooley, 2022), a pilot program for New Jersey state workers (Fazelpoor, 2022) and contemplations on how telework could be implemented in the US intelligence community despite security limitations (Gioe, 2020).

However, despite the recent move to hybrid work models, which has yielded unique research contexts in which many employees can decide their work location daily (Shao *et al.*, 2021), a significant gap in the literature exists as to how organizations can create or execute a hybrid work model based on the unique needs of its employees. This manuscript is one of the first of its kind, with only minimal work in this area done outside the US (Sampat *et al.*, 2022).

The purpose of this practitioner manuscript is to present how an organization within the US federal government, the 711th Human Performance Wing (711 HPW) under the USAF, built a new hybrid work model called the Mission-Focused Agile Work Environment, based

on employee preferences. Located at Wright–Patterson Air Force Base near Dayton, Ohio, the 711 HPW is a division of the USAF under the Air Force Research Laboratory (AFRL) that combines two entities, the Human Effectiveness Directorate (RH) and the USAF School of Aerospace Medicine (USAFSAM). Composed of approximately 2,000 full-time employees, including active-duty military, federal civilian employees and contractors, the 711 HPW is a world leader in studying and advancing human performance through research, education and consultation (Air Force Research Laboratory, 2024).

Before the pandemic, the workforce in the 711 HPW worked in person daily, reporting to an assigned office or cube space. Business operations in the 711 HPW had the following characteristics: (1) technology options for communication and workflow/personnel management were limited in scope and utility; (2) leaders and personnel primarily conducted interactions face-to-face; (3) conference rooms and auditoria were used for meetings and large audience briefings; (4) communication strategies primarily involved verbal or written (email/memo) methods; (5) collaborative spaces in offices were limited. The idea of teleworking was reserved for situational events such as family emergencies or inclement weather and was limited to only one or a few consecutive days. Flexible work schedules involving a combination of telework and in-office operations existed but were not widely utilized. Remote work or full-time telework for employees was by exception, usually accommodating medical conditions, and involved less than 1% of the 711 HPW workforce.

During the COVID-19 pandemic, health and safety rules and directives from the Department of Defense and USAF rendered the traditional work environment model obsolete, and all AFRL organizations had to adapt quickly to a new way of doing business to complete their mission assignments. In what was effectively an overnight transformation, the 711 HPW went from an in-person organization to a full-time, remote operations organization.

The 711 HPW recognized much of the organization's work could be accomplished using a hybrid work model. However, the 711 HPW was given little guidance from high-level leadership regarding what this model should look like or how to implement it, leaving the organization to implement policies and operations that best suited its mission and personnel's needs. Moreover, due to the uncertainty of the pandemic's longevity, the 711 HPW leadership team had to approach the creation of this model strategically and develop a solution that would be enduring, agile and sustainable over an undefined amount of time. The 711 HPW also wanted to ensure its approach incorporated accurate employee preferences and did not compromise employee health, wellbeing and short- or long-term performance.

This project addressed the following problem statement as its main aim: "How can the 711 HPW create a hybrid work model that will fit organization and workforce needs for up to two years?" The team addressed this problem through three objectives:

(1) Create working groups to gather data from 711 HPW leadership and employees to better understand organizational needs and employee preferences concerning hybrid work.

(2) Using the collected data, uncover the most critical areas of concern for the organization and employees that the new hybrid work model must address.

(3) Build a hybrid work model that could meet the unique needs of the 711 HPW organization for the next two years.

The 711 HPW used a combination of human and mission-focused strategies to answer the need for more flexible work environments in the COVID-19 pandemic era without compromising the organization's excellence or its employees' wellbeing. According to the

landmark work by Sampat *et al.* (2022), employee preferences can either facilitate or inhibit hybrid work model implementation, making personnel's opinions regarding flexibility, work-life balance, team building and other issues essential for organizations to consider. This paper gives organizations a real-world example of how to approach the complex task of balancing employee and organizational needs to create a new hybrid work model.

Methodology

An action research methodology was leveraged for this project, allowing members from all organizational levels to provide input on what the new hybrid work model should include. Action research is an iterative approach designed to change practice while creating knowledge simultaneously. This cyclical process combines action and reflection to bring about the improvement of practice or to propose a new solution to practical problems (Soh *et al.*, 2011). From another perspective, as defined by Carr and Kemmis (1986), "Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out." This approach was chosen because action research using participation from the community allows greater sensitivity to a specific community's unique circumstances and needs while simultaneously building trust and mutually beneficial partnerships (Wallerstein and Duran, 2001).

To address objective 1, two categories of stakeholder working groups were built: (1) a 711 HPW leadership working group, which provided the initial framework and requirements for the model, and (2) five employee working groups that gathered and analyzed data to uncover employee preferences and advise on potential model characteristics. For objective 2, employee working groups were given wide latitude in creating instruments for data collection, such as conducting literature reviews and building surveys to uncover information of value to their discovery process. This unique approach was used to avoid a "top-down" method in which leadership dictated too much of the process, potentially compromising the employee's experience in uncovering their preferences for hybrid work. Objective 3 was accomplished by taking action on the three areas of focus uncovered by the working groups.

Stakeholder working groups

Knowing stakeholder input would be crucial to answering the problem statement accurately, a total of 77 people from the 711 HPW were assigned to six stakeholder working groups. The leadership working group was comprised of 20 members tasked with providing the initial requirements for the hybrid work model, which would be the basis for the work conducted by five employee working groups. To ensure inclusivity, each employee working group consisted of (1) military and civilian personnel, (2) supervisors and non-supervisors and (3) junior and senior personnel. This approach had the added benefit of allowing diverse 711 HPW personnel an opportunity to shape the hybrid work environment that they would be using daily. In most cases, research experience was not a consistent skill set in these teams. The teams had six group requirements with a final output of two products: one white paper and one presentation.

Data collection and analysis

Two senior functional leaders acting as facilitators collected data from the 711 HPW leadership working group. During one multi-hour session, working group members were guided through two facilitated questions: (1) What principles must be included in the new hybrid working model? and (2) From which perspectives must the employee teams examine

the new model? Interview data was collected through meeting minutes recorded by the facilitators from the participants answering the two questions verbally. An inductive thematic analysis was conducted on the narrative to make meaning from the data derived from leaderships' views and opinions. Themes were developed from commonalities uncovered and grouped to establish a concise list of working principles.

Each employee working group, on the other hand, was free to collect data to analyze the problem statement as they saw fit. They were given only 30 days, the month of April 2022. Suggestions for data collection sources included:

(1) Policy Reviews – Studying strategic plans, regulations, instructions and guidance memorandums from the Department of Defense and USAF for telework and hybrid work environment policies. Any team recommendations had to comply with these higher-level directives and requirements.

(2) Literature Reviews – Reviewing hybrid work environment articles in academic literature, military publications and articles readily available through online searches.

(3) Interviews – Talk to leaders in other USAF organizations and industry organizations that have already implemented some form of hybrid work environment to understand their implementations' successes, failures, drawbacks and plans.

(4) Personal Experiences – Talking to 711 HPW personnel about their current experiences with telework, including successes, failures and recommendations for improvement.

Two functional leaders met with the employee working groups to confirm the teams were making progress, answer questions and ensure the crossflow of information between the teams.

Results

711 HPW leadership working group

Results from the thematic analysis of the two facilitated questions asked during the 711 HPW leadership offsite were used to develop a list of common principles. 711 HPW leadership concluded the following seven principles emerged from the data and must be included in the new hybrid working model:

(1) It must be viewed as a cultural way of doing business.

(2) It had to account for processes, communication, collaboration, data sharing, hiring, recruiting and training to strategically design the workplace to enable the 711 HPW to deliver its mission.

(3) It had to integrate both individual personnel concerns and organizational ones.

(4) It had to acknowledge a transition from work-life balance to work-life integration to ensure employee wellness.

(5) Not all 711 HPW operations and processes would be compatible with onsite and telework personnel.

(6) Space allocation, space utilization, space improvement and facilities contract support would be impacted.

(7) It had to enable a culture that all employees would find engaging, fair, inspiring and meaningful.

Moreover, leadership concluded the employee working groups should examine the problem statement from five perspective areas (Figure 1). It was these five areas for which each of the five employee working groups were assigned:

(1) Mission Perspective: Examining the impact, benefit and detriment of a hybrid work environment on the ability of 711 HPW organizations to execute their mission, individually and collaboratively.

(2) Employee Perspective: Examining the impact, benefit and detriment of a hybrid work environment on military, civilian and contractor personnel.

(3) Operations Perspective: Examining a hybrid work environment's impact, benefit and detriment on team operations and overarching 711 HPW business.

(4) Infrastructure Perspective: Examining the impact, benefit and detriment of a hybrid work environment on laboratory spaces, administrative spaces and IT infrastructure.

(5) Leadership Perspective: Examining the impact, benefit and detriment of a hybrid work environment on the 711 HPW culture, its leadership and supervisors.

Based on their results, leadership concluded that what made the 711 HPW hybrid model unique was ensuring that the organization's mission was not compromised to meet employee expectations in the new COVID era. Moreover, the leadership working group concluded that the new model required extensive agility and flexibility due to the organization's various workspaces, work schedules and employee types. As a result, the new model was named the "Mission-Focused Agile Work Environment" or MFAWE.

Employee working groups

Employee teams chose a variety of data collection methodologies (Table 1), including policy review ($N = 1$), literature review ($N = 2$), web search ($N = 2$), senior leader interviews ($N = 1$), focus group ($N = 1$), informal peer feedback ($N = 4$), survey ($N = 1$) and internal team discussions ($N = 2$). At the end of the 30 days, each employee working group created and presented a PowerPoint presentation to the 711 HPW leadership working group. A total of 191 pages were presented and collected. Leadership distilled the groups' recommendations into major themes to create an executive-level brief.

Employee working groups presented their PowerPoint presentations and white papers to leadership, which included five components: (1) state of the assigned perspective, both pre-

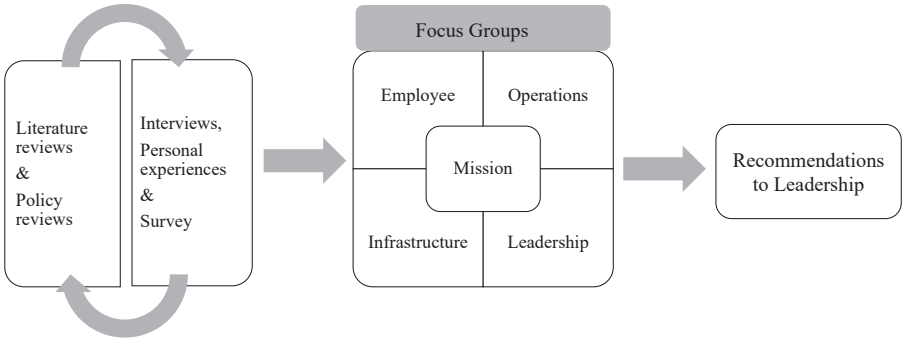


Figure 1.
Five perspectives workflow

Source(s): Courtesy of 711th Human Performance Wing, United States Air Force

Table 1. Employee working group data collection sources

Team	Sources selected Policy Reviews	Literature Reviews	Web Search	Senior Leader Interviews	Focus Group	Informal Peer Feedback	Survey	Internal Team Discussions
Mission						X		X
Leadership	X	X		X	X	X		
Employee			X				X	
Operations		X				X		X
Infrastructure			X			X		

Source(s): Table created by authors

COVID and today; (2) team methodology including approach, collaborators, data and assumptions; (3) findings including pros, cons and other consideration; (4) recommendations for a 3-year plan with identification of issues that would require resolution and (5) items requiring more exploration/research or coordination/collaboration with other teams. Due to the limited time frame to collect data and few group members with expertise in qualitative or quantitative analysis, only two groups presented formal, original data to leadership. However, because military and federal bargaining unit employees are among those surveyed, this manuscript cannot disclose the details of that data due to security.

On May 6, 2022, the employee working group brief was presented to the Wing Council, a formal board within the 711 HPW, who voted on the best way forward for the organization. Using the four major recommendations briefed by the employee working groups (Table 2), 711 HPW leadership reflected on the data, looking for common themes across the five perspectives to determine their final implementation strategy. Multiple interdependencies were noted. For example, which employee positions qualified for telework and when they chose to telework changed the availability of space within the buildings traditionally occupied by in-person workers full time. Information technology capabilities and equipment had to be considered for those working at home and what would be required on-site for those needing to interact with those teleworking such as video conferencing software and webcams. Three major concepts emerged from the recommendations: employee guidance, permanent workspace guidelines and facilities. The MFAWE concept was presented at a senior leadership offsite in May 2022, launching the work required to execute the project.

As part of the action research process, in December 2022, leadership launched an employee-created 36-item anonymous online survey via email to all 711 HPW members. This survey aimed to ensure the project's progress met the organization's needs at six months. The six-month survey results in December 2022 ($N = 450$, 22.5% return rate) provided additional guidance for the approach to the three recommendations, such as how many employees might be willing to share a desk space with another employee.

Employee guidance: the mission-focused agile work environment playbook

Due to the many topics required for employee understanding in the new hybrid work model and telework environment, the leadership team desired to make expectations as straightforward as possible to decrease employee stress during the transition. As a result, *The Mission-Focused Agile Work Environment Playbook* was created and distributed to employees via email and leadership-driven group presentations in the first quarter of 2023 (Figure 2). This 14-page document guided hybrid work options like alternate work schedules, shared office/collaboration spaces and telework.

The *Playbook* established a MFAWE where all personnel could work where and when they were the most effective. As described in the *Playbook*, the MFAWE embraced agile work schedules and workplace options to enhance mission accomplishment while supporting an understanding and resilient workforce. Leadership empowered frontline managers and supervisors to use agile work options to optimize mission accomplishment. These agile work options were available when the tasks assigned, team dynamics and employee characteristics lent themselves to an alternate worksite. An essential aspect of the MFAWE was the understanding by all personnel that it was a discretionary workplace flexibility, not an entitlement. Agile work option eligibility for all employees, including active-duty military members, was discretionary and determined by the commander or supervisor by weighing mission, team and individual needs. Most importantly, the MFAWE ensured that the 711 HPW's mission-focused purpose was prioritized, the team culture of trust and accountability was present, individual employee autonomy and growth were enhanced and employee recommendations were included.

Mission perspective team	Leadership perspective team	Employee perspective team	Operations perspective team	Infrastructure perspective team
MFAWE should be a mission imperative. It opens up the applicant pool to individuals with other regional ties outside of southwest Ohio. We want the best in the nation, not the best willing to live in Dayton	Develop and clearly define a hierarchical decision tree for telework and asynchronous work eligibility based on the following four levels: (1) mission needs, (2) position requirements, (3) employee-provided telework resources (e.g. stable internet connection and bandwidth) and (4) employee performance	Leadership must gain an understanding of employees' needs, concerns and desires before committing to a 711 HPW MFAWE	Mandatory use of singular communications platform during business hours. Personnel must keep an accurate status indicator (available, busy, etc.) and chat messaging should be used before sending email to communicate with other 711 HPW personnel	Create collaboration space and hybrid workspaces for immediate use
When operating in a MFAWE, 711 HPW Leadership should provide more deliberate consideration and communication of what accomplishing the mission means and how we will measure success	Permit service member telework participation in accordance with Air Force Guidelines	Leadership must empower supervisors to make MFAWE decisions for their individual teams	Email should have signature blocks with contact information and preferences. The email out-of-office capability should be used when personnel are unavailable for an extended period	Develop a plan for converting existing cube and administrative workspaces into flexible hybrid workspaces
Flexibility must occur in both directions. Leaders and supervisors must work with employees to identify the flexible work arrangement that works for them. Employees must be responsive to supervisors and leadership to understand and adapt to what works best for them. Employees should also understand that their mission work does not exist in a vacuum	Specify dress and appearance requirements for members participating in telework	Create robust training for employees and supervisors on how to excel in a MFAWE	All meetings should have a virtual option to include dial-in number for maximum flexibility. Mute the microphone when in a large meeting and when not speaking to reduce background noise and feedback. Cameras should be used when able and practical	Introduce mock-ups of flexible hybrid workspaces for user feedback prior to full implementation

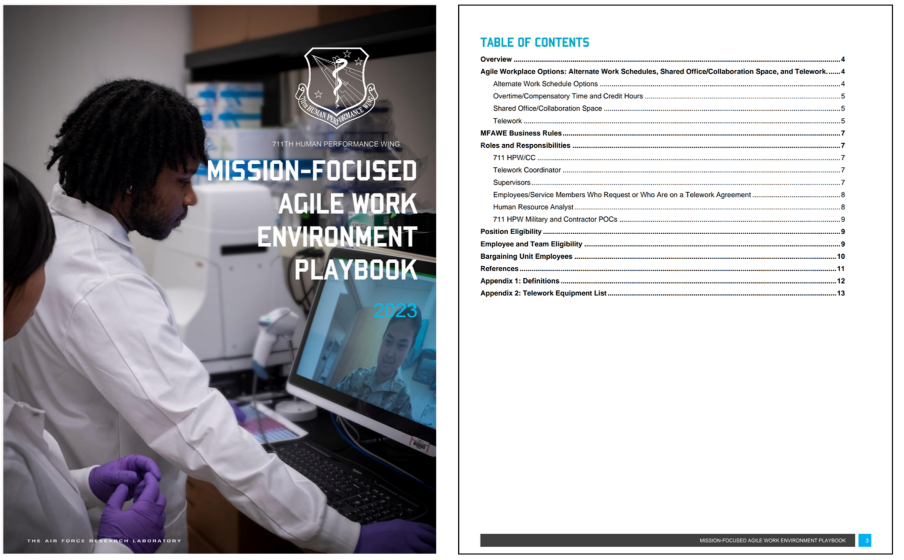
(*continued*)

Table 2. Employee perspective team recommendations

Mission perspective team	Leadership perspective team	Employee perspective team	Operations perspective team	Infrastructure perspective team
The 711 HPW Senior Leadership must create a vision in which they trust that employees are completing their work when they are not in the office. This vision also extends to being able to always reach employees via email, video call or telephone	Identify mandatory enterprise communication platforms and ensure 711 HPW-wide access	Survey the 711 HPW workforce to get their needs, thoughts and opinions on implementing an organization-wide MFAWE	Create a new employee orientation users guide to help new personnel navigate the MFAWE. Supervisors should be in-person for 1–2 weeks for new hire onboarding	Evaluate automation technology, virtual reality technology and IT equipment to ensure the ability to support remote access for performing mission functions

Source(s): Table created by authors

Table 2.



Source(s): Courtesy of 711th Human Performance Wing, United States Air Force

Figure 2.
Mission-focused agile work environment playbook

Additionally, the *MFAWE Playbook* specified that the supervisor was responsible for determining if an employee and their team were apt to thrive in a telework environment. Employee aptness was based on the characteristics and preparedness of the employee and their work team. Once an employee's position had been determined to be eligible for telework and the employee's team was assessed to benefit from the employee in a telework environment, the supervisor would be required to review the characteristics of the employee requesting telework to determine whether the situation lent itself to a telework arrangement. Per USAF guidance, employees most likely to succeed in a telework environment were generally

self-directed and required minimal direct supervision. They could work independently and be responsive to the organization, team and customers even though not in immediate proximity to other team members. They would keep supervisors and coworkers informed on their assigned work status and seek out work assignments when workload permits. They would be comfortable not having daily, regular in-person contact with colleagues. Other characteristics that supervisors considered about their employees included demonstrating a high level of job knowledge and skill, meeting deadlines and reliable work history.

Once the supervisor had determined that the job-team-employee combination would benefit from an aspect of the agile work environment, they were to contact the human resources organization for further guidance on the training and the necessary paperwork before the employee began performing in an agile work arrangement.

The *MFA WE Playbook* also addressed office space sharing and collaboration. Personnel who regularly reported to work on base more than 50% of the time (at least five days per pay period) or more would have a permanent, assigned workspace. Personnel who reported to work on-base less than 50% of a pay period could schedule the type of workspace they would need to fit their requirements, such as individual cubes or offices, collaboration areas for 4–8 personnel or larger meeting rooms.

Finally, the *Playbook* established meeting business rules that were to be followed by all 711 HPW personnel, including:

(1) When practical, meetings would be formatted to accommodate all attendees, whether physically present or remotely located, by providing a dial-in number or video conferencing link.

(2) While participating in a virtual or hybrid meeting, leadership requested that all employees use cameras when speaking and at all other times when able and practical or required by the onsite facilitator.

(3) While in meetings, all personnel must wear appropriate attire and dress regardless of the location from where they are attending.

(4) Email signature blocks (including reply email) must include preferences (phone, email or virtual platform) and an accurate phone number.

Permanent workspace guideline

As established by the *Playbook*, the new guideline that only personnel who regularly reported to work on-base more than 50% of the time (at least five days per pay period) or more would have a permanent, assigned workspace had the added benefit of alleviating existing space constraints in the building which housed much of the 711 HPW, main building B840, while taking advantage of the new MFAWE. As a result, the concept of "hot bunking" came to fruition, an opportunity for those employees only working a few times a week in the office to share the same cubicle or office space with another employee. In addition, another shared space environment was developed, in which multiple spaces would be wholly vacated by primarily teleworking employees and bookable by a teleworking employee when he/she was in the office. A digital system was piloted to book these shared spaces, allowing employees to reserve identified office or cubicle spaces not occupied on the day or days the employee planned to work onsite. In addition to showing reserved and unreserved spaces, this system provided detailed information on the amenities available in each space, such as technology, office supplies and furniture.

Facilities

Identified changes in facilities indicated specific needs to accommodate the new guidelines. These results translated into seven new space concepts (Table 3) and a need for collaboration

Type	Purpose	Structure	Supplies	Requirements of employee
Flex Desk	For those personnel that need an individual space to complete mission activities	Cubicle walls Desk Drawer Chair	Single computer monitor Mouse/ keyboard Phone White board Dry erase markers/eraser Trash can Tape dispenser/ stapler	Bring employee laptop Check out camera at IT Desk Headphone usage for calls No permanent personal effects Clean before exit
Flex Office	For supervisors or other personnel when closed door meetings and discussions are necessary	Permanent walls Door Desk Drawers Chair Shelves Small table with chairs	Single computer monitor Mouse/ keyboard Phone White board Dry erase markers/eraser Trash can Tape dispenser/ stapler	Bring employee laptop Check out camera at IT Desk No permanent personal effects Clean before exit
Flex Pod	For teams of two or more people in which collaboration is necessary	Cubicle walls Desk, two or more Chairs, two or more Small table with chairs	Single computer monitor Mouse/ keyboard Phone White board Dry erase markers/eraser Trash can Tape dispenser/ stapler	Bring employee laptop Check out camera at IT Desk Headphone usage for calls No permanent personal effects Clean before exit
Virtual Call/ Phone Room	For those personnel that need a private space for a video conference meeting or a phone call. Not typically used as an all-day space	Permanent walls Door Desk or small table Chair	Single computer monitor Mouse Keyboard Phone Trash can	Bring employee laptop Check out camera at IT Desk No permanent personal effects Clean before exit
Touchdown Space	Temporary "laptop only" space for personnel to check email, have informal one-on-one meetings or collaborate. Scheduling not necessary for these spaces	Desk or Small table Chair	None	Bring employee laptop No permanent personal effects Clean before exit
Community Spaces	General space for people to meet for meals and socialize. Designed to increase morale and promote connectivity with people that are not always in the office	Tables Chairs Sofas Benches	None	Clean before exit

Table 3.
Identified collaboration spaces

Source(s): Table created by authors

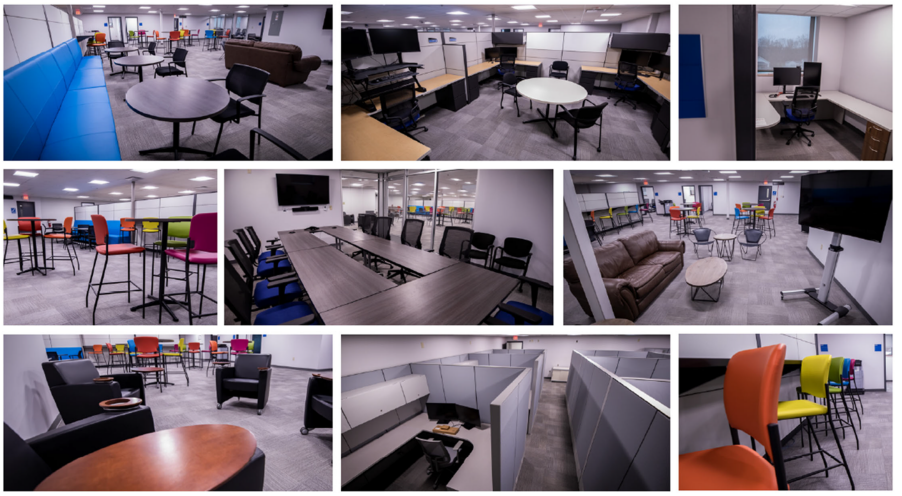
space for approximately 150 personnel who worked full-time or part-time in the telework environment. Teleworking employees indicated a need for space to connect with their team socially and work together more efficiently when the mission required. This type of space was limited in main building B840. In the third quarter of 2022, the second floor in nearby satellite building B441 was discovered as an ideal renovation candidate and commandeered for new collaboration space. Furniture in main building B840 and 13 other facilities were modified in preparation for the modernization of the satellite building, B441 and $13.2 M was allotted for the design and restoration of the aging infrastructure. Cubicles were moved throughout 711 HPW facilities, increasing overall capacity across 14 buildings to facilitate internal mobility. Once satellite building B441 was available for move-in (Figure 3), renovation allowed for divesting several severely aging buildings (Soulliere, 2024).

Discussion

Challenges

Although the 711 HPW was purposefully inclusive in its approach to building its new hybrid work model, ultimately, the MFAWE pilot had several barriers to success. The parameters around which employees would keep permanent workspace were deemed unclear, with some supervisors interpreting this as an optional tool while others considered this a mandatory rule. This discrepancy in interpretation resulted in inconsistent use of the guideline.

The loss of permanent workspace was highly distressing for many employees who wanted to maintain their existing cubicle space, desk or office, even if rarely onsite. Employees indicated this preference for a multitude of reasons, including employee accountability for maintaining the sanitation of shared spaces, such as the removal of refuse and food after use, a desire for guaranteed disinfection to avoid the spread of COVID-19 and other diseases and uncertainty as to how these requirements, if made mandatory, could be reinforced consistently. Employee mental health was noted as a concern due to the lack of the ability to keep personalized belongings in most shared spaces. There was a perceived lack of camaraderie with teammates sitting in other areas or buildings unavailable to teleworkers or



Source(s): Photography courtesy of AIMS Studio, United States Air Force School of Aerospace Medicine, 711th Human Performance Wing

Figure 3.
Satellite building B441 redesign

already booked. Finally, employees believed the effectiveness of productivity would be compromised, with no guarantee of consistently having the supplies and technology they needed when booking space. Due to employee concerns and challenges with space reallocation in main building B840, the 711 HPW leadership decided not to mandate or strictly enforce the *MFAWE Playbook* as written during the pilot. However, the *Playbook* continued to be marketed and disseminated as an option for supervisors and employees.

As a result, the pilot's "hot bunking" component was paused. Without teleworking employees vacating their existing workspaces or sharing space with another employee, there was little space to conduct the "share space" pilot and test the space-reserving digital system (Cambron, 2024). Likewise, the creation of the collaboration space in satellite building B441, although highly successful in its design and construction, had marginal success in its execution of the MFAWE, with few teleworking employees booking the space since its opening. Members of the Facilities team reported that employees either kept their existing office or cube space, wanted to return close to their coworkers in main building B840 or did not wish to come into the office at all (Soulliere, 2024).

Additionally, mission-based barriers became visible. Several work processes were not fully compatible with the MFAWE, such as new employee in-processing, out-processing, onboarding, mentoring and orientation. In particular, the lack of in-person onboarding of new employees was insufficient in the MFAWE, with face-to-face communication essential to the procedure. Similarly, contracting processes were not compatible, with an added layer of complexity due to regulations around contract employee telecommuting and different contracting processes existing in various areas of the organization. Unique to the military environment, those with roles requiring a sensitive compartmented information facility (SCIF), a secure room onsite in which classified files can be viewed, eliminated many roles from qualifying for telework approval.

On the other hand, the short pilot did reveal that much could be accomplished in the MFAWE. Many unclassified work processes that did not require face-to-face customer interactions were suitable for telework. Simple trainings or "how to" guides increased in-office worker confidence to use technology teleworking employees had come to rely upon. Expanding data sharing, communication and other digital tools across the Department of Defense made proper connectivity more possible.

Lessons learned

Moreover, this project resulted in several lessons learned. First, the *Playbook* was an effective modality for sharing information throughout the organization; however, without the consistent enforcement of its principles by leadership at all levels, change management across the organization was impossible. This lack of universal success is not unexpected, as success in cultural transformation was ultimately unlikely without successfully addressing the "hard" factors of change management, such as solid leadership communication, influence and enforcement (Sirkin *et al.*, 2005). Secondly, despite surveyed employee opinions indicating otherwise, 711 HPW employees ultimately preferred their permanent space, regardless of frequency, if asked to be onsite. Sharing space with one or more employees was unpopular, resulting in a cascading effect that compromised plans around space and other aspects of the pilot. Leadership recognized this as an essential factor not to be dismissed, as workspace satisfaction is associated with higher perceived self-satisfaction, future workability, workday recovery, collegiality and social capital (Lusa *et al.*, 2019). In addition, although renovation of satellite building B441 was necessary, a perceived return on investment has yet to be realized for the MFAWE-based floorplan and furniture concept. It is surmised that steps in the decision-making and planning process were missed for the renovation project, or employee survey data was inaccurate or flawed.

Furthermore, the challenges associated with this pilot had secondary effects. Without infrastructure and buy-in across the organization for the MFAWE, many supervisors have opted to return their employees to the office over time due to perceptions or reports of decreased productivity, innovation and collaboration. Similar findings have been reported on supervisor perceptions of telework, with negative correlations associated with productivity and engagement (Hodzic *et al.*, 2023), organizational impact (Park and Cho, 2022) and effects on employees (Wang *et al.*, 2023). However, this return to the office trend is similar to other work environments in the US, with the US Census Bureau reporting fewer than 26% of households still have someone teleworking at least one day per week (United States Census Bureau, 2023b).

Conclusion

To answer the need for a more flexible work environment in the COVID-19 era, a complex organization in the US government, the 711 HPW, built a new hybrid work model called the MFAWE based on employee preferences. An action research methodology used a combination of employee-led data collection and analysis alongside leadership reflection, allowing for the inclusivity of employee voices throughout the project. Leadership uncovered three themes from the data, resulting in three projects: building employee guidance, permanent workspace guidelines and updated facilities. However, the pilot experienced many barriers to success, including a lack of change management strategies, inconsistent enforcement of guidelines from leadership and employee preferences for maintaining their original office space regardless of frequency onsite.

Limitations to this project include a highly specific environment, the US military, which makes applying its findings to other workplaces uncertain. However, despite this, the authors believe that the process used in this practitioner paper can likely apply to many organizations in the US and elsewhere, particularly those with complex hierarchical structures like the military. The second limitation of the project is the data collection. Because the 711 HPW used employees to collect and analyze data for decision-making, many did not have formal research experience. With a truncated timeline, errors likely occurred during this process. However, scientific perfection was not the ultimate goal, and leadership believed that employee participation and buy-in were reasonable offsets for any errors in the data. Finally, due to security, the authors could not disclose the details of the data collected from the working groups or the six-month survey. However, the real benefit of this manuscript is the process conducted, which leveraged employees throughout the process using action research to create a novel model, not the data itself, data which likely has limited generalizability due to the specificity of the sample population.

Future research should examine 711 HPW employees' opinions on the pilot's successes and challenges and re-assess telework preferences. 711 HPW leadership plans to re-examine existing space in main building B840 with the potential shifting of personnel to continue the pilot despite employees' preference not to "hot bunk." As more companies search for new ways to work in the COVID-19 era, additional research for consideration could also include the use of the MFAWE in a similar work environment, such as another government organization or large company. Researchers could also consider using an employee-based process like that used here to build an employee-centric hybrid work model that fits their organization's unique needs.

Should the latter be selected, the authors have several recommendations for organizations interested in using a similar employee-inclusive method to build their own hybrid work model. First, both 711 HPW leadership and the authors agree that constructing the MFAWE was highly successful, including using action research and creating employee work groups for data collection. This was a unique and inclusive way to engage employees in a

meaningful project that would affect the entire organization. However, two significant elements for project success were lacking: a communication plan and a change management plan. Only a select number of the 2,000 employees had intimate knowledge of the project during the planning phase, making the lack of a communication plan a tremendous error during execution. Employees were surprised to learn they suddenly might need to share their desk with another coworker, for example, causing panic. Moreover, without a proper change management plan, there was a lack of consistent follow-through from leadership around the rules and regulations in the *MFAWE Playbook,* which ultimately compromised the project's progress. Communication and change management should be considered at the project's inception to ensure organizational transformation.

In summary, this article provides insight into how a large organization built a new hybrid work environment while including its employees throughout the process. This manuscript adds to existing literature focused on hybrid work experiences and processes by informing future practice, specifically showcasing how a complex organization can create and execute a hybrid work model based on the unique needs of its employees. Although challenges were present and adoption was not universal, today 711 HPW teams leverage the options created as a part of the MFAWE. It is recommended that organizations seeking to implement similar hybrid work models should take into consideration complex interdependencies that are present when transitioning, including employee preferences.

References

Air Force Research Laboratory (2024), "About the 711th human performance wing", available at: https://www.afrl.af.mil/711HPW/ (accessed 20 January 2024).

Antunes, E.D., Bridi, L.R.T., Santos, M. and Fischer, F.M. (2023), "Part-time or full-time teleworking? A systematic review of the psychosocial risk factors of telework from home", *Frontiers in Psychology*, Vol. 14, 1065593, doi: 10.3389/fpsyg.2023.1065593.

Beno, M. (2021), "On-site and hybrid workplace culture of positivity and effectiveness: case study from Austria", *Academic Journal of Interdisciplinary Studies*, Vol. 10 No. 5, p. 331, doi: 10.36941/ajis-2021-0142.

Cambron, C. (2024), "Email to melanie lazarus", 18, January.

Carr and Kemmis (1986), "Participatory action research", in Zuber-Skerrit, O. and Wood, L. (Eds), *Action Learning and Action Research: Genres and Approaches*, 1st ed., Emerald Publishing, Leeds, p. 100.

Criscuolo, C., Gal, P., Leidecker, T., Losma, F. and Nicoletti, G. (2023), "The role of telework for productivity during and post COVID-19: results from an OECD survey among managers and workers", *Economie et Statistique/Economics and Statistics*, Vol. 539, pp. 51-72, doi: 10.24187/ecostat.2023.539.2097.

Dey, M. and Loewenstein, M.A. (2020), "How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn?", *Monthly Labor Review*, available at: https://www.bls.gov/opub/mlr/2020/article/covid-19-shutdowns.htm.

Dooley, L. (2022), *Hospital-based Telework: The Pandemic Pilot*, ProQuest Dissertations Publishing, available at: http://search.proquest.com.ezproxy.lib.uh.edu/trade-journals/telework-pilot-program-established-nj-state/docview/2649443390/se-2?accountid=7107 (accessed 26 May 2024).

Fazelpoor, M. (2022), "Telework pilot program established for NJ state workers", NJBIZ.

Gioe, D.V., Hatfield, J.M. and Stout, M. (2020), "Can United States intelligence community analysts telework?", *Intelligence and National Security*, Vol. 35 No. 6, pp. 885-901, doi: 10.1080/02684527.2020.1767389.

Hodzic, S., Prem, R., Nielson, C. and Kubicek, B. (2023), "When telework is a burden rather than a perk: the roles of knowledge sharing and supervisor social support in mitigating adverse effects of telework during the COVID-19 pandemic", *Applied Psychology*, Vol. 73 No. 2, pp. 599-621, doi: 10.1111/apps.12491.

Joice, W. (2000), "The evolution of telework in the federal government", available at: http://passages-pro.fr/wp-content/uploads/2020/06/JOYCE-these-doctorale-History-telework.pdf (accessed 12 January 2024).

Lusa, S., Kapykangas, S.M., Ansio, H., Houni, P. and Uitti, J. (2019), "Employee satisfaction with working space and its association with wellbeing – a cross-sectional study in a multi-space office", *Frontiers in Public Health*, Vol. 7, p. 358, doi: 10.3389/fpubh.2019.00358.

Mele, V., Belardinelli, P. and Bellé, N. (2023), "Telework in public organizations: a systematic review and research agenda", *Public Administration Review*, Vol. 83 No. 6, pp. 1649-1666, doi: 10.1111/puar.13734.

Nilles, J.M., Carlson, F.R., Gray, P. and Hanneman, G. (1976), "Telecommuting – an alternative to urban transportation congestion", *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 2, pp. 77-84, doi: 10.1109/TSMC.1976.5409177.

Pabilonia, S.W. and Vernon, V. (2022), "Telework, wages, and time use in the United States", *Review of Economics of the Household*, Vol. 20 No. 3, pp. 687-734, doi: 10.1007/s11150-022-09601-1.

Park, S. and Cho, Y.J. (2022), "Does telework status affect the behavior and perception of supervisors? Examining task behavior and perception in the telework context", *International Journal of Human Resource Management*, Vol. 33 No. 7, pp. 1326-1351, doi: 10.1080/09585192.2020.1777183.

Randall, T. (2014), "Can I drill from home? Telework (or the lack thereof) in the Army Reserve", *The Army Lawyer*, Vol. 32, available at: https://heinonline.org/HOL/LandingPage?handle=hein.journals/armylaw2014&div=52&id=&page= (accessed 12 January 2024).

Sampat, B., Raj, S., Behl, A. and Schöbel, S. (2022), "An empirical analysis of facilitators and barriers to the hybrid work model: a cross-cultural and multi-theoretical approach", *Personnel Review*, Vol. 51 No. 8, pp. 1990-2020, doi: 10.1108/PR-02-2022-0176.

Shao, Y., Fang, Y., Wang, M., Chang, C.H.D. and Wang, L. (2021), "Making daily decisions to work from home or to work in the office: the impacts of daily work-and COVID-related stressors on next-day work location", *Journal of Applied Psychology*, Vol. 106 No. 6, pp. 825-838, doi: 10.1037/apl0000929.

Sirkin, H.L., Keenan, P. and Jackson, A. (2005), "The hard side of change management", *Harvard Business Review*, Vol. 83 No. 10, pp. 108-158, available at: https://hbr.org/2005/10/the-hard-side-of-change-management (accessed 13 April 2024).

Soh, K.L., Davidson, P.M., Leslie, G. and Rahman, A.B.A. (2011), "Action research studies in the intensive care setting: a systematic review", *International Journal of Nursing Studies*, Vol. 48 No. 2, pp. 258-268, doi: 10.1016/j.ijnurstu.2010.09.014.

Soulliere, V. (2024), "Email to melanie lazarus", January 16.

Telework Enhancement Act of (2010), 124 STAT 3165, available at: https://www.congress.gov/111/plaws/publ292/PLAW-111publ292.pdf (accessed 12 January 2024).

United States Census Bureau (2022), "The number of people primarily working from home tripled between 2019 and 2021", available at: https://www.census.gov/newsroom/press-releases/2022/people-working-from-home.html (accessed 27 January 2024).

United States Census Bureau (2023b), "Week 62 household pulse survey: September 20 - October 2", available at: https://www.census.gov/data/tables/2023/demo/hhp/hhp62.html (accessed 27 January 2024).

Wallerstein, N. and Duran, B. (2001), "The conceptual, historical, and practice roots of community based participatory re-search and related participatory traditions", in Wallerstein, N., Duran,

B., Oetzel, J.G. and Minkler, M. (Eds), *Community Based Participatory Research for Health: Advancing Social and Health Equity*, John Wiley & Sons, Incorporated, Hoboken, NJ, p. 18.

Wang, H., Xiao, Y., Wang, H., Zhang, H. and Chen, X. (2023), "'Who knows me understands my needs': the effect of home-based telework on work engagement", *Psychology Research and Behavior Management*, Vol. 16, pp. 619-635, 10.2147/PRBM.S402159.

Weisner, M. (2023), "Almost 70% of federal employees still telework, OPM poll finds", *Federal Times*, available at: https://www.federaltimes.com/management/career/2023/11/06/almost-70-of-federal-employees-still-telework-opm-poll-finds/ (accessed 12 January 2024).

About the authors

Melanie M. Lazarus is a professor of medical education, Chair of the Office of the Dean, and the Dean of the United States Air Force School of Aerospace Medicine, Wright Patterson Air Force Base, Ohio. Melanie M. Lazarus is the corresponding author can be contacted at: melanie.lazarus@us.af.mil

Joseph P. Nalepka is the Chief of Workforce Development for the Air Force Research Laboratory, Wright Patterson Air Force Base, Ohio.