

# **From Small Sensors to Big Data: How the Sensor Web is Changing our World.**

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In our increasingly digitized world almost everything we do creates a data record that is stored somewhere, whether we are purchasing a book, calling a friend, ordering a meal, or renting a movie. And in the world of the sensor web this no longer limited to our online activities: exercising in the park, shopping for groceries, falling asleep, or even having a shower, are just some of our everyday activities that are likely to generate data.

The world of the sensor web is all about understanding how we can (and whether we should) use this information to enable better decisions. Better decisions for where we might live or where to send our kids to school. Better decisions about the food we eat and the exercise we should take. Better decisions by our governments and policy makers when it comes to managing education, energy, infrastructure, and healthcare. And better decisions for business and enterprise when it comes to understanding customer needs and demands.

In this talk we will discuss the origins of the sensor web and the attendant big data revolution. To understand where we will get to in the future we need to understand where we have come from in the past. But it is a unique feature of the present technological revolution that the pace of change is no longer stable and linear, rather it is accelerating and exponential. We will consider the implications of this when it comes to predicting how these technologies may develop over the coming years and decades. And we will explore how these developments point to entirely new ways of thinking about some of modern society's toughest challenges, and how the resulting technologies will impact on our everyday lives in the future.