

Keynote:
**Building a Nervous System for Society:
The ‘New Deal on Data’ and How to Make
Health, Financial, Logistics, and Transportation
Systems Work**

Alex Pentland

Massachusetts Institute of Technology (MIT), US

Abstract. Most of the functions of our society are based on networks designed during the late 1800s, and are modelled after centralized water systems. The rapid spread of ubiquitous networks, and connected sensors such as those contained in smartphones and cars, allow these networks to be reinvented as much more active and reactive control networks - at the scale of the individual, the family, the enterprise, the city and the nation. This will fundamentally transform the economics of health, finance, logistics, and transportation. One key challenge is access to the personal data at scale to enable these systems to function more efficiently. In discussions with key CEOs, regulators, and NGOs at the World Economic Forum we have constructed a ‘new deal on data’ that can allow personal data to emerge as accessible asset class that provides strong protection for individuals. The talk will also cover a range of prototype systems and experiments developed at MIT, outline some of the challenges and growth opportunities, focusing on how this new data ecosystem may end up strongly promoting but also shaping the semantic web.