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UNECE Green Economy Seminar
"Building the Cities we Want"

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It's all about the data

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- Which is to say, the digital age, or the *third industrial revolution*, in the midst of which we now find ourselves: the world of human-to-human communications (6 billion devices networked today), growing at a seemingly unstoppable rate (50% of Britons who own mobile phones now have smartphones, compared to only 25% two years ago)
- Already, a "smart world", wherein Amazon, for example, can tell us what other people bought which is similar to the item we just bought and create "our" shopping pages, which always seem to be unerringly accurate
- But, a mere drop in the ocean compared to what is to come with the "smart city" and a **fully connected built environment**, in which it is likely *trillions* of devices will be networked, behind the scenes, so that we never even see them; technology as part of the furniture (literally) in the world of mass urbanization
- Yet, the real importance of this change is not in the hardware, but in the software and applications and, especially, in the *data* they allow us to collect and manage
- Because data lead to the possibility of *knowledge*, which in turn leads to the possibility of *control* over, and *improvement and optimization* of, our environment; **doing more with less**, which has been at the core of human development since our ancestors started making tools and bending the world to their will
- Cities have always been the engines of human growth and development; with 70% of our population living in cities by 2050, we should be entering a new Golden Age

Impacts & Challenges; what we have to do

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- **Finance:**
- Possibly the greatest challenge we face today is how to raise the trillions of dollars we must spend to build our new cities and refresh our old (the EU's 2020 plan calls for **€2 trillion of new infrastructure spend** in the next 7 years); the majority of this spending will, inevitably, be financed by debt (because real estate and infrastructure lend themselves to it)
- Capital markets are mechanisms for information (*data*) exchange for the purpose of price discovery, for the pricing and distribution of risk and associated return; the better the information (*data*), the more efficient the market and the lower the cost of capital; this is particularly true of the debt markets
- The smarter the city and the better, therefore, its ability to capture its key data, the more *accessible* and *available* the finance and the *lower* will be its *cost of capital* for a given level of risk
- And this does not even take into account the impact of technology on new business models in the City; think of the impact of "new tech" companies like Google and Apple on "old" industries such as advertising and entertainment; look for this to be repeated in exponentially greater fashion in the smart city
- Critical insight: the Cities have the chance to be the gatekeepers to this data, not Google, Apple, Amazon, Microsoft, IBM, etc., and therefore to be in a position to monetize the value of this data on behalf of their citizens

Impacts & Challenges, what we have to do

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- **Technology:**
- The "Smart City" will, at its heart, be a *networked* and *connected* city
- Which means that it will require to be networked horizontally as well as vertically; **the "smart grid" cannot stand on its own**; we will need platforms for data collection and management across all functional and operational areas of the city, both public and private; if one of our challenge is to *waste less resource,* then we will do this by acting intelligently and in full knowledge of the impact of each action as part of the whole picture; this is what should be the principal goal of smart collection and application of data
- There are enormous challenges in networking technologies, which are being addressed today, but the key message is that we already have the ability to do most things today; the devil is in the application of technologies in a holistic and managed environment
- *This is a journey that has already started*
- **Regulation & Public Policy:**
- It will be critical for there to be a true understanding of what data are being collected, by whom and to what purpose; the overwhelming majority of all data collected in the smart city will be impersonal, i.e., not related to the individual identities of citizens; this is not the Big Brother state!
- But, without wide *public understanding* of these points, policy makers and parliaments cannot properly legislate with full public consent