

Austin's Pilot Telework Program to Impact Air Quality and Reduce Traffic Congestion



Summary of our Citywide Telework Pilot Program Austin, Texas

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Table of Contents

Introduction

Foreword

Executive Summary

Part I:

Telework as a Solution to Air Quality Issues in Austin, TX

The Problem

The Solution

Part II:

The Work from Home Pilot Program

Overview

Project Inception

Implementation of the Work from Home Day Pilot Program

Findings from Work from Home Day 2013

Conclusion

References

Additional Resources

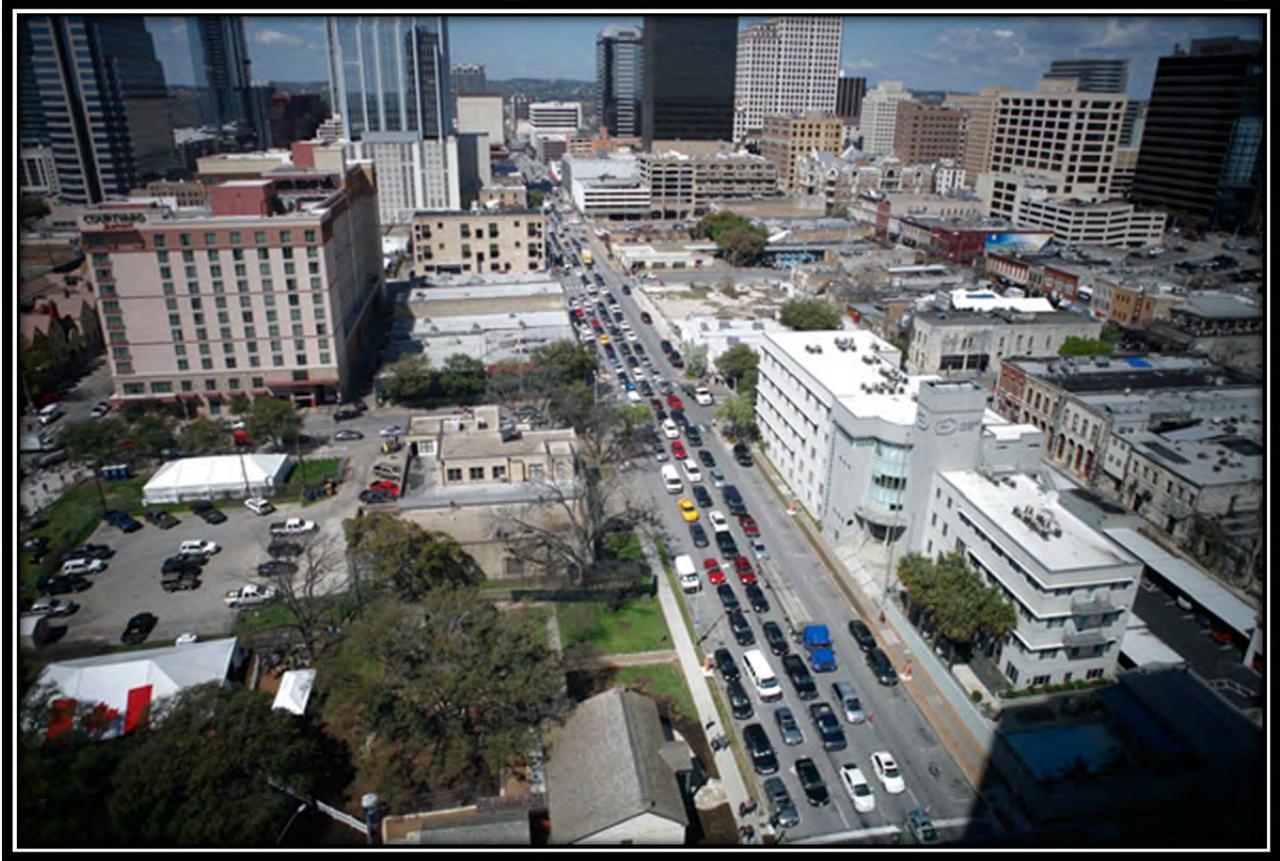
Introduction

Foreword

Since its September 2012 inception, during the third annual Mashable Social Good Summit, the Social Good Summit Austin (SGS Austin) Committee has sought to address air quality and traffic congestion issues in Austin, Texas. The objective of this group of local advocates, volunteers and social media influencers was to implement a citywide telework pilot program designed to reduce carbon emissions from traffic. The Summit Committee worked with government, businesses, nonprofit organizations and the media toward this end. This white paper will highlight the problem of air quality and traffic congestion in Austin, Texas; offer a solution; and report on the findings of the pilot program completed on February 8, 2013. It will also detail the steps required to launch this community program organically and make it successful.



Executive Summary



In Austin, traffic congestion has produced unhealthy levels of ozone, forcing our region to be labeled “near nonattainment” for ground-level ozone by the Environmental Protection Agency (EPA). With the use of Single Occupancy Vehicles (SOV) projected to continue to grow, the problem is expected to worsen unless action is taken in the short term. For an immediate impact on air pollution, Austinites must drive less to decrease our traffic emissions.

Individuals commuting to and from work account for the majority of cars on the road. Over 125,000 individuals come downtown every weekday (Gadbois). Demographics of Austin show a large population of educated individuals employed in the technology field, with a high level of access to high-speed internet - conditions highly favorable for successful telework – yet only about 2.5% of workers telework on a given day (Bhat, 2004). Teleworking, however, would be a solution Austin could easily implement, that would positively impact air quality and traffic congestion in Austin, and improve the quality of life for Austinites. Moreover, the process of implementing this new community-wide teleworking practice will be organic to each business and individual, but will promote a sustainable shift in the community. This report will show the results and plans done by our community organization, SGS Austin, and what we still are undertaking, to create a better environment for Austin and our future. Within this report, you will see efforts both local and global, online and offline, short-term and long-term, all driven around one main idea: to make Austin the center of Social Good and Innovation.

Part I:

Telework as a Solution to Austin Air Quality & Traffic Congestion Issues



The Problem



Austin's population is growing exponentially. The Texas State Data Center projects a continued growth rate of 35% between 2010 and 2020. Up to 25,000 new Austin area rush hour commuters are added each year (Bhat, 2004). Movability Austin calculates over 125,000 individuals commute downtown each weekday (ACS 2011). The vast majority - nearly 72% - of Austin commuters drive alone. (Bhat, 2004).

So many people drive (especially alone) that ozone pollution in Austin is at an unhealthy level. Our region's current ozone level (a.k.a. design value) is 74 parts per billion (ppb), one unit short of EPA's 75 ppb ozone standard, which means our region is considered near nonattainment. A nonattainment designation would mean negative public health impacts and harsh restrictions on economic development.

The American Lung Association's annual "State of the Air" report, graded Austin's ozone level a grade of 'D' in 2012. Ozone is a colorless gas composed of three atoms of oxygen. In the upper atmosphere this gas helps protect the earth from the sun's damaging ultraviolet rays. At ground level, however, ozone can be harmful to human health and the environment. Ground-level ozone is not emitted directly into the air but is created through a series of reactions between nitrogen oxides (NOx) and volatile organic compounds (VOCs) - usually from vehicles - mixing in the presence of heat and sunlight (Health.State.MN.US). Due to Austin's high levels of heat and sunlight combined with traffic congestion, the city is a particularly hospitable environment for the production of unhealthy ozone. Austin's traffic problems are the fourth worst in the United States, according to a study by traffic data company INRIX. (INRIX, 2013)

In the Austin area, most of our ground-level ozone pollution, primarily caused by cars and other vehicles, is extremely harmful to humans, producing negative health effects ranging from



lung inflammation, and cancer, to, in extreme cases, death.

Government leaders are exploring solutions to increase the capacity of your transportation system with HOV lanes, express bus services and other high capacity transit options like rail to give more people options other than driving alone. But these solutions could be years away. (Austin's Strategic Mobility Plan, Project Connect, CAMPO 2035 Plan)

According to Dr. Chandra Bhat at The University of Texas at Austin, from his 2004 Austin Commuter Survey:



“Traffic trends in Austin show a longer rush hour, more congestion on the roads, and longer travel times for trips. Travel time delays and the difference in peak travel time to off-peak travel time are increasing at a greater rate in Austin than in other medium-sized cities in the country. In fact, according to the recent 2004 urban mobility report, the Austin area has the dubious distinction of having the highest level of traffic congestion among cities its size. Further, with the addition of about 25,000 new Austin area rush hour commuters each year, traffic congestion and air quality levels can be expected to only significantly worsen in the coming years unless bold, creative, coordinated, and proactive traffic congestion alleviation strategies are developed and implemented within the context of a broader vision for the economic vitality and social vibrancy of the Austin region.”

In addition to the air pollution problems, there are other health risks associated with commuting long distances by passenger vehicle. A study in the American Journal of Preventive Medicine based on data from nearly 4,300 people in Texas found that people who drove longer distances to work were generally found to have larger waist circumferences, lower cardiovascular fitness levels, higher blood pressure and higher body-mass index (Hoehner et al., 2012).

People commuting 31 miles or more die sooner than people who live closer to work. (Sandow, Umea University, 2012)

Finally, despite Austin's educated population, most of who work in high-tech jobs at private companies, only about 2.5% of workers telework on a typical day (Bhat, 2004). This leaves a great opportunity for our community to act in a united fashion and find a way to make telecommuting a part of the larger more effective solution in solving our air quality issues.

The Solution

Reducing the number of people driving alone on the roads is key to reducing ground-level ozone. Telecommuting is a viable short- and long-term solution to reduce emissions and traffic congestion in Austin and to improve the quality of life for Austinites.

Compared to other solutions -- such as road and mass transit improvements which require large financial investments, extended periods of time to construct, and are often bogged down by political and financial interests -- telework can be implemented immediately and at a fraction of the cost.

In most cases, telework programs are relatively easy to implement and can even save employers money. For example, with more workers at home, employers can afford to lease or purchase smaller, less expensive facilities, pay less for electricity—which can be costly in the hot, Austin summer—and purchase fewer supplies. But the benefits of telework go far beyond cost savings for employers.

Let's assume that those persons who could do their jobs from home did so 50% of the time. Recent information puts the number of those workers at 307,345 among for-profit companies, non-profit companies, and government agencies. It does not include self-employed workers who account for about half of the telecommuting population. If those 307,345 workers worked from home it could save:

- 734 million vehicle miles - the greenhouse gas equivalent of taking 61,000 cars permanently off the road.
- 52 million trips - potentially eliminating some 200,000 hours of congestion
- 36 million gallons of gasoline
- 4 million barrels of oil
- \$64 million in accident related costs
- 558 traffic accident deaths or injuries

Road traffic would drop by nearly 20% -- similar to a Friday before a holiday weekend. This conservative Greenhouse Gas reduction estimate does not include the resulting benefits from reduced congestion. Congested traffic causes more pollution than moving traffic.

The potential savings from even *one day* of telework among that same audience is:

- 5.9M vehicle miles, that's the GHG equivalent of taking 500 cars permanently off roads

- 2,758 tons of greenhouse gas
- 295 thousand gallons of gas
- 32 thousand barrels of oil
- \$521,000 in traffic related accidents
- 5 traffic accidents



Austin is by and large an educated, employed and connected city, making telework a viable option for most commuters:

“A very high proportion (nearly 90%) of Austin commuters have internet access in their homes. The high internet penetration rate in Austin

residences, in addition to the hi-tech nature of jobs in Austin, implies that teleworking (*i.e.*, working from home on one or more days instead of traveling to the office) may be an effective traffic congestion mitigation strategy for the Austin area (Bhat, 2004).

In the next year, Google plans to bring Gigabit Fiber to Austin, which should speed up connectivity exponentially, thereby further reducing employer concerns about delay and productivity.

In summary: Telework programs are fairly easy to implement and a highly effective solution to reduce air pollution and traffic congestion in Austin.

Part II:
The Work from Home Pilot Program



Overview

The Work From Home (WFH) pilot program is an initiative proposed by the Social Good Summit Austin Committee and backed by the Austin City Council which supported the creation of a citywide “Work From Home” (telework) Day that asked all citizens who are able to participate without inhibiting daily operations, to work from home for one day: Friday, February 8, 2013.

Goals for the Pilot WFH Initiative

- Raise awareness of the problem of air quality in Austin
- Positively influence public opinion of teleworking
- Educate employers on telework productivity tools and strategies
- Reduce traffic congestion and air pollution
- Measure government, citizen and corporate interest in telework programs
- Continue to build a database of existing telework programs

Project Inception



It all began with the creation of an event at the *Alamo Drafthouse* on September 24, 2012 which had 120 attendees, including Capital Metro spokesperson John-Michael Cortez. The goal was to brainstorm solutions to the problem of air quality in Austin. Those assembled voted for a specific solution with action steps and accountability measures.

The [newly created] Social Good Summit Austin Committee would then help facilitate this solution and set a six-month deadline to ascertain progress. At the conclusion of the event, participants agreed that the following solutions should be followed up by the Social Good Summit Austin:

- Initiate a *Work From Home* Pilot Program
- Coordinate a program to enable Wi-Fi on all public transportation to increase ridership
 - The Wi-Fi program is currently being developed by CapMetro, and is waiting on further development and funds.

At the first meeting of the Social Good Summit Austin Committee, held at the Google Austin headquarters on October 19, 2012, the team determined reduction of traffic through teleworking to be the most viable short-term solution to the air quality problem in Austin. Though the project to increase ridership of Austin public transportation could also contribute to air quality improvement, the SGS Austin Committee decided to focus on one initiative for the six-month timeframe, and chose the telework initiative as having the most impact as well as viability. Therefore, on October 19, 2012, the SGS Austin Committee agreed to complete a telework pilot program in Austin within six months. The SGS Austin Committee also decided to host an event during SXSW to raise awareness of the cause and to present the results of the pilot program. Sub-committees were created for the following projects:

Work from Home Pilot Program

- State and Local Government Support Acquisition
- Corporate Participant Acquisition
- Community Partnerships
- Marketing, Social Media & Community Awareness
- Logistics Sponsorship

SXSW Event

- Event Planning & Logistics
- Marketing, Social Media & Community Awareness
- Event Sponsorship

White Paper

- Compiling of WFH Day data
- Drafting and Editing

Implementation of the Work From Home Pilot Program



To implement the Work From Home Day Pilot Program, the SGS Austin team grew bigger. This team of twenty-six volunteers divided into sub-committees and completed the following:

Marketing, Social Media & Community Awareness

Social Good Summit Austin created a website, logo, and Social Media presence.



FACEBOOK



GOOGLE+



TWITTER



TUMBLR

Weekly content included initiative updates and environmental education, including carbon and ozone reduction tips. The Committee leveraged its own individual social media power by re-tweeting and re-sharing posts on the SGS Austin pages, as well as via the various team members' pages.

Outreach & Education

On January 11, 2013 SGS Austin invited the community to the Google Austin headquarters for a “Telecommuting for Productivity” seminar designed to educate attendees about the benefits of teleworking, and to teach strategies to make telecommuting effective and productive, at both the company and individual level. More than 50 community leaders and members attended, including representatives from AMD, Applied Materials, Austin Technology Council, CAMPO, Flying Island Press, CapMetro, City of Austin, HNTB, Manor ISD, Movability Austin, National Instruments, The Austin Grand Prix, Travis County, TxDOT, CLEAN AIR Force of Central Texas, Whole Media Concepts, and Williamson County.

State, County & Local Government Support



Social Good Summit Austin successfully worked with Councilman Mike Martinez, of the Austin City Council, to pass a resolution on December 6, 2012, designating Friday, February 8, 2013, an official Work From Home Day as an initiative to encourage telecommuting efforts. This was a historical event as it had never been done on such a large scale. Through that initiative, the City of Austin pledged to allow all non-essential employees to work from home on February 8, 2013. It was noted that Work From Home Day is very much in keeping with the City's Imagine Austin Comprehensive Plan goals.

The State of Texas was also an avid supporter, and Governor Rick Perry and Mrs. Anita Perry issued an official recognition letter as a statement of support.

Community Partnerships



Corporate & Educational Participation



Event Planning & Logistics



Findings from Work from Home Day 2013

On February 8, 2013 more than 14,000 employees worked from home.

Participating (pledged) Companies / Individuals	Number of Participants	Avg. Commute	Total VMT avoided	Gals of Fuel Saved*	Est. lbs. GHG Reduction**
ACC	7,600	22.7	220,400	10,073	194,926
Active Life***	13	15.5	202	9	177
AMD****	700	22.7	15,890	709	13,896
Austin Technology Council	0				
Austin Young Chamber	0				
CAMPO	1	22.7	29	1	26
CapMetro	0				
Clean Air Force Texas	3	22.7	87	4	77
Dell	4,667	22.7	135,343	6,186	119,700
City of Austin	928	22.7	1,230	3,936	23,802
GDSM	0				
Google Austin	30	22.7	870	40	769
Greater Austin Hispanic Chamber	0				
Jason's Deli	0				
Nature Conservancy of Texas	1	22.7	29	1	26
NOOM	1	22.7	29	1	26
PGI	0				
Rackspace	204	22.7	5,916	270	5,232
Travis County	78	22.7	2,262	103	2,001
SGS ATX Team					
St Edward's University	0				
TOTALS:	14,226	n/a	382,287	21,333	360,658

Notes:

* Fuel saved estimated at average 22.4 mpg.

**Greenhouse gases calculated at 19.59 lbs/Co2/gal of fuel

*** Calculated from zip code data provided

**** Data provided by AMD. Calculations vary slightly from those using calculator provided by CoA.

Significant publicity was generated for the event through a combined public relations and social media effort. Most notably, Austin's KXAN reported on Work From Home Day during their morning, afternoon and evening newscasts, and featured reporters participating by reporting the news from their home.

News Coverage of Work From Home Day 2013



	News Agency	Link to Coverage
Television	Univision	http://video.univision.mobi/entry/view/id/964766#entry/view/id/964
	KEYE	
	KVUE	http://www.kvue.com/news/Austin-companies-take-part-in-Work-from-Home-Day-190358481.html
	KXAN	http://www.kxan.com/dpp/news/local/austin/austin-welcomes-work-from-home-day
	KHOU - Houston	http://www.khou.com/news/texas-news?fld=190358481&fPath=/news/local/&fDomain=10232
Radio	KUT	http://kutnews.org/post/seeing-fewer-cars-road-today-heres-why
	KLBJ-AM	
Print	CULTUREMAP	http://austin.culturemap.com/newsdetail/02-05-13-12-29-keep-your-car-off-the-road-for-austins-work-from-home-day-on-february-8/
	ABJ	http://m.bizjournals.com/austin/blog/at-the-watercooler/2013/02/extreme-telecommuting-london-to-austin.html?r=full

Anecdotal Findings:

The Social Good Summit Austin Committee found the political, corporate, media and general communities to respond favorably to the concept of telework. What proved more difficult, however, was getting companies to actually implement sustainable strategies for an ongoing Work From Home Program.

Because ozone is generally highest during the hotter months of the year, February was not the ideal month for the pilot program in terms of impacting a measurable change in ozone levels. However, it needed to be implemented as a beta for future Work From Home Days. For this reason, another citywide telework day will be implemented during ozone season, on September 10, 2013. This next effort is a yearlong initiative, and only the beginning of what SGS Austin plans to tackle as a community-led organization to affect other social issues in our community.

Conclusions

The Social Good Summit Austin Committee feels strongly that telework is a viable option for many Austin area companies and employees to reduce ozone pollution, and increase wellness in Austin. Moreover, offering telework as an option elevates the perception of companies as flexible workplaces, thus attracting more employees. Eighty-five percent of 2012 Fortune's 100 Best Companies to Work For allow employees to work from home at least 20 percent of the time. Dell has 50 percent of employees who work from home on a shifting schedule.

Organizations such as Thrival School in Austin will be instrumental in helping employers implement sustainable, effective telework programs.

We are already beginning to look to the future, weaving our WFH efforts into an even more ambitious solution, to the problems of air quality and traffic congestion in Austin, by seeking to combine employer telework programs, travel data, other active transportation options, and improvements to Austin's road system.

Thank You!

The Social Good Summit Austin wishes to offer our gratitude and respect to the many companies, government entities, community organizations, and individuals that supported the cause of pollution and traffic congestion reduction in Austin.



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Appendix

- Bluetooth Travel Time Monitor <http://tti-i35-data.tamu.edu/bluetooth/>
- Clean Air Partners Program <http://www.cleanairpartnerstx.org/resources/partresources.html>
- Filing sharing and cloud storage Business IT <http://goo.gl/wCpe0>

Imagine Austin Comprehensive Plan <http://www.austintexas.gov/imaagineaustin>

Teleworkers Are More Motivated by Autonomy than Bonuses <http://goo.gl/FAfHo>

Texas A&M Transportation Institute <http://mobility.tamu.edu/mip/strategies.php#options>

United States Office of Personnel Management – 2012 Status of Telework in the Federal Government <http://goo.gl/Ai4OP>

<http://pulse.me/s/jqa7V>

Global Workplace Analytics Telework Savings Calculator™	
Austin-Round MSA - Telework Savings Potential	
Total workforce or number of program participants	778,088
	Default Values
Average frequency of remote work (days per week)	2.5
Current \$ per gallon of gas	\$ 3.05
Annual Savings Potential	
Employer Impact	
Real Estate Impact	\$703,948,585
Absenteeism Impact	\$265,836,791
Turnover Impact	\$828,381,742
Productivity Impact	\$1,250,576,301
Other Impacts	\$0
	Total Per Person
	\$3,048,743,418
	\$9,920
Environmental Impact	
Greenhouse Gases Savings (tonnes per year)	337,888.7
Total Air Quality Savings (lbs. per year)	7,864,481.9
Other Impact	
Employee Savings Per Person per year (mid)	\$3,042
Equivalent Work Days Saved by Not Commuting (average)	12.9
Traffic Deaths & Injuries Avoided (#)	558.9
<p>Please cite Global Workplace Analytics Telework Savings Calculator™ in any use of this data. © Global Workplace Analytics</p>	

Note:

The Calculator includes the assumption that not all driving is eliminated on telework days and a portion of the teleworkers would have otherwise walked, biked, carpooled, or taken public transportation.

Note:

These calculations are based on the Austin Telework Savings Calculator, available on the SGS Austin website: <http://socialgoodsummitaustin.org/wfh-day/savings-calculator>.