



# The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

## Final Copy of Case Study

**Status:**

Laureate

**Year:**

2013

**Organization Name:**

Ford Motor Co

**Organization URL:**

[ford.com](http://ford.com)

**Project Name:**

SUMURR

**Please select the category in which you are submitting your entry:**

Human Services

**Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)**

We have been developing and piloting a new project that we are calling SUMURR, Sustainable Urban Mobility with Uncompromised Rural Reach. The project is exploring ways we can use our vehicles to add value to society by improving four critical needs: health care; the delivery of potable water; primary education; and renewable energy in rural communities (currently underway in India). In areas where prenatal and natal care is unavailable, rather than have the women travel to a hospital, the project will take the hospitals to them, in the form of a Ford vehicle equipped with medical supplies and "tele-present" medical practitioners. A mobile broadband connection (OpenXC) in the vehicle would enable "telemedicine" service, provided by a doctor back at an urban hospital. (A

partnership with a health care provider was under development in the spring of 2011.) The idea is to have the mobile health applications designed, built and managed by local social entrepreneurs, working with the best clinical service and technology providers.

**When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)**

In early 2012, we launched our first SUMURR pilot project with the Tamil Nadu Directorate of Public Health, the Indian Institute of Technology Madras (IIT Madras), the U.S. Department of State, and Hand in Hand, a nonprofit focused on the empowerment of women. The long-term goal is to reduce the number of maternal and infant deaths by improving the delivery of health care services. We're providing a vehicle for nurses with open hub connection to reach remote locations. And we're tailoring our mobile-device information technology to help nurses better track their patients, make diagnoses and recommend more effective treatments. A Ford Endeavor will carry medical supplies and provide power and a vitally important wireless connection. Currently, the regional public health division in the Tamil Nadu district of India uses a software tool called PICME (the Pregnancy Infant COHORT Monitoring Evaluation) to track health information on pregnant women and infants up through age 1. But in remote regions that lack Internet connectivity, PICME is of limited usefulness. Developers at IIT Madras have tailored applications using our Ford technology to make PICME more mobile and more accessible to village health nurses. AOpenXC is an open-source hardware and software platform developed by Ford Research and Innovation and New York City-based Bug Labs to unleash the power of local developers to determine niche market-specific applications that take advantage of mobile connectivity. Networked vehicles represent the next frontier for mobile application developers. By connecting cars and trucks to wireless networks, entirely new application categories can be explored -- safety, energy efficiency, sharing, entertainment, health, the list goes on. OpenXC gives developers the tools they need to get involved, including an interface module based on the popular Arduino platform that allows developers to read data from.

**Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)**

Ford has just started shipping the first OpenXC beta toolkits to universities such as the University of Michigan, MIT and Stanford, as well as initial developer participants, including Weather Underground in the U.S. and HCL Technologies in India. While first-stage focus is rural reach, health and community enablement, our hopes are that developers working with OpenXC will be able to create apps

across a wide spectrum of categories, from those dealing with personal information and entertainment to those who are contributing to a better world such as directly addressing congestion, and the needs of road safety, healthcare and education. At NASSCOM (2012), Prasad Venkatesh, senior technical leader for Ford Research and Innovation demonstrated an app created by HCL that would allow a driver to provide selected personal contacts with an automatic location update during that driver's travels. By monitoring location and speed information from the vehicle, the app can determine if the driver is running late for a meeting and then send an email or text message notification to other attendees without any input from the driver. The app can also notify the driver's family following a safe arrival after a road trip.

**Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)**

The project was kicked off in the Kalrayan Hills, in the southern state of Tamil Nadu, where we have manufacturing operations. In the hilly villages of Kallakurichi, maternal and infant mortality is an all-too-common tragedy, with half of all pregnant women and their newborns at high risk of death, disease or disability resulting from inadequate care. Some of the villages are so remote that government-sponsored nurses have difficulty accessing them. Many pregnant women go for months if not for their entire pregnancies without any medical care. This is collaborative project with the Tamil Nadu Directorate of Public Health, the Indian Institute of Technology Madras (IIT Madras), the U.S. Department of State, and Hand in Hand, a nonprofit focused on the empowerment of women. The long-term goal is to reduce the number of maternal and infant deaths by improving the delivery of health care services.

**Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)**

OpenXC is an innovative open-source hardware and software platform developed by Ford Research and Innovation and New York City-based Bug Labs to unleash the power of local developers to determine niche market-specific applications that take advantage of mobile connectivity. Through OpenXC, car owners can install a small hardware module to read and translate metrics from a car's internal network, making the data accessible from most Android mobile phones. There are many opportunities and ways to use this platform. For example HCL created an app that allows a driver to provide selected personal contacts with an automatic location update during that driver's travels. By



monitoring location and speed information from the vehicle, the app can determine if the driver is running late for a meeting and then send an email or text message notification to other attendees without any input from the driver. The app can also notify the driver's family following a safe arrival after a road trip.

**If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)**

As application development progress so will opportunities for utilization of the OpenXC platform for benefit of individuals and communities. Usage of vehicles as a mobility platform for services will only increase. The future will tell where will be the limits.