

A Sustainable Environment: Our Obligation to Protect God's Gift

by
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New Sustainability Technologies to Help Achieve Our Goal

As we move into another year, we are still confronted with many environmental issues like climate change, water scarcity, depletion of our natural resources, population growth, and many others. Fortunately, there are many people who have such a concern for the protection of the environment that they are developing new technologies to save our planet.

One of the most effective sustainability strategies is “servicizing” where a company sells the function of the product rather than the product itself. This leads to less products being manufactured, but they are more efficient products. One way of looking at this strategy is to think of underutilized assets. One example is the automobile which the average owner uses less than 5% of its availability but pays for 100% of the ownership, depreciation, insurance, etc. This has led to car-sharing businesses like Zip Car or I-Go. In France, a similar concept is Relay Rides where a car owner can earn money by allowing others to use the car. It is similar to “airbnb” where people rent unused bedrooms in their house or even an entire house. Airbnb has the largest inventory of room rentals in the world serving 190 countries.

In the past year or so, several other similar ride-splitting services have developed. Lyft Line, Sidecar Shared Rides, and uberPOOL service group passengers who are traveling in the same direction by funneling them into carpools that are matched in real-time. Bridj provides express shuttle services for commuters; Lift Hero connects community drivers to older adults; and Shuddle schedules safe rides for children. And then you have TaskRabbit which allows you to outsource a task that you don't want to do, can't do, or don't have time to do. Another sharing service, while maybe not really sustainable, is EatWith. It is a new dining experience where a host prepares a dinner for you and others at the host's home. Or you can be the host and have people pay to have dinner with you.

In the renewable energy area, there have been major advances in solar energy. The photovoltaic panels are becoming more efficient, lighter in weight and cheaper. Solar energy has become less expensive than fossil fuel energy in many areas of the U.S. If you don't have access to solar energy, your home energy consumption can be reduced effectively with a Nest thermostat. It programs itself once you set the desired temperature, and you can communicate with it via a smart phone. If an alarm goes off, Nest will call your phone.

There is also very rapid advancement in electric vehicles. Tesla has been making its electric car more efficient by increasing its driving range, and has been able to reduce the cost of the batteries. The keys for this transportation concept are how far a car can travel on one charge, how long it takes to recharge the batteries, and the cost of the batteries. Advancements have been made in all three areas. As a marketing move by Nissan for its Leaf EV, the company has established recharging stations at various locations that allow Leaf owners to recharge the batteries at no cost.

Another technology that took off last year is the use of unmanned aerial vehicles – or drones. While the technology was probably first developed for military use, there are many domestic uses that enhance sustainability. Amazon is planning to use drones to deliver packages within 30 minutes of an order, a system having much less impact on climate change versus truck delivery. Cyberhawk, a Scottish company, uses drones to inspect power lines, transmission and distribution towers, wind farms, hydroelectric dams and other assets where workers otherwise are exposed to the danger of height. Honeycomb, based in Oregon, uses drones to supply aerial imagery for “precision agriculture” such as data analytics to take measurements, monitor irrigation systems and assess the growth and health of crops. Insitu, a Boeing subsidiary, is developing drones to monitor fish, marine mammals and arctic ice floes, survey pipelines, inspect power lines and assist with forest fires. Matternet is using networks of drones to supply only the most critical products – such as food and medical supplies – to areas that do not have decent transportation infrastructure to deliver such essentials. The company has already initiated field trials in Haiti and Dominican Republic. More companies will be using drones for their businesses once new regulations are in place.

We need more technological advances to help us develop a more sustainable environment, and I am optimistic that they are on the horizon.