

Use the following worksheets to estimate the costs and savings of implementing telework.

One-Time Start-Up Cost			
Program planning & development			
▪ Labor/time for project team members	\$		
▪ Legal or consultant fees	\$		
▪ Development of training programs	\$		
▪ Printing, copying, web design, materials prep.	\$		
▪ Conducting training / staff time to attend training	\$		
▪ Other:	\$		
Program planning & development total →			
Initial IT set-up			
▪ IT staff time to design & implement changes	\$		
▪ Costs associated with changes to network, security, etc.	\$		
▪ Additional computer equipment for system (e.g. server)	\$		
▪ Additional software required for system	\$		
▪ Other	\$		
Initial IT set-up total →			
Employee outfitting cost (may vary by employee – use an employee average)	Per Employee Average Cost		
▪ Telephone cost	\$	Number of Employees at Start-Up	
▪ Computer	\$		
▪ Devices (printer, fax, scanner, web cam, etc.)	\$		
▪ Software / software licenses	\$		
▪ Office furniture	\$		
▪ Other	\$		
Employee outfitting cost total (average) x (# employees)		\$	\$
Start-up Cost Total →			\$

Ongoing Program Cost		
Ongoing personnel costs	Annualized	
▪ Program coordinator salary <i>(if required)</i>	\$	
▪ Additional management time <i>(is an additional manager required?)</i>	\$	
▪ Additional IT time <i>(for help desk/troubleshooting)</i>	\$	
▪ Ongoing training / training new teleworkers	\$	
▪ Added record keeping <i>(if not already in coordinator or mgr salaries)</i>	\$	
▪ Other:	\$	
Ongoing personnel cost total _____	→	\$
Ongoing costs for equipment & services	Annualized	
▪ Computer/peripheral equipment maintenance	\$	
▪ Computer/peripheral equipment replacement	\$	
▪ Monthly telephone service fees	\$	
▪ Fees for web-based services	\$	
▪ Additional software licenses	\$	
▪ Additional Insurance payments <i>(if required)</i>	\$	
▪ Other	\$	
Ongoing equipment & services cost total _____	→	\$
Employee outfitting cost as new teleworkers start		
(per employee cost from previous table x estimated number of new teleworkers)		\$
Ongoing Cost Total (For Year 1) _____	→	\$

Savings From Reduced Recruiting

Notes: One of the claims about telework is that because of improved work/life balance and increased morale, fewer employees leave the organization in search of other jobs. Also, some employees may have their home situation change (such as when a spouse takes a new job) in a way that results in a much longer commute, prompting the employee to seek new employment, unless they can telework instead. There are surveys reported in the literature indicating that teleworkers are less likely to say they have thoughts of leaving the organization.

Calculation: To calculate the savings from reduced recruiting, you will need data collected over two time periods. This example uses one year's worth of data prior to teleworking and one year's worth of data after teleworking. You may want to exclude those that left the organization because of retirement at full retirement age.

		Example*	Your Organization
# employees that left organization during year prior to telework program	A	21	
# people employed during year prior to telework program	B	140	
Divide (A) by (B) = % of staff who left year prior to telework	C	15%	
# employees that left organization during first full year of telework program	D	18	
# people employed during full year of telework program	E	150	
Divide (D) by (E) = % of staff who left during first full year of telework	F	12%	
Is the percentage that left the organization during the telework year (F) smaller than for the year prior to telework (C)? If not, then the first year of telework has not had an effect on retention. If (F) is smaller than (C), continue.			
Subtract (F) from (C) = increased retention rate	G	3%	
Multiply (G) by current number of employees to get an estimate of the number of employees retained for the year (.03 x 150)	H	4.5	
Estimate the per-employee cost of recruitment: (Recruitment process, advertising, screening, interviewing, training, lost productivity during the learning curve, possibly relocation costs and payments to professional recruiters. Don't forget any costs associated with the employee leaving.) Your HR department may already have a replacement cost figure they use. Estimates in the literature vary from 5% to 15% of salary.	I	10% of salary	
Multiply (I) by the current average employee salary	J	\$5,000	
Total Estimated Annual Savings = (J) x (H)	K	\$22,500	

* In the above example, the organization had 140 employees in the year prior to a telework program and 150 employees the first full year of a telework program. The average annual employee salary is estimated at \$50,000.

You will need to recalculate for any year in which there is a change in the number of employees, average salary, or per-employee cost of recruiting.

As additional data, get a list of every employee who left during the year and check to see how many of them were teleworkers. Is the percentage of teleworkers on the list as a percentage of all who left during the year smaller than the percentage of teleworkers in the organization? If so, teleworkers are less likely to leave.

Savings From Reduced Sick Leave

Notes: Sick leave may be reduced because employees who are too sick to come into the office, but not too sick to work part of the day, may do so if they can work from home. And, by staying home they are not infecting others.

Calculation: The example below uses data from the first full year of telework. You could use the first six months and multiple by 2 to annualize. You will need an estimate of the average employee salary and average number of work days.

		Example*	Your Organization
# of sick days taken by all teleworkers during the year	A	220	
Divide (A) by total number of teleworkers (40 in example) for the average # sick days claimed by teleworkers	B	5.5	
# of sick days taken by all non-teleworkers during the year	C	820	
Divide (C) by total number of non-teleworkers (110 in example) for the average # sick days claimed by non-teleworkers	D	7.5	
Is the average number of sick days for teleworkers (B) smaller than the average for non-teleworkers (D)? If not, then the first year of telework has not reduced sick days. If (B) is smaller than (D), continue.			
Subtract (B) from (D) = average sick days saved per teleworker	E	2	
Multiply (E) by the current number of teleworkers in your organization (40 in example)	F	80 days saved	
Enter the average daily salary: Divide the average annual employee salary by the number of work days for your organization: for example, \$50,000 divided by 235 days = \$212.77	G	\$212.77	
Total Estimated Savings = (F) x (G)	H	\$17,022	

* In the above example, the organization has 150 employees, of which 40 are teleworkers. The average annual employee salary is \$50,000. The average employee works 235 days (260 days – vacation & holidays)

Savings From Reduced Absenteeism

Notes: Experts say that absenteeism often occurs because employees have home and family obligations (parent teacher day, repairman coming to the house, etc.). As commutes have gotten longer, some people just take the day off rather than trying to make it back to the office in time to get anything accomplished. These obligations are much easier to manage for teleworkers.

Calculation: The calculation is identical to that for sick days. You could combine the two. The example below uses data from the first full year of telework. You could use the first six months and multiple by 2 to annualize. You will need an estimate of the average employee salary and the average number of work days.

		Example*	Your Organization
# of absentee days taken by all teleworkers during the year	A	95	
Divide (A) by total number of teleworkers (40 in example) for the average # days teleworkers were absent	B	2.4	
# of absentee days taken by all non-teleworkers during the year	C	430	
Divide (C) by total number of non-teleworkers (110 in example) for the average # days non-teleworkers were absent	D	3.9	
Is the average number of absentee days for teleworkers (B) smaller than the average for non-teleworkers (D)? If not, then the first year of telework has not reduced overall absenteeism. If (B) is smaller than (D), continue.			
Subtract (B) from (D) = average # absentee days saved per teleworker	E	1.5	
Multiply (E) by the current number of teleworkers in your organization (40 in example)	F	60 days saved	
Enter the average daily salary: Divide the average annual employee salary by the number of work days for your organization: for example, \$50,000 divided by 235 days = \$212.77	G	\$212.77	
Total Estimated Savings = (F) x (G)	H	\$12,766	

** In the above example, the organization has 150 employees, of which 40 are teleworkers. The average annual employee salary is \$50,000. The average employee works 235 days (260 days – vacation & holidays)*

Real Estate Savings

Savings on office space and related costs may be achieved if enough employees telework often enough. The graphic on the right provides four scenarios; each for an organization with 150 employees where 110 (73%) do not telework and 40 (27%) do.

In the first scenario, 20 employees telework 1 day a week and 20 telework 2 days a week. No matter how you arrange schedules, there will always be at least 2 days a week when you need space for all 150 employees.

In the second scenario, where all teleworkers work 2 days a week from home, there is still one day a week when you need space for everyone.

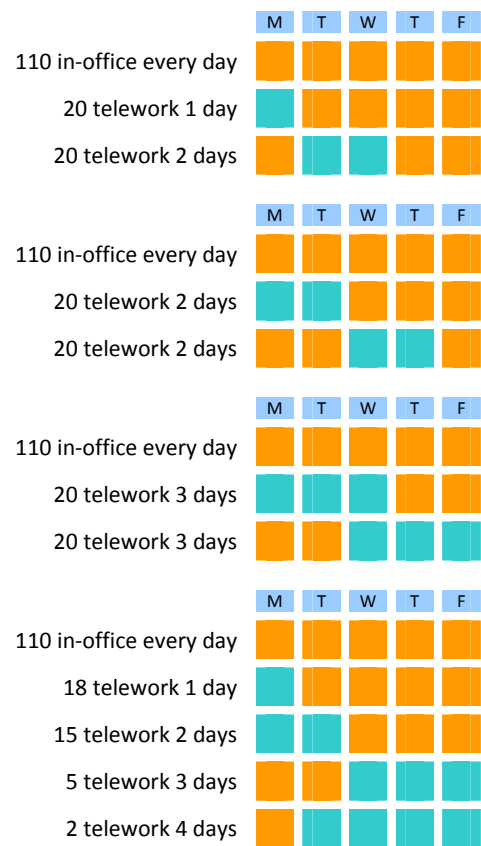
The third scenario does free up space, but requires that a large number of workers telework 3 days a week, which is unlikely.

The fourth scenario is more realistic and does free up seven worker spaces every day, assuming schedules could be arranged accordingly. This graphic points out the obvious fact that the more teleworkers you have doing a majority of their work at home, the greater the chance of freeing up office space. So while an organization may start small, there is real incentive to ramp up so that a significant amount of work is home-based. This emphasizes the need for good telework managers and technology that allows workers to do any work at home that they could do in the office.

The General Services Administration (GSA) uses 230 Square Feet (sf) per employee when planning office space for government offices. The rule-of-thumb calculator on Officefinder.com estimates 220sf per employee for an organization of 150 employees. These estimates include a mix of office sizes, cubical spaces and open work spaces, plus hall ways, break rooms, conference rooms, etc.

In the fourth scenario, the organization would not give up the conference room, executive office offices, or break room, so realistically, the space saved is much less than 220sf. However, using even 100sf per employee, the organization could save 700sf. Using a gross lease rate of \$22sf, the organization would save over \$15,000 a year.

To realize a benefit from reduced office space, the organization will have to set up shared workspace, so not all of the space for the seven workers is unnecessary. Some will have to be converted to shared offices, which is one reason for the smaller 100sf figure. Probably the best method of managing shared office space is called 'hoteling'; a system where teleworkers make a reservation for the space they need on the days they need it. There is software designed just for



this purpose, allowing teleworkers to make reservations online. For large businesses, an online reservation system may be worth the price. The alternative is someone at the organization that maintains a calendar and makes reservations for teleworkers; workable when there are only a few teleworkers. There are also online calendars that workers could access with the appropriate password. Hoteling, tends to change the emphasis from the central office being the main worksite to the home being the main worksite. Teleworkers visit the office when needed and, because of the limited number of desks at the main office, must make a reservation well in advance to work there.

There are a number of services related to office space that may also be reduced along with the size of the office. These are shown in the worksheet below.

Real Estate Savings		Your Organization
Number of Vacant Spaces Created: One teleworker does not equal one vacant space unless the teleworker works from home every day. You will need to determine how many full-time vacancies are created. Estimate the number of teleworkers that will be working from home each number of days (1 day a week, 2 days a week, etc.) and take into consideration their schedules and whether or not they are in the same building or rental unit. How many vacant spaces is it realistically possible to create? (See scenario 4 on the previous page.)	A	
Square Feet Per Employee: Estimate the amount of space saved for each employee. This average will vary depending on the type of organization and how space is allocated. Eliminating 10 offices saves a lot more space than eliminating 10 cubicles. Space per person can range from 175 to 250 square feet, when planning for an entire office, including hallways, break rooms, etc. Keep in mind that you will need to add space for shared workspace. The example on the previous page used 100 square feet saved for each vacant space created.	B	
Total square feet saved = (A) x (B)	C	
Estimated Real Estate Savings: Multiply (C) by your current sf lease rate	D	

Possible Additional Savings (estimate each, if applicable)		Your Organization
Fewer office computers		
Fewer office telephones		
Fewer office phones on system (if you pay based on connections)		
Lower energy costs (for utilities not covered in lease)		
Less office furniture		
Lower janitorial costs		
Lower security service costs		
Other:		
Total Additional Related Savings		

Real Estate Savings + Additional Related Savings		
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Savings from Reduced Parking & Transportation

If your organization pays for employee parking, it may be able to realize some savings. This depends on how parking is being paid for. If you pay for a certain number of spaces each month, then reducing the number of spaces will produce some savings. If you reimburse teleworkers for their parking costs, there may not be any savings. Individuals typically pay a monthly rate whether they use the space or not. Paying a daily rate probably doesn't make sense unless the employee teleworks at least 3 days a week. If you are able to reduce parking spaces for your employees, you may want assign a few for visitors and clients.

Of course not all employees drive to work. The organization probably doesn't pay for parking for employees who don't drive. Some organizations however, do pay for public transportation. Again, like parking, public transportation fees are usually paid with monthly passes, which generally are less expensive than paying daily fares unless the employee works from home most of the time.

Possible Savings From Reduced Parking & Transportation		Your Organization
Parking: If you pay for monthly parking spaces, determine the spaces you can save and the amount of savings		
Public Transportation: Estimate if there is any savings on reduced public transportation costs		
Other:		
Total Parking & Transportation Savings		

Value from Increased Productivity

Experts agree that telework increases worker productivity and quality. Teleworkers claim that they can get much more done at home where there are fewer distractions. This is logical, but the evidence is primarily from self-evaluation surveys. However, these claims shouldn't be dismissed, because when managers are surveyed, they too are more likely to say productivity has increased rather than decreased, although often they say there is no change.

When teleworkers are surveyed about what they do with the time they save from not commuting, some say they spend some of that time working. People who work at home report putting in a little extra time late at night catching-up on emails, reading, or preparing for the next day. If this occurs, then it's reasonable to assume productivity increases. Also, teleworkers consistently report greater job satisfaction, which may lead to higher productivity.

Unless the work product is something that can be counted, like number of sales calls, number of emails sent, number of leads generated, etc., it is very difficult to document productivity. If managers check progress against assignments they will have a rough measurement of how well teleworkers are doing. One way to do this is keeping track of meeting deadlines. If managers conduct the same process with in-office employees, they will have a way to compare the two groups for productivity. Even this measurement is flawed; it could be that your most productive employees are the ones who want to telework and that they would be more productive anyway.

If you do attempt to measure productivity, keep in mind that telework has a learning curve. Experts say it's not unusual for teleworker productivity to decline at first and then increase over the first year. Also, if teleworkers don't have the proper equipment at home, they may not be as productive.

What percentage should you use to estimate increased productivity? Articles found on the internet about surveys and pilot studies from major organizations and public agencies report increases from 10% to 27% (All appear to come from self-reporting surveys). Georgia's Clean Air Campaign reports a 20% average increase. These averages assume a mix of employees teleworking a different number of days.

The example of calculating value below uses 10% productivity gain, to be conservative. You can use a higher or lower number depending on your own feelings about likely increases.

		Example	Your Organization
Estimated productivity increase	A	10%	
Average teleworker salary	B	\$50,000	
Multiply (A) x (B)	C	\$5,000	
Enter the number of teleworkers	D	40	
Value of Increased Productivity = (C) x (D)	E	\$200,000	

In the Event of a Disaster

Telework, as part of a disaster plan may mean some work can continue even in the event of a disaster. Disaster Planning or Continuity of Operations (COOP) has taken on greater urgency since 9/11 and Hurricane Rita. Here in the Northwest there is always the possibility of an earthquake. The Nisqually Quake in February 2001 caused over 3.5 billion in damage. Many businesses were shut down for weeks or months. Because buildings were considered unsafe to enter, financial records and work in progress was often inaccessible for weeks. Telework combined with proper data storage and backup could keep a business running, at least at an emergency level.

In this context, telework definitely has a value, although it is probably impossible to determine.

Similarly, employees who can't get to work due to snow or road closures can work at home if prepared to do so. (This contingency may be included in the earlier calculation for reduced absenteeism).

Commute Trip Reduction & Environmental Goals

Even if your organization is not required to meet CTR standards, you may still have a goal of reducing employee travel. Calculating the miles saved per telework day for each worker, times the number of days teleworked, summed for all teleworkers, will give you the miles saved in a given time period. Each teleworker will have to calculate their own miles saved, taking into consideration additional travel that may occur because they are no longer running errands on their way to or from work. For example, if they used to drop the kids at child care on their way to work, but now, because they telework, their spouse drives the kids.

Commute Trip Reduction and other environmental goals demonstrate good citizenship for the organization. Although this may have no tangible value that can be calculated on a spreadsheet, it does have value to the community and the organization's image.

In this table, copy total costs and savings figures from the preceding tables. Since costs and savings are determined by the number of teleworkers, you may want to use the previous tables to calculate totals for more than the first year. It is possible, for example, that you won't realize any real estate savings the first year when the program is small, but would in the second or third year as more employees sign up for telework.

Cost / Benefit Analysis Summary			
	Year 1	Year 2	Year 3
One-Time Start Up Cost			
Option: Start Up Cost (prorated over 3 years)			
On-Going Annual Program Cost			
Other Costs (Annualized)			
Total Annual Cost of Telework			
Savings from Reduced Recruiting Costs			
Savings from Reduced Sick Days			
Savings from Reduced Absenteeism			
Real Estate and Related Savings			
Reduced Parking/Transportation Savings			
Value of Increased Productivity			
Value of Disaster Preparedness			
Other Savings (Annualized)			
Total Annual Savings from Telework			