



**CONCERT**  
technologies



**Maximize the Green Efficiency  
of Multi-Site National Rollouts of  
Technology**

A Concert Technologies White Paper

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## Executive Summary

In a world of diminishing natural resources and increasing greenhouse pollution and emissions, companies struggle to:

- Meet mandated government compliance
- Reduce environmental effects
- Boost corporate reputation and perception
- Discover new revenue opportunities
- Avoid electronic waste
- Maximize the use of devices and resources to their fullest effect.

In addition, national rollout requirements to manage lower project costs, minimize site visits, reduce scheduling conflicts, accelerate implementation time, and cut internal customer management needs have increased.

Now, Green has become the focus and the solution.

Companies must maintain transparency at a time when unethical and unprofessional practices can be immediately shared. Companies that waste fuel and carelessly emit greenhouse gases undermine the positive efforts other organizations are attempting to achieve.

By employing Green IT Deployment Methodology which utilizes the Local Multi-Service Deployment Method, the 'green' benefits become inherent in the project. In addition to fewer truck rolls and a distance limitation threshold of 40 miles for travel to each site, The Local Multi-service Deployment Method also provides:

- Minimized Resources Deployed
- Lower Project Costs
- Fewer Scheduling Conflicts
- Minimized Site Visits
- Accelerates Implementation Time
- Reduced Internal Customer Management Requirements



[Concert Close Green IT Deployment Program for Nationwide Installations](#)

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## Introduction

The largest business-based contributor to carbon emissions is the service industry which generates 10s to 100s of thousands of truck rolls per year. As stated in Telephonyonline.com's May 2009 series article on [Green Telecom](#), "If a large wireless provider with a fleet of 1000 trucks was able to eliminate three truck rolls a week, that would represent a savings of 3.3 million pounds of carbon dioxide emissions."

This industry, and untold others, in efforts to work hard to serve customers, dispatch multiple trucks carrying multiple technicians to perform multiple services at multiple sites. This process burns millions of gallons of fuel and pumps out billions of pounds of emissions.

## The Contributing Factors of Excess Carbon Emissions and Fuel Consumption

Green initiatives are important to the service industry because, like all businesses, everyone is aware of diminishing natural resources and the impact of carbon emissions on the environment. The [U.S. Department of Transportation's Bureau of Transportation Statistics](#) discovered that the typical 20-gallon-tank work van averaging 18 miles per gallon burns on average nearly 692 gallons of fuel per year and emits 9.29 grams per mile of carbon monoxide.

This is caused because most national rollout companies overlook the three primary factors in dispatching:

## Factor 1: Not Having Established Local Partnerships

Typically, national installation companies dispatch technicians to jobsites by searching for the closest resource in the vicinity of where the work is to be performed. Most technology rollout companies, however, do not have qualified and professional field technicians within 40 miles of all remote and rural areas. Problems arise because often the closest resource is anywhere from 75 to 200 miles or more from the job site.

The typical nationwide installer's prime objectives are to get resources to the job site and to complete the work in an effort to serve the customer. Little additional effort is spent considering the environment by setting limited distance thresholds for local resources, and even less effort is made establishing methodologies to acquire additional, experienced resources should a mileage requirement not be met.

## Factor 2: Not Consolidating Multiple Services into Fewer Truck Rolls

More often than not, the typical technology rollout company does not consolidate different technologies into as few deployments as possible, thus requiring multiple dispatches of separate vendors to each site.

## Factor 3: Not Employing Multi-Service Technicians

Without having partnerships with technicians experienced in providing multiple services, a typical technology rollout company must dispatch individual resources (technicians) from different local businesses driving separate vehicles for each type of service required (i.e., circuit testing, equipment installation, cabling), regardless of the distance necessary to travel to each site.

## Results

There could be a number of other factors that contribute to a technology rollout company's deployment methodologies or lack thereof, but the overall result remains that by ignoring the consolidation of multi-service, multi-site truck rolls, a demand for transportation is created that consumes gas and energy and contributes to the increased carbon footprint generated by its industry.

## The Need to Become Green

Most national rollout companies are aware of the need to become 'Green'. However, the reality is that while these nationwide installers plan to move to greener solutions, the demand for environmental responsibility has not yet been emphasized. When the demand arrives, all service companies will be looking for better ways to protect the environment while still providing excellent service to the customer. Awareness of environmental concerns is the first step. The second is raising the bar. The service industry needs a solution that consolidates technology and equipment requirements into as few deployments as possible.

## Green IT Deployment Methodology

Companies can avoid making these mistakes by looking at the issues on a nationwide scale from the perspective of how they "spec-in" requirements (consolidating technologies into fewer deployments) at the solution provider level to include working with service companies that have a measurable means to obtain experienced and professional local resources in close proximity to each site.

All national rollout companies should have a web-based software application that calculates the closest resource to a site. A big question for multi-site service calls is: What distance is considered close to rural jobsites? Performing 90% of technology rollout services within 40 miles or less of every rural site within the United States is the newly devised industry standard for national rollouts of technology projects.

Other questions that arise are what if a company does not have someone within the 40 mile radius in a rural area? Does the service company have processes in place to search for experienced and professional resources ‘on the fly’ or utilize the next closest available resource to that specific site? As discussed, most national installation companies do not build programs to satisfy these questions, and, regardless of the impact to the environment, will send any technician no matter the distance required to travel.

In answer to these issues, the Green IT Deployment Methodology has been created using fewer truck rolls, staying within a 40 mile distance, reducing fuel consumption and harmful emissions, all while serving the customer quickly and efficiently. Referred to as the [Local Multi-Service Deployment Method](#), this process protects the environment by deploying local field resources remaining as close as possible to customer sites, thereby eliminating unnecessary transportation and excess truck rolls.

The Local Multi-Service Deployment Method minimizes the amount of resources deployed, reduces truck rolls, consumes less fuel, emits less carbon, causes fewer scheduling conflicts, lowers project costs, minimizes site visits, accelerates implementation time and cuts internal customer management.

## Understanding the Impact of Truck Rolls

For the industry as a whole, a typical nationwide installer of technology receives a job in a rural location from a customer and turns to the first available technician, regardless of their distance from the job which may be 75, 100, 150 to 200 miles away. If multiple skills are needed to complete the job, little effort is made by the national installer to combine qualified technicians into a single vehicle. Instead, multiple vendors driving multiple vehicles with a technician for each required skill are dispatched from any distance, typically much greater than 40 miles in rural areas.

In the information technology field, technology deployment companies can leverage the industry’s move to IP-based technologies in reducing gas consumption and their associated carbon footprint. IP-based equipment has provided a reasonably easy field installation due to their general “Plug and Play” design. The ease of installation requires fewer technicians with specialized skills which in turn reduces the number of truck rolls. It is important to note that the management of the overall project still requires the same level of experience and expertise from the nationwide installation company, regardless of the ease of field installations at the site level.

To demonstrate the advantages of implementing these technologies, the following graphs show fuel consumption for a company that implements the discussed standards as compared to the rest of the industry.

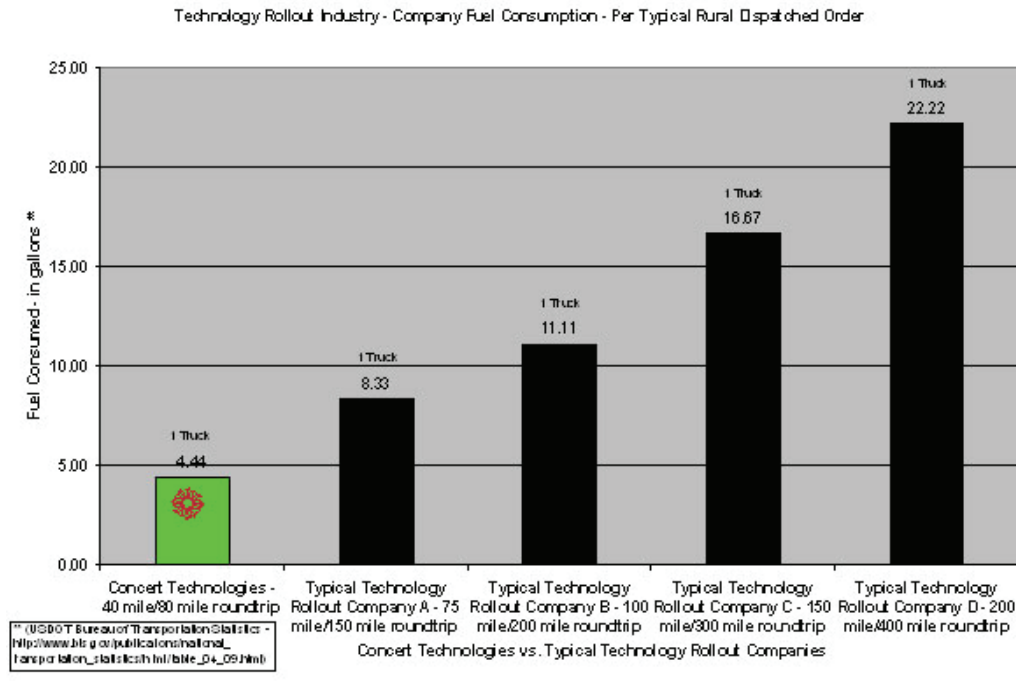
In urban and suburban areas, finding qualified technicians near a jobsite is not difficult. The challenge comes when a job must be performed in rural areas. This fuel graph shows a national rollout company’s fuel consumption when a single vehicle is used to perform a job at 40 miles or less (80 miles round trip).



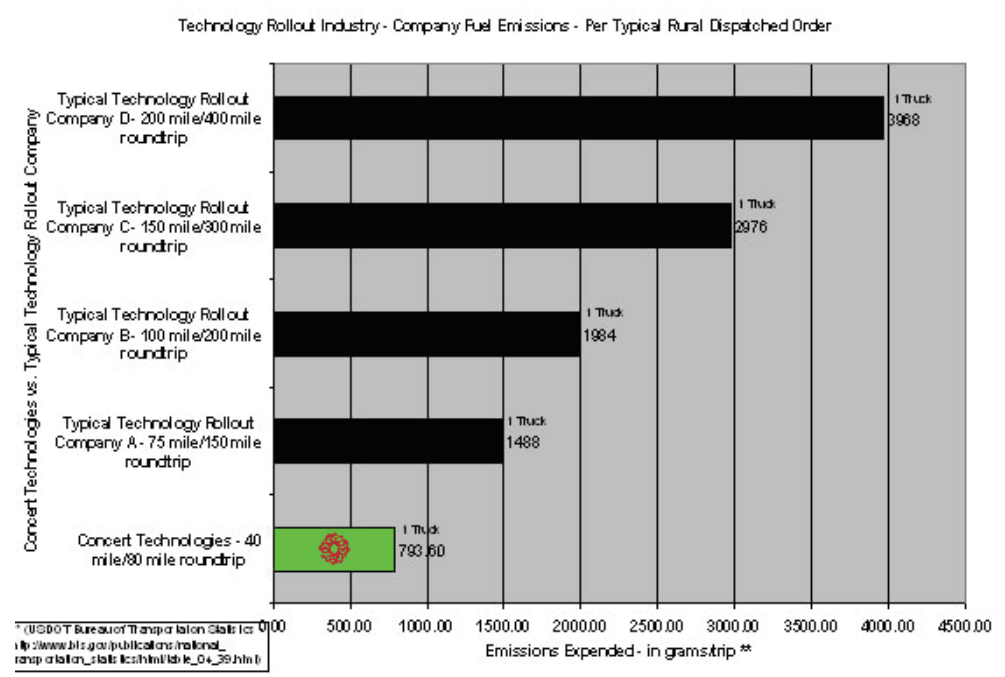
### [Deployment Method Comparison Video](#)

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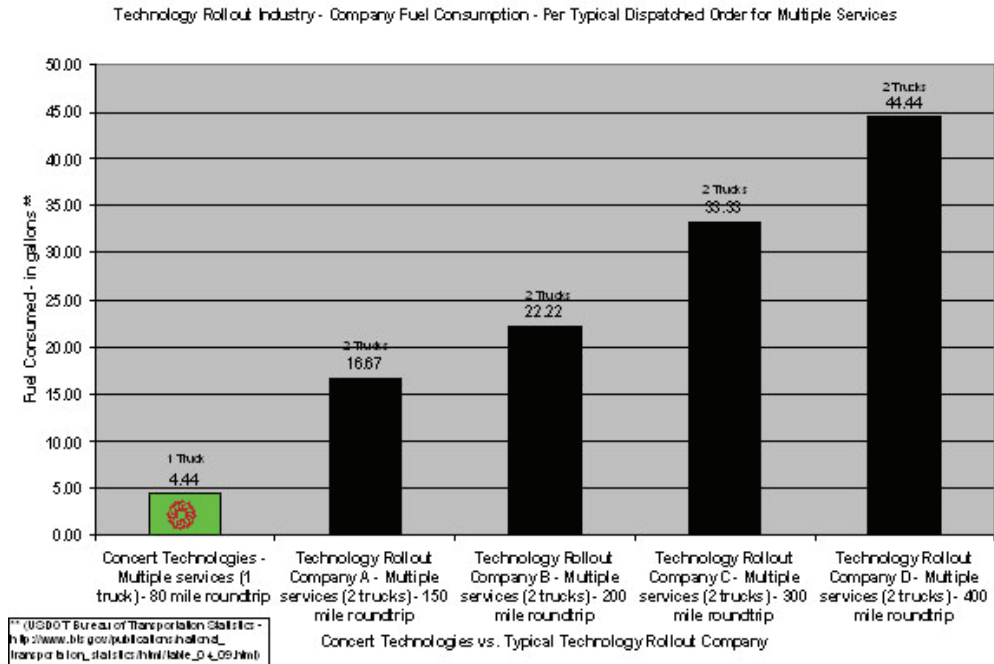
In contrast, other national rollout companies without extensive partnerships have no distance threshold and must contract technicians from 75, 100, 150 to 200 mile distances (150, 200, 300, and 400 miles roundtrip). Thus, these nationwide installation companies that contract at these distances “simply to get the job done” consume much more fuel.



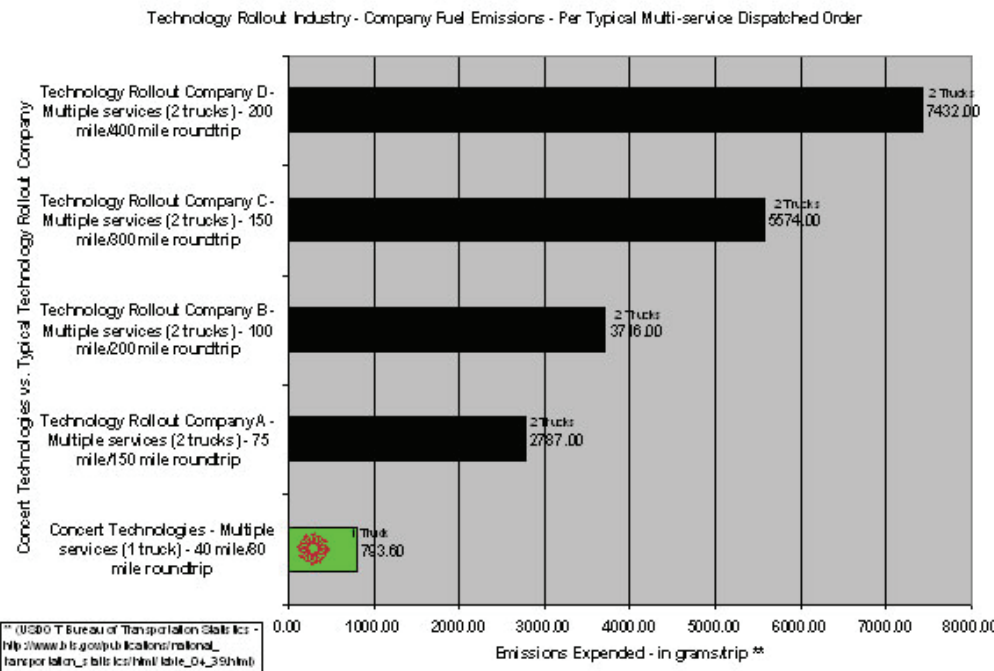
Equally as revealing is the graph of emissions expended by typical technology rollout companies for a single truck roll traveling longer distances as compared to a practicing technology rollout company staying within the 40 mile threshold:



When multiple services are added, a practicing nationwide installation company continues to deploy a single vehicle carrying a single technician (or multiple technicians), while the great majority of the industry deploys multiple vehicles, contracting multiple technicians driving separate vehicles for each job. The fuel for just two truck rolls to a single jobsite causes an enormous impact on energy consumption.

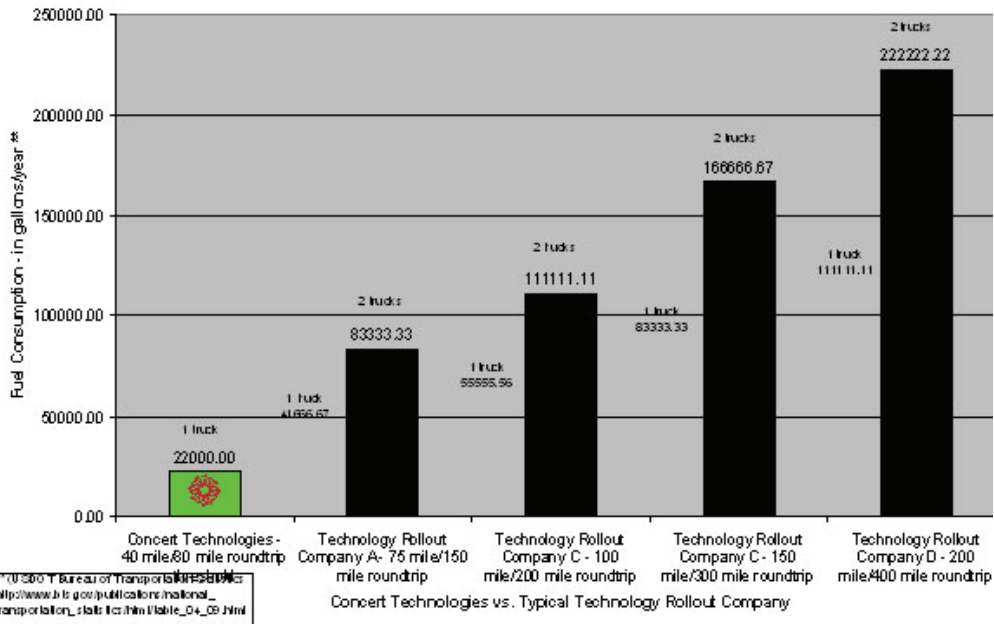


Likewise, when a typical nationwide installer deploys 2 vehicles, the emissions expended escalate rapidly as compared with a practicing national installer's single truck roll:

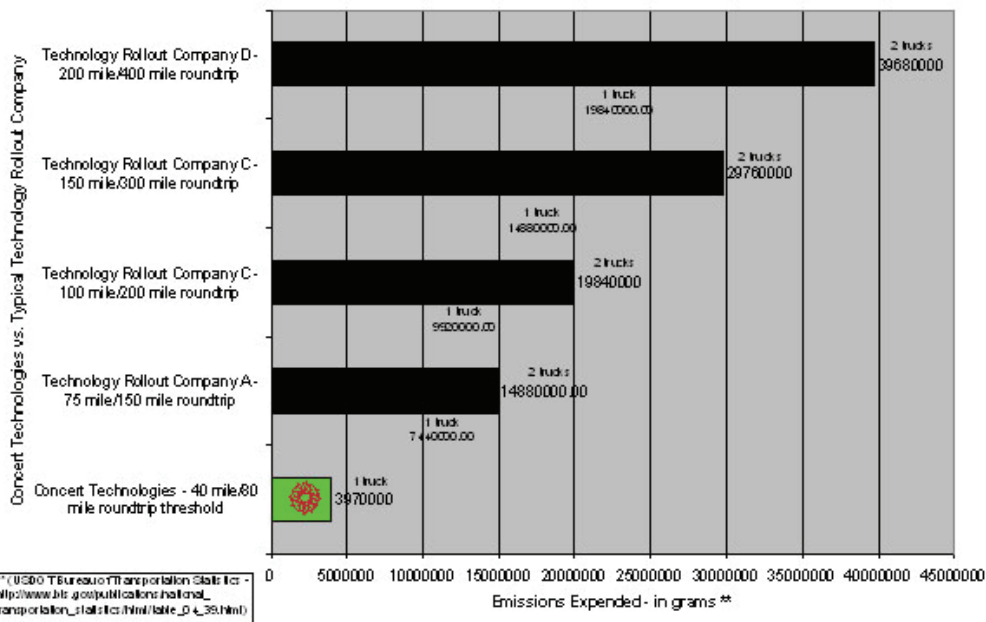


Likewise, when a typical nationwide installer deploys 2 vehicles, the emissions expended escalate rapidly as compared with a practicing national installer's single truck roll:

**Technology Rollout Company Fuel Consumption at 5000 Rural Dispatched Jobs/Year**



**Technology Rollout Company Fuel Emissions at 5000 Rural Dispatched Orders/Year**



## Conclusion

Most industries are seeking a means to serve customers quickly and efficiently. At a point in time when environmental awareness and responsibility are reaching a high level of awareness, the ability to take care of customers becomes more challenging. The IT industry, like all industries, will soon be focused upon for compliance to environmental friendliness. The incentive to hire environmentally friendly companies puts even more pressure on all businesses, including technology rollout companies, to reshape themselves to meet these future demands.

Companies wishing to reduce the impact their companies have on the environment should model their in-house and subcontracted job assignments on the Green IT Deployment Program which utilizes the **Local Multi-Service Deployment Method**. The most progressive companies use this methodology to maintain a distance threshold of 40 miles or less one-way from each customer site in rural areas and 20 miles or less in urban areas. These companies utilize existing partnerships or find additional technicians within this radius. If the job requires the installation or maintenance of various technologies, local technicians with multi-service capabilities are consolidated into a single truck roll.

Thus, the effort to 'Go Green' reduces project costs, minimizes site visits, reduces scheduling conflicts, accelerates implementation time and cuts internal customer management needs all while assisting in the preservation of our environment.

## About Concert Technologies

This paper was authored by Dennis Mazaris, President and Founder of Concert Technologies, Inc. Since 1995, Concert Technologies has offered rapid delivery of multi-site, multi-service, multi-technology rollouts on both a national and global scale. Our Maestro Technology Rollout System®, the world's first unified system, is based on the proven methodologies that span our extensive experience of providing professional rollout services.

For more information:

- Visit our website: [www.concerttech.com](http://www.concerttech.com)
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## References

U.S. Department of Transportation. *BTS | Table 4-9: Motor Vehicle Fuel Consumption and Travel*. Bureau of Transportation Statistics (2009).

Wilson, C. *Green Telecom XIV: Kentrox streamlines cellsite power management*. Telephonyonline.com (May 2009).