



GSA Public Buildings Service

Client Enrichment Series

WIFM 3.0 - the sustainability edition

Tuesday, July 9, 2024



Welcome

WIFM

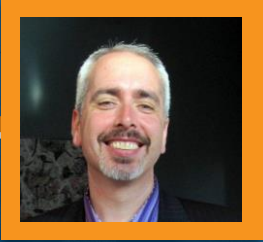
July 9, 2024

*The presentation
will start at 1 pm
Eastern*

Note: Phones are automatically muted during the presentation. Submit questions to our presentation team via your Q&A pane and we'll answer as many questions as possible during the presentation.

All questions will be responded to in writing in a formal Q&A document, posted along with the slide deck and session recording, on our website, <http://www.gsa.gov/ces>

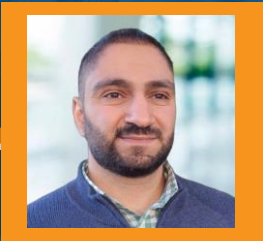
Introductions



Ryan Doerfler

Director

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Principal

Sustainability & Building Performance
Noblis

Agenda

- 01** Overview
- 02** WIFM 3.0 Space Calculations
- 03** WIFM 3.0 CO₂e Calculations
- 04** Demonstration
- 05** Resources



Who has used WIFM before?

01 Overview

GSA Portfolio Snapshot

- **2,000 communities across the country**
- **360 Million Rentable Square Feet (RSF)**
 - 190 Million RSF in 1,685 federally-owned assets
 - 170 Million RSF in 6,590 leased assets; 56% expiring within 5 years
- **5.8% Vacant Space end of FY23**
 - 9.9% federally-owned
 - 2.3% leased

Workplace Investment & Feasibility Modeling (WIFM) Tool

WHAT IS IT?

A configurable tool that allows GSA project teams and client agencies to quickly see potential space-saving benefits from increased telework levels.

BACKGROUND & DEVELOPMENT

The first version of WIFM was developed in-house and released to client agencies in 2018. By adjusting individual workspace sizes and desk sharing ratios, client agencies could see the overall impacts on space needs. GSA recently enhanced the tool, giving it a cleaner user interface, do-it-yourself customization features, and greater accuracy in space calculations. Latest update added CO₂e estimates.

PURPOSE

To help users make better and earlier decisions about their workplace needs, as they consider the impact of hybrid work and alternative workplace strategies.

WIFM Tool Benefits



Configure and compare multiple workplace scenarios



Jump start development of future space requirements



Develop feasibility scenarios for workplace programming & sustainability criteria



Identify potential future need for change management services



WIFM Tool Use Cases

Change in Capacity

Evaluate quickly how an increase or decrease in personnel will impact future space needs.

Telework Policy Change

Rapidly compare options for changing telework or mobility policy to see the impacts on future space needs.

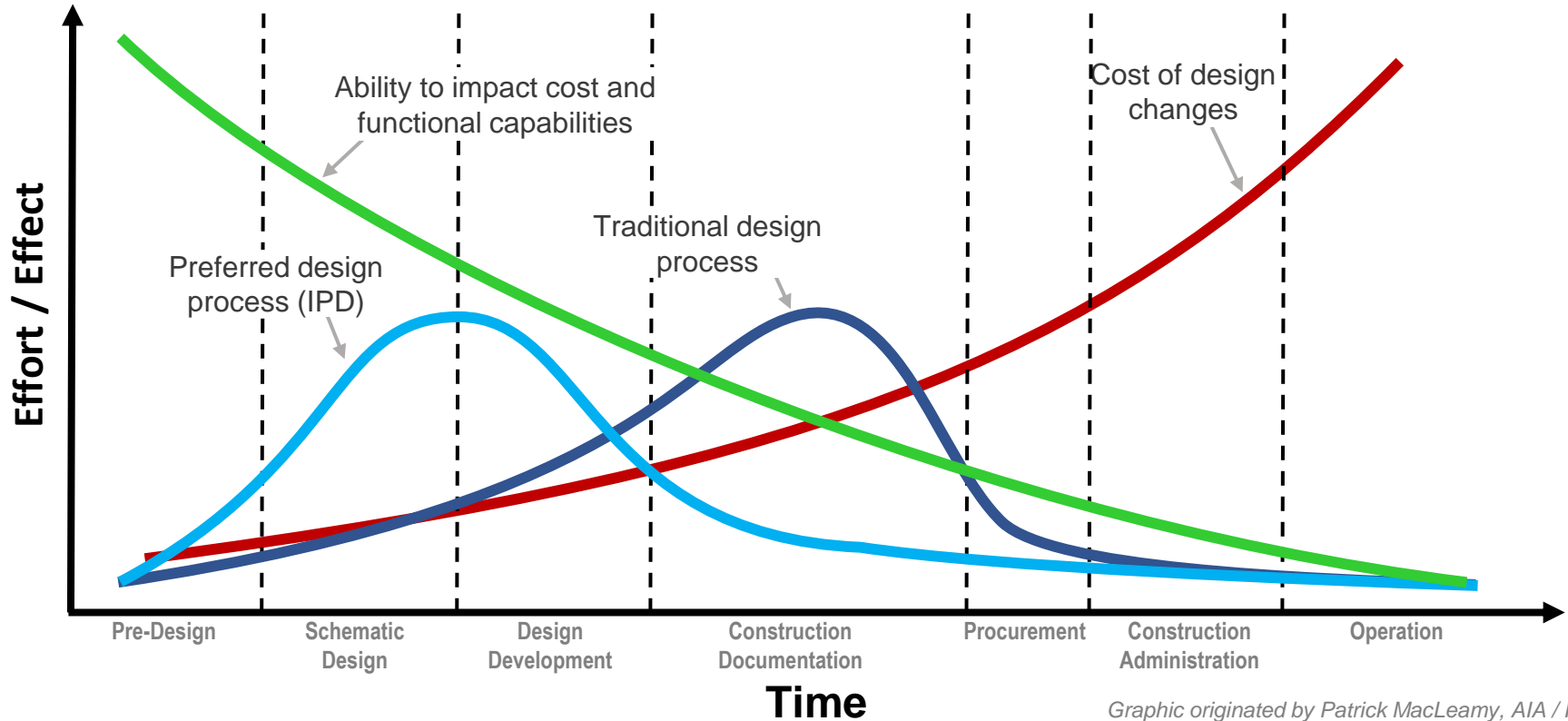
Requirements Development

Generate and compare many different options at the beginning of the Requirements Development process.

CO₂e Estimates

Understand the rough magnitude of impact that changes in workplace policy/space requirements may have on emissions.

Best Used Early



02 WIFM 3.0 Space Calculations

Hybrid Continuum

Transformation across work, worker, workplace = people, place, and technology solutions



Office-Based

(Considered full time on-site.
Less than 1 day a week teleworking)

- employees accomplish all or the **vast majority of work in the office**
- **telework is a human resource benefit** and not a space occupancy strategy
- **larger individual workspace sizes** tend to be used
- **meeting space** are less likely to be customized to different work styles

Periodic Telework

(Primarily work from the office. On average 1 - 2 days a week teleworking.)

- **employees begin to do more work remotely**, likely more heads-down tasks
- **some space reduction** can be achieved with desk sharing
- **individual workspace sizes begin to shrink**
- meeting spaces become more focused on **collaboration**

Frequent Telework

(Work between offsite and office. On average 3 - 4 days a week teleworking.)

- employees consider their **home office as their primary work location**
- **significant space reduction** is achieved with desk sharing
- **smaller individual workspace sizes** are used
- meeting spaces are primarily focused on **smaller team collaboration and hybrid meetings**

Remote Work

(Extensive virtual work adoption. On average 5 days a week teleworking.)

- employees go into the office for a **specific purpose and to connect with peers**
- **maximum space reduction** is achieved with desk sharing
- **the smallest individual workspace sizes** are used
- meeting spaces are primarily focused on **smaller team collaboration and hybrid meetings**

Application: Individual Workspace Allocation

	Office Based (Considered full time on-site. Less than 1 day a week teleworking)	Periodic Telework (Primarily work from the office. On average 1 - 2 days a week teleworking.)	Frequent Telework (Work between offsite and office. On average 3 - 4 days a week teleworking.)	Remote Work (Extensive virtual work adoption. On average 5 days a week teleworking.)
Low Degree of Change	Workstations: 90% Private Offices: 10%	Workstations: 92% Private Offices: 8%	Workstations: 97% Private Offices: 3%	Workstations: 100% Private Offices: 0%
Medium Degree of Change	Workstations: 91% Private Offices: 9%	Workstations: 93% Private Offices: 7%	Workstations: 98% Private Offices: 2%	Workstations: 100% Private Offices: 0%
High Degree of Change	Workstations: 91% Private Offices: 9%	Workstations: 94% Private Offices: 6%	Workstations: 99% Private Offices: 1%	Workstations: 100% Private Offices: 0%

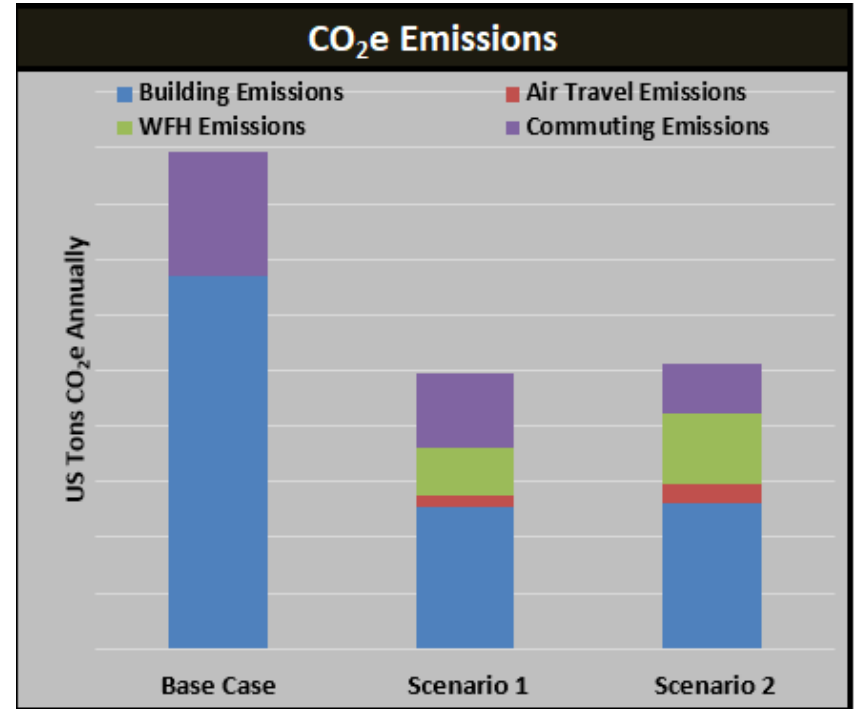
Application: Individual Workspace Sizes

	Office Based (Considered full time on-site. Less than 1 day a week teleworking)	Periodic Telework (Primarily work from the office. On average 1 - 2 days a week teleworking.)	Frequent Telework (Work between offsite and office. On average 3 - 4 days a week teleworking.)	Remote Work (Extensive virtual work adoption. On average 5 days a week teleworking.)
Low Degree of Change	Workstations: 64 nsf Private Offices: 150 nsf	Workstations: 48 nsf Private Offices: 120 nsf	Workstations: 48 nsf Private Offices: 100 nsf	Workstations: 24 nsf Private Offices: 0 nsf
Medium Degree of Change	Workstations: 64 nsf Private Offices: 120 nsf	Workstations: 48 nsf Private Offices: 100 nsf	Workstations: 36 nsf Private Offices: 100 nsf	Workstations: 24 nsf Private Offices: 0 nsf
High Degree of Change	Workstations: 48 nsf Private Offices: 120 nsf	Workstations: 48 nsf Private Offices: 100 nsf	Workstations: 36 nsf Private Offices: 100 nsf	Workstations: 24 nsf Private Offices: 0 nsf

03 WIFM 3.0 CO₂e Calculations

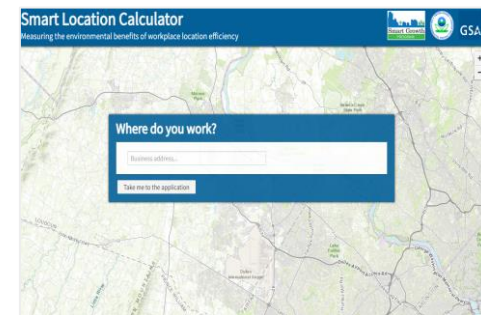
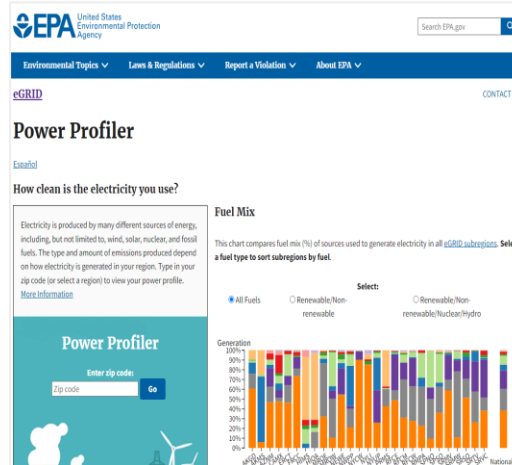
WIFM Tool CO₂e Module

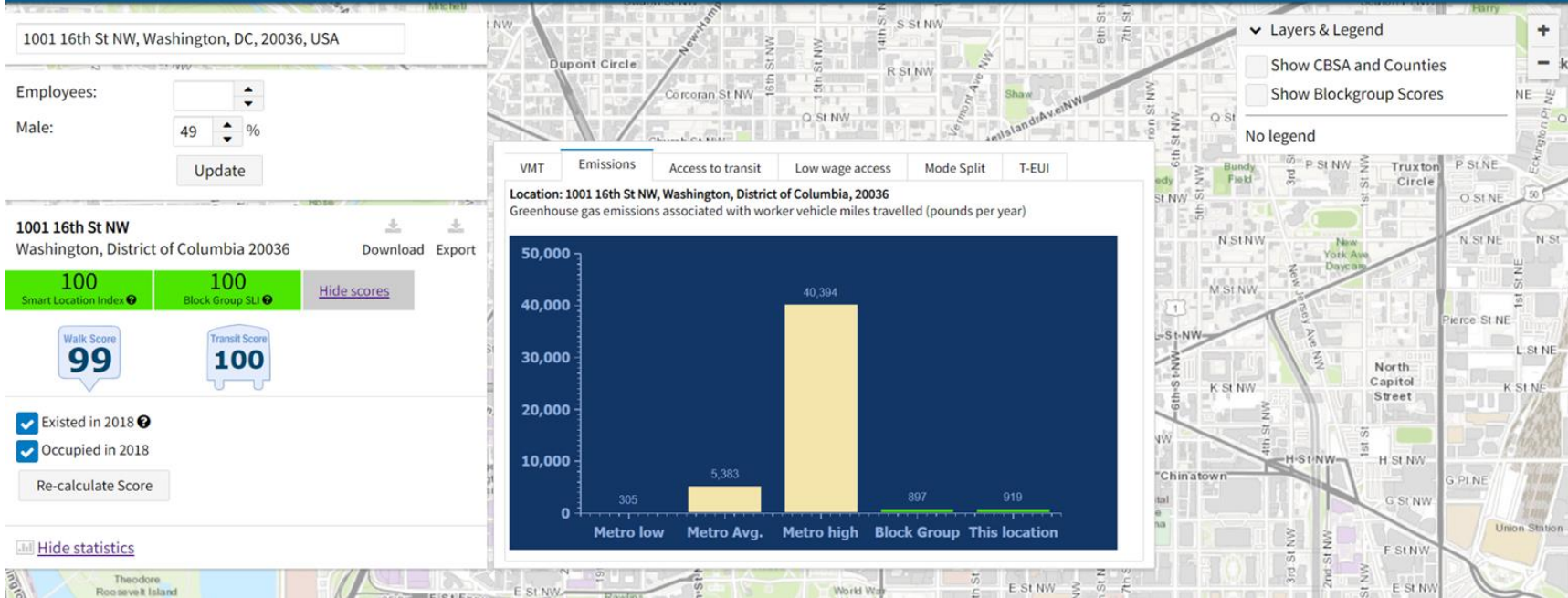
- Methodology validated by a cross sector SME Advisory Panel
- It's a planning and decision making tool **NOT** a calculator
- Provides ROM estimates of annual workplace CO₂e
- Shows changes in CO₂e based on changes in workplace policies, space requirements, and planning decisions
- Captures CO₂e from **4 emissions streams**:
 - Office building emissions
 - Commuting emissions
 - WFH emissions
 - Air travel emissions



WIFM Tool CO₂e Module - Data Sources

- [CB ECS 2018](#) - Building Energy Use Intensity
- [RECS 2015](#) - Work From Home (WFH) Heating and Cooling Energy
- [EIA Energy Use by Type of Building](#) - Office building emissions
- [EPA's Emissions Factors](#) - Converting energy, Vehicle Miles Traveled, air miles to CO₂e emissions
- [eGRID](#) - Converting electricity to emissions
- [Smart Location Calculator](#) - Average Vehicle Miles Traveled for GSA buildings by Zip Code (internal source)





- The Smart Location Calculator is a simple tool for exploring how workplace location affects worker commute travel.
- Joint GSA/EPA tool, publicly available at slc.gsa.gov
- Measures the environmental benefits/impacts of workplaces
- Location specific (down to CBSA level)
- Smart location index (0-100)- With 0 being the least efficient.
- VMT/GHG
- Walk/transit scores

WIFM Tool CO₂e Module - Assumptions

- All CO₂e estimates are annualized
- **Base case**
 - all employees are office based and commute five days a week
 - no emissions from Work From Home (WFH) or Air Travel
- **Air Travel**
 - for remote employees traveling to/from the office for internal connection
- **Commuting emissions**
 - based on the average vehicle miles traveled (VMT) by zip code
 - fully remote employees do not commute
- **WFH**
 - home-office energy calculations based on 240, 8-hour workdays per year
 - office-based employees have no home-energy emissions

Case Study 1: Chicago Office Building

Base Case Parameters

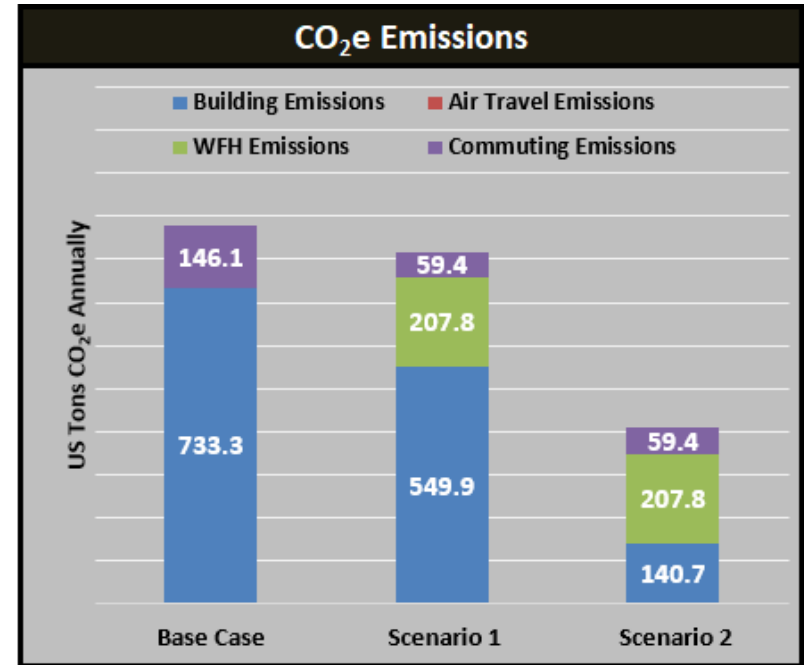
- Original Floorspace: ~80,000 USF
- Headcount: ~500
- Zip Code: 60604
- Base Case: Pre-pandemic, assuming everyone was Office Based
- Air Travel: None assumed for remote employees

WIFM Scenarios

- Scenario 1 & 2: 57% hybrid, 2% office-based, 41% remote (actual)
- Scenario 1: ~60,000 USF office footprint (actual)
- Scenario 2: ~15,348 USF office footprint (WIFM-calculated)

Supplemental Analysis

- Change in annual commuting estimated from HR data:
 - 75% drop pre/post pandemic across GSA (emissions intensity)
 - 72% drop for this location
- Compares favorably ~60% commuting reduction calculated by WIFM
- Actual estimated building emissions for all of GSA-occupied space dropped by 13% from pre-pandemic baseline (2019).
- Scenario 1 projects a 25% reduction in building emissions BUT if GSA followed the WIFM (Scenario 2), emissions would drop by 80%



Case Study 2: Fort Worth Office Building

Base Case Parameters

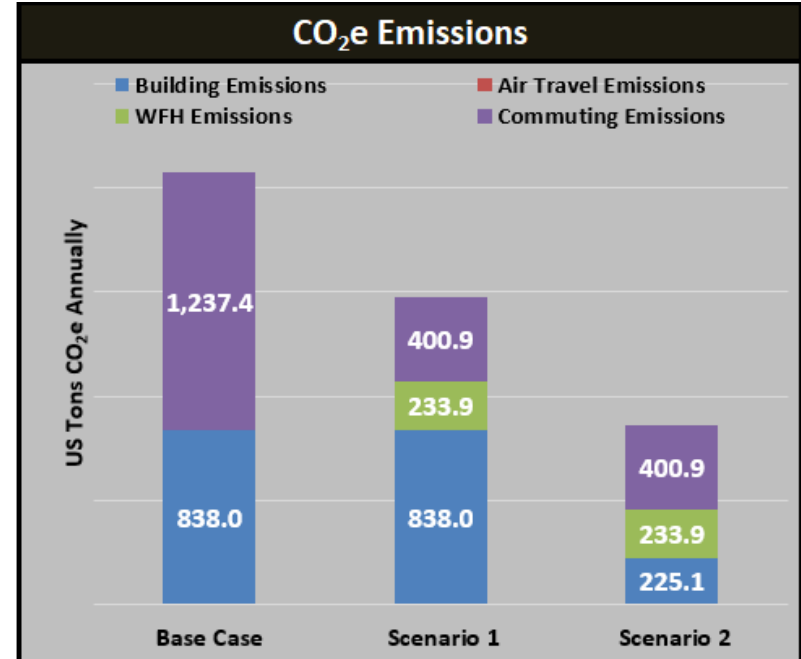
- Original Floorspace: ~126,000 USF
- Headcount: ~660
- Zip Code: 76102
- Base Case: Pre-pandemic, assuming everyone was Office Based
- Air Travel: None assumed for remote employees

WIFM Scenarios

- Scenario 1 & 2: 46% hybrid, 1% office-based, 53% remote (actual)
- Scenario 1: ~126,000 USF office footprint (actual)
- Scenario 2: ~19,844 USF office footprint (WIFM-calculated)

Supplemental Analysis

- Change in annual commuting estimated from HR data:
 - 75% drop pre/post pandemic across GSA (emissions intensity)
 - 81% drop for this location
- Compares favorably ~67% reduction calculated by the WIFM
- Actual building emissions for all of GSA-occupied space dropped by 13% from pre-pandemic baseline (2019).
- Scenario 1 shows no reduction in building emissions BUT if GSA followed the WIFM (Scenario 2), emissions would drop by 73%



04 Demonstration

05 Resources

Resources to Improve the Home Office

GSA Promote Productivity, Health & Well-being While Working From Home

THE CHANGING WORKPLACE



The rapid growth of telework has prompted the federal community to reassess the traditional workplace. Indeed, a guiding principle of Workplace 2030 is that work can be done anywhere, at any time. As more work is done outside the office, more attention needs to be paid to ensuring our federal employees' productivity, health and well-being. This includes maintaining good personal habits and creating healthy, engaging workplaces no matter where we work.

BEYOND AVOIDING ILLNESS

Health and well-being require more than not being sick; they require conditions that help us thrive. Creating comfortable and healthy indoor environments, seeking social connection, ensuring regular physical activity, and removing unwanted distractions are all key. There are many ways to pursue this.

Tips to Promote a Healthy and Productive Remote Workplace:

- Optimize your work space**
 - Create a dedicated work space area with good task lighting if you can.
 - Select a spot with access to daylight and views of the outside. Learn more about daylighting at the [Whole Building Design Guide's Daylighting page](#).
 - Choose comfortable, ergonomic work furniture. Check out the resources on [SF Tool.gov's ergonomics page](#) for help.
 - Include biophilic design elements like house plants.
- Make thermal comfort a priority**
 - Set a comfortable temperature.
 - Seal or avoid drafts around windows.
 - Wear clothing that fits the season.
 - Avoid walls and windows that are warm or cold to the touch.
- Improve your air quality**
 - Open windows when you can.
 - Use fans to circulate indoor air when you can't.
 - Change the air filters on your home air conditioning systems at least quarterly.
 - Choose your air filter's MERV rating based on local pollution levels. Visit [www.airnow.gov](#) for more information.
 - Consider portable filters to clean the air during polluted seasons or extreme events.

4 Make time for social contact

- Visit "third places" like a cafe, gym, or park to work or just to be around others.
- Connect with colleagues for regular socializing activities.

5 Move around and get outside

- Take regular breaks to move and make time to exercise.
- Get outdoors for a dose of daylight and fresh air.

[future of federal work workplace 2030](#)

Reduce home-office energy use



GSA Solid Waste Management in the Home Office

THE CHANGING WORKPLACE

The rapid growth of telework has prompted the federal community to reassess the traditional workplace. Indeed, a guiding principle of Workplace 2030 is that work can be done anywhere, at any time. As more work is done within the home office, and more solid waste is therefore cycled through the home, we need to ensure our federal employees' can properly manage their work-related solid waste to reduce the environmental impacts of telework.

SOLID WASTE MANAGEMENT

Solid waste is accumulated more now within the home as federal employees spend more time working from their home offices. Electronics used for work in addition to other waste is cycled through the home much quicker now. Employees can manage waste by using the reduce, reuse and recycle method and best practices.

Tips to Reduce Waste Through the Reduce, Reuse and Recycle method:

- Reduce**
 - Avoid using printers, ink, and paper as much as possible; switch to electronic documents and files.
 - Turn off and/or unplug lights during the day. This will save energy and keep your lights lasting longer.
 - Reduce hazardous waste by buying batteries with low mercury content or using rechargeable batteries.
 - Don't leave your phones, tablets, keyboards, and headsets plugged in all day, cycle charging to off-peak hours and extend the life of the batteries.
 - Learn more about waste reduction here: [www.waste360.com/waste-reduction/ten-ways-reduce-waste-office](#).
- Reuse**
 - Extend the life of office electronics including computers, printers, phones, etc.
 - Regular maintenance and turning off your office electronics when not working can greatly suppress their life span.
 - When possible, buy refurbished electronics.
 - Have a yard sale to find homes for clothes, toys, appliances, and books that you no longer need.
 - For indoor house cleaning, buy reusable mops, sags and sponges.
- Recycle**
 - Recycle certain office items such as paper and ink cartridges (refer to your local recycling program).
 - Learn to compost at home. Snacks, coffee, and lunches at home could be composted.
 - Recycle unwanted old office electronics by taking them to stores like Best Buy.
 - Find recycling locations and programs information on: [https://recycleaction.com/](#), [https://www.wm.com/](#), [https://search.east911.com/](#)



[future of federal work workplace 2030](#)

Improve health & wellness



GSA REDUCING THE CARBON FOOTPRINT OF REMOTE WORK
Improving Energy Efficiency of the Home Office

THE CHANGING WORKPLACE

The rapid growth of telework has prompted the federal community to reassess the traditional workplace. Indeed, a guiding principle of Workplace 2030 is that work can be done anywhere, at any time. As the expansion of telework grows, so does the need to invest in better home offices. Specifically, reimagining the workspace through a sustainability lens and prioritizing reducing carbon footprints and increasing the energy efficiency of home offices.

THE HOME OFFICE

Telework has led to a decrease in carbon footprint related to transportation, as commuting to the office becomes less frequent. However, there is also an increase in overall home energy consumption as the home office becomes prioritized. Encouraging remote workers to invest in habits and products that reduce their at-home carbon footprint can offset these issues.

Tips to Reducing Work From Home Carbon Footprint/Improve Energy Efficiency:

Low Hanging Fruit Strategies

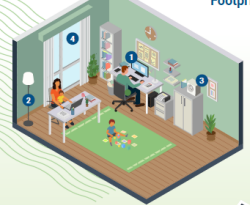

These strategies are well suited for multi-family and apartment dwellers.

- Use ENERGY STAR rated equipment such as monitors and printers.
- Use LED light bulbs and utilize daylighting in home office. Check for programs that offer free of charge or incentivized LED light bulbs on [www.dsireusa.org](#)
- Utilize local thermal comfort devices (fans, footwarmers, etc).
- Open windows on moderate days.

Major Intervention Strategies

These strategies are well suited for single-family dwellers and homeowners.

- Get a home energy audit.
- Check for local energy efficiency and utility incentives on [www.dsireusa.org](#)
- Switch to high-efficiency, all-electric systems for the home. Consider installing high-efficiency heat pumps for your heating and air conditioning, electric water heaters, and electric kitchen appliances.
- Assess and improve attic insulation.
- Install solar energy.
- Purchase or lease a portion of a community solar project.

[future of federal work workplace 2030](#)

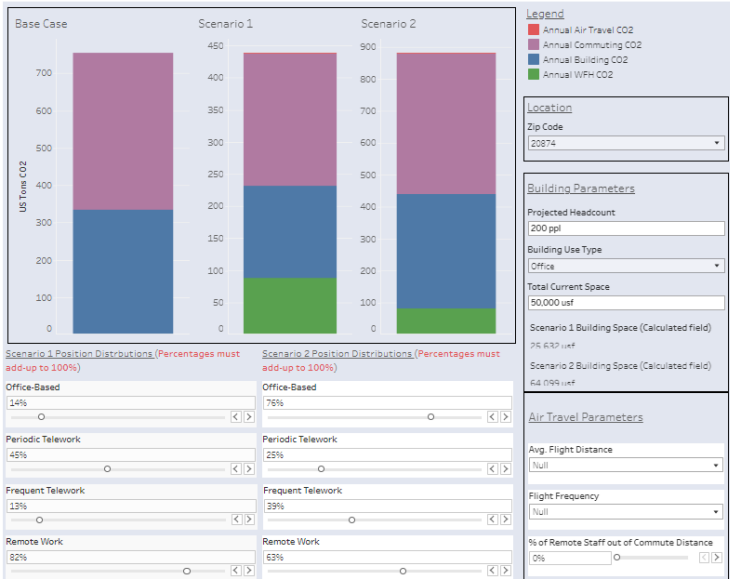
Reduce home-office waste



WIFM Resources

WIFM GHG Module

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OMB Max Tableau Dashboard



Sustainable Facilities Tool

U.S. General Services Administration

LEARN

Sustainability Topics

PLAN

Strategies & Tools

EXPLORE

Virtual Facility



Planning and Engagement Processes

[Systems Thinking](#)

[Integrative Design Process](#)

[Life Cycle Perspective \(Life Cycle Thinking\)](#)

Green Teams

Green Teams

Referred to as Green Teams, Green Project Teams, or Eco-Teams, these groups consist of occupants/tenants and building staff who voluntarily educate fellow occupants and empower their organization to adopt sustainable practices. Identifying and implementing building-specific initiatives through occupant-run programs and regularly occurring calendar events, these teams seek to create a more environmentally friendly workplace.

By promoting sustainable practices in the workplace, Green Team projects have several benefits:

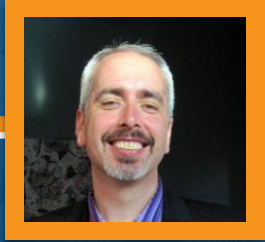
- Increased occupant engagement
- Enhanced occupant and/or tenant satisfaction
- Increased cost savings
- Improved regulatory compliance and environmental performance
- Improved community impact

Use our strategies below to establish your Green Team.

[Getting Started](#)

sftool.gov

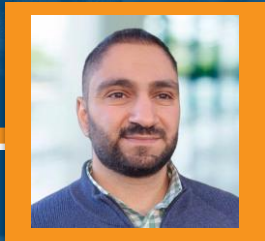
Q&A



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Thank You

Join us for these upcoming
Client Enrichment Series
events...

PBS Customer Dashboard - Reporting Made Easy!

Thursday, July 11th
1pm-2pm EDT

[Register Today!](#)

Water Quality Management in GSA Facilities

Tuesday, August 6th
11am-12:30pm EDT

[Register Today!](#)

Workplace Innovation Lab - Insights and Applications

Thursday, August 15th
1pm-2:30pm EDT

[Register Today!](#)

Watch our  **YouTube** **[class recordings](#)**
visit **www.gsa.gov/ces**
email **clientenrichmentseries@gsa.gov**