ICT as a Sustainability Solution: Moving from Theory to Practice

By Dunstan Hope, Managing Director, ICT Practice, Advisory Services, BSR

Originally published in the *BSR Insight*: September 1, 2009

Recently, several companies have taken the lead in using information and communications technology (ICT) to address pressing sustainability challenges as diverse as climate change, urban development, water scarcity, health care, and sustainable food chains:

SAP's "Sustainability Map" profiles the role that business software can play in helping customers address sustainability challenges and covers aspects such as sustainability performance management, energy and carbon, product stewardship, and sustainable supply chains.
For example, SAP is working with Nestlé to provide solutions for product traceability of foodstuffs.

IBM's "Smart Planet" initiative examines the role of ICT and sophisticated data analysis to help solve sustainability challenges such as energy, food security, traffic congestion, national security, urban development, and water scarcity.
For example, IBM will be the systems integrator for American Electric Power's "gridSmart" initiative to upgrade the distribution grid to better handle distributed power generation, storage, and efficiency programs.

Hitachi's "Environmental Vision" aims to reduce carbon-dioxide emissions and solve other environmental challenges from the use of Hitachi Group products.

For example, Hitachi Software Agricultural Information Management System uses satellite imagery of crop growth to improve efficiency, save energy, and optimize the use of fertilizer and chemicals.

Governments are taking notice of the opportunity to use ICT as a sustainability solution. In April, the European Union published a communication with a typically snappy title ("Mobilizing Information and Communications Technologies to Facilitate the Transition to an Energy-Efficient, Low-Carbon Economy"), which emphasized the role of ICT in enabling energy-efficiency improvements in major energy-using sectors, especially buildings, construction, and logistics. An updated communication, with timelines and targets, is expected later in 2009.

There is no doubt that ICT has a role to play in addressing sustainability challenges. But to achieve maximum potential, the industry needs to increase the depth and scope of its engagement with large enterprise and government customers.

THINKING BIG
It is BSR's premise that the ICT Industry can improve its effort by:

1. **Making sustainability a central focus:** With so many sustainability challenges top-of-mind for governments, ICT companies can afford to place identification of sustainability solutions at the center of their business strategy for enterprise markets.

Examples of ICT as a Sustainability Solution

Smart meters

Video collaboration

Sensor technologies

Intelligent utility networks

Route optimization

Industrial process automation

Smart motors

Greenhouse gas management

Intelligent buildings

Data analytics

RFID tracking

Leakage detection

Cap-and-trade modeling

eCommerce

Waste tracking

According to the Climate Group/Global eSustainability Initiative's 2008 "Smart 2020" report, the ICT sector can help reduce global carbon-dioxide emissions by 15 percent by 2020, especially in areas such as motor systems, grids, buildings, and logistics. A U.S. addendum to the report states that the ICT sector could cut annual emissions by 13 to 22 percent against business as usual.

2. **Co-innovating with customers:** Product development, sales and marketing, and sustainability functions within ICT companies should be collaborating much more closely with purchasing, information technology, and sustainability functions in their largest enterprise and government customers in a much more deliberate effort to co-create sustainability solutions.

   In particular, ICT companies could learn by asking themselves the following questions:

   » What are the sustainability priorities and challenges of our largest enterprise and government customers? There are plenty of areas to think about: food security and traceability, access to financial products in rural areas, energy efficiency in retail or manufacturing environments, and sustainable water management, to name a few.

   » What are the relevant sustainability goals and targets of our largest enterprise customers—for example, in carbon-dioxide emissions, waste reduction, energy efficiency, or water use?

   » What is the potential role of ICT solutions in helping these customers address sustainability challenges and achieve sustainability goals? More specifically, which of our products and services have functionality that can help deliver these goals?

   » Who within our enterprise and government customers are key influencers (e.g. R&D, buyers, product development, sustainability, sales and marketing), and how can we best engage them?

   » What is the size of the potential addressable market?

   » Are there key enterprise customers that we should engage with first?

3. **Moving from reports to action:** The ICT industry has done an excellent job raising the profile of its role and measuring the potential impact. The opportunity now is to systematically identify and implement opportunities to generate new revenues by helping enterprise customers save emissions.

   Consider this approach created by BSR's ICT practice (also see chart below):

Moving from Reports to Action

1. Identify opportunities through reports and papers.
2. Look at your products and services.
3. Identify your top global enterprise customers.
4. Develop new revenue opportunities from CO_2 savings.

View larger image

» **Identify opportunities:** From "Smart 2020" and other reports, identify the broad areas of opportunity to help your enterprise customers cut emissions in areas such as motor systems, logistics, buildings, grids, and construction.

» **Look at your products and services:** Which of your products and services (now and in the future) could help deliver these savings?

» **Identify the potential market:** Which of your existing enterprise customers would be interested in opportunities to explore solutions further?

» **Develop new revenue opportunities from carbon-dioxide savings:** What are the new market and revenue opportunities based on helping customers reduce emissions?

TAKING THIS AGENDA FORWARD

There are many next steps that companies can take to maximize the impact of ICT as a sustainability solution on company strategy and revenues:

» Establish a map for products, services, and issues that links the sustainability priorities of key customer segments (e.g. food and agriculture, oil and gas, transportation, mining, and consumer products) with the ICT products, services, and solutions your company provides.

» Engage in conversations with key internal influencers (sales and marketing, account managers, product development, and R&D) and external influencers (buyers, strategy, and sustainability teams) to understand sustainability priorities and opportunities.

» Host sustainability solutions workshops that bring together the relevant participants from customers/suppliers to identify the greatest opportunities and explore approaches to co-innovation. These participants could include representatives from sales and marketing, sustainability and corporate social responsibility, product design and development, and account managers and buyers.

» Train sales, marketing, and product development staff in the sustainability challenges faced by their biggest customers.

BREAKING OUT OF ICT

While it's important for ICT companies to innovate for sustainability transformation, it's even more critical that those firms working in energy, food, transportation, agriculture, retail, and manufacturing consider how ICT can help them.

So let's try an experiment promoting ICT and sustainability right now: If you're working for an ICT company, forward this article to your customers and make sure they read it.

Related Resource: Learn more at the BSR Conference 2009, which features a session on "Sustainability Solutions." This one-hour conversation with IBM will inspire you to think big about the possibilities of a technology-enabled sustainability transformation. Read all session descriptions at www.bsr.org/bsrconferences/2009/sessions.cfm.