The Future of Sensors

Sensors: Extending the Reach of Human Perception

As sensors become ever smaller, they will be absorbed into the world around us (and inside us), allowing everything to be measured and manipulated. And that will make them a powerful force in the future of business and society.
Sensors will help us experience a reality well beyond that defined by our evolution.

**Self-Sustainer**
As sensors become smaller, they can be self-sustaining, enabling them to be used just about anywhere. Prototype sensors grab energy from radio waves in the air or from vibrations as minor as touching a table with your fingers.

**Data Monsters**
Sensors will generate so much data that computing power will move to the edge to manage the load. Autonomous vehicles already carry their own small data centers and process about 1 GB of data per second.

**Smart Dust**
Eventually, sensors will become so small that they can be implanted at the cellular level, such as inside brain cells to control movement of a prosthetic arm. Already, there is a compound that can be painted on almost any surface and will harden into a sensor that can function in the tightest, dirtiest, hottest places.

**Super Senses**
Sensors will help us experience a reality well beyond that defined by our evolution, such as using echolocation like bats.

Sensors could also give us entirely new abilities that are not in nature, such as extrasensory perception, or let us swap in ultraviolet, infrared, and night vision to meet our individual needs at any given time.

**World Mover**
Beyond merely sensing their surroundings, sensors are actively affecting them. An experimental sensor is small enough to be swallowed but so powerful that it not only monitors fat levels in obese patients but also automatically releases medication that gives patients a sense of fullness and dissuades them from eating.

**New Measures of Market Success**
In a world that senses everyone and everything all the time, we will need new ways of thinking about how to succeed in the market. The opportunities for differentiation will become increasingly fine-grained. The way we think of competitive advantage will change. It will be a new era of real-time business.

*Read More in Coming to Our Senses: The Future of Sensors*