

Global Trends that will reshape the future of Recycling and Solid Waste Management

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Antonis Mavropoulos, ISWA STC Chair, CEO D-Waste

We need forward thinking

- First of all, because our future depends on our ability to **understand** and **adapt** to the new trends.
- Second, because we want to be an **active contributor for a better future on our planet**, so understanding the changing landscape is a major precondition for catalyzing positive changes in our industry.
- Third, because speaking about the future of waste management is speaking about **the future of our world!**

SHAPING THE FUTURE OF WASTE MANAGEMENT



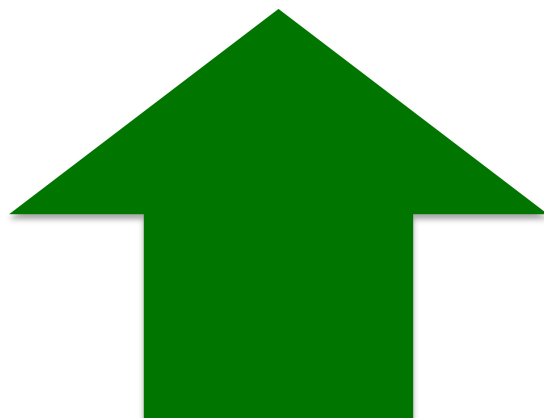
Some thoughts on future trends and the need to
establish a forward thinking group

*Antonis Mavropoulos, ISWA STC Chair
July 2015*

Tectonic shifts between now and 2030

- Growth of the Global Middle Class
- Definitive Shift of Economic Power to the East and South
- Unprecedented and Widespread Aging
- Urbanization
- Growing Food, Water and Energy Pressures

The future in a glance...



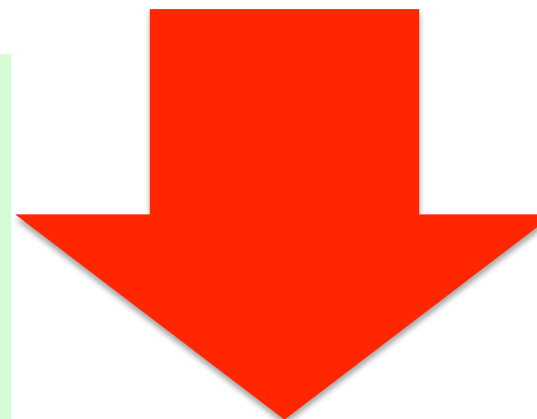
What's In?

- Circular Economy
- Systemic description
- Decentralization
- Interconnectivity
- Special streams
- Innovation
- Market volatility



What's Out?

- Bulk management
- Solely Infrastructure
- Expensive solutions
- Simply technical



Trend-spotting

1. Local activities & global impacts: the case of marine litter
2. **New products – new waste**
3. Market volatility, business models and circular economy
4. **Stocks & the need for final storage**
5. **The challenge of governance in a globalized world**
6. Internet of Things
7. E-Waste
8. Technologies for everyone
9. **Climate Change – Global coordination**
10. Biotechnology



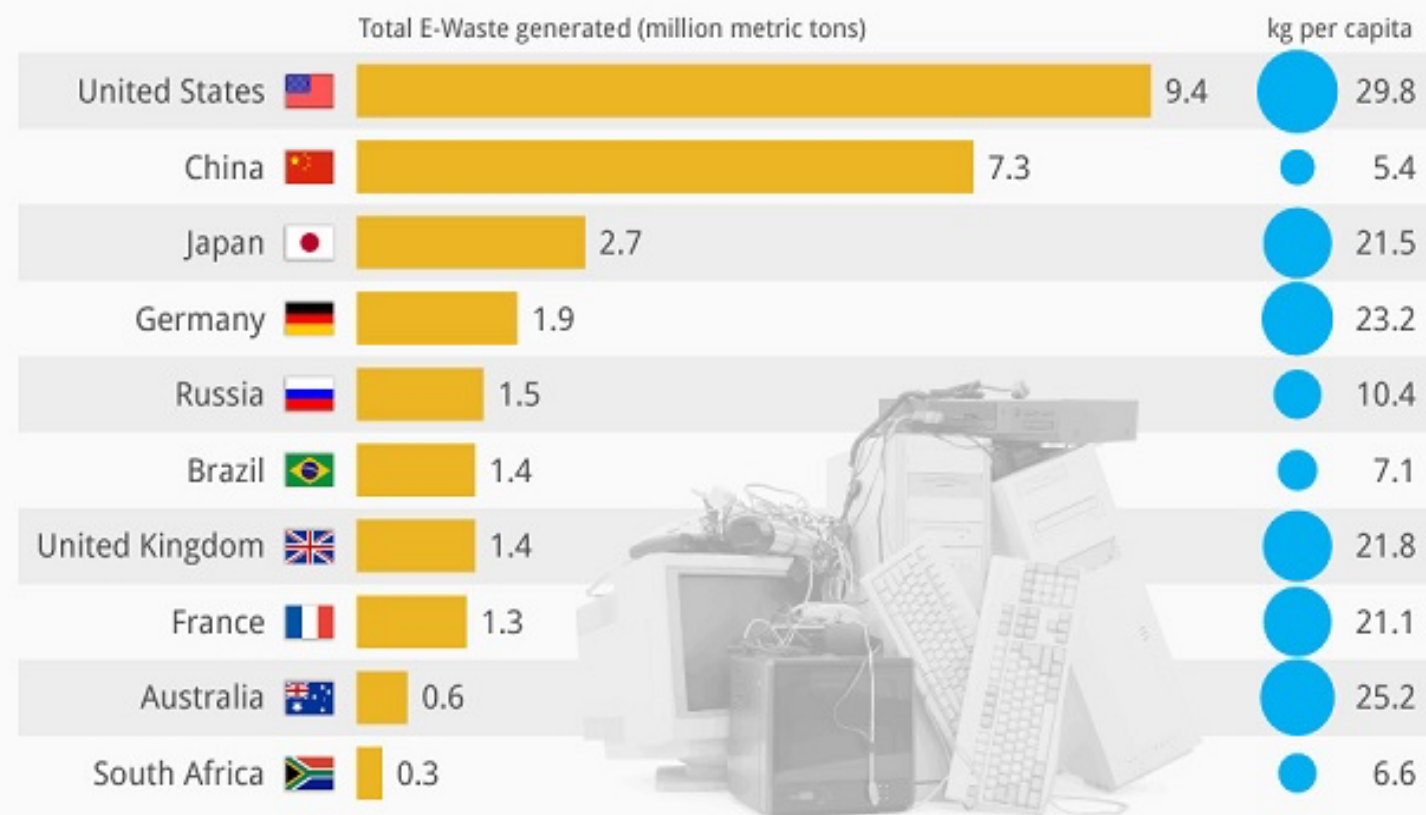
Marine litter



E-Waste

49 Million Tons of E-Waste Were Generated in 2012

Amount of electronic waste generated in selected countries in 2012



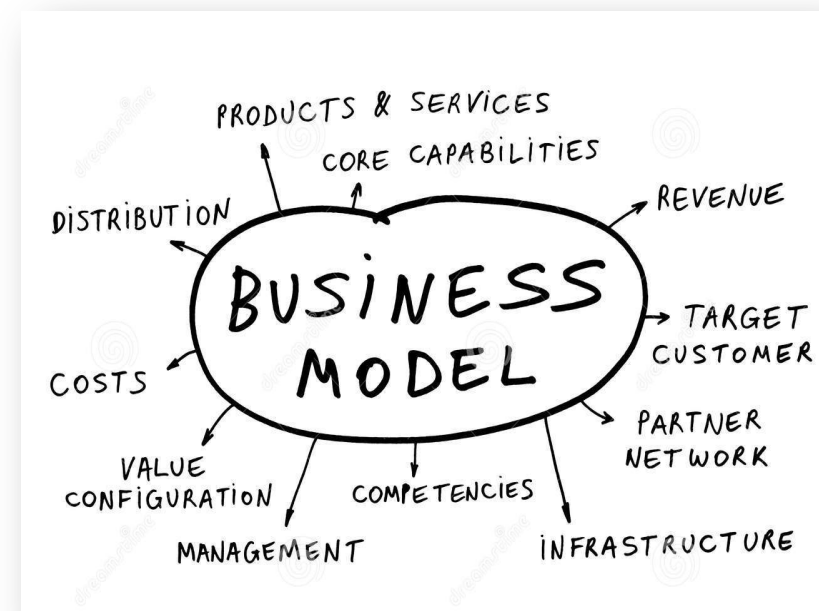
Source: StEP Initiative

Mashable statista

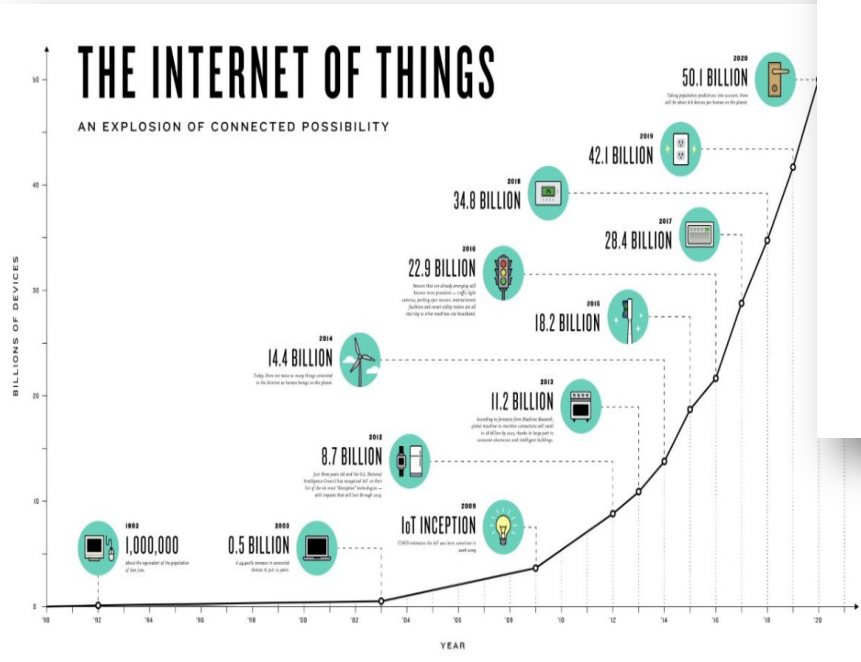
E-Waste Toxic Components and their Damage to Human Health

Toxic Materials	Birth Defects	Brain Damage	Heart, Liver, Lung & Spleen Damage	Kidney Damage	Nervous/ Reproductive System Damage	Skeletal System Damage
Barium		X	X			
Cadmium	X		X	X	X	X
Lead	X	X		X	X	
Lithium	X	X	X	X	X	
Mercury	X	X	X	X		
Nickel	X		X	X	X	
Palladium	X	X	X	X		
Rhodium			X			
Silver	X	X	X	X	X	

Market volatility, business models and circular economy



Internet of Things and Waste management

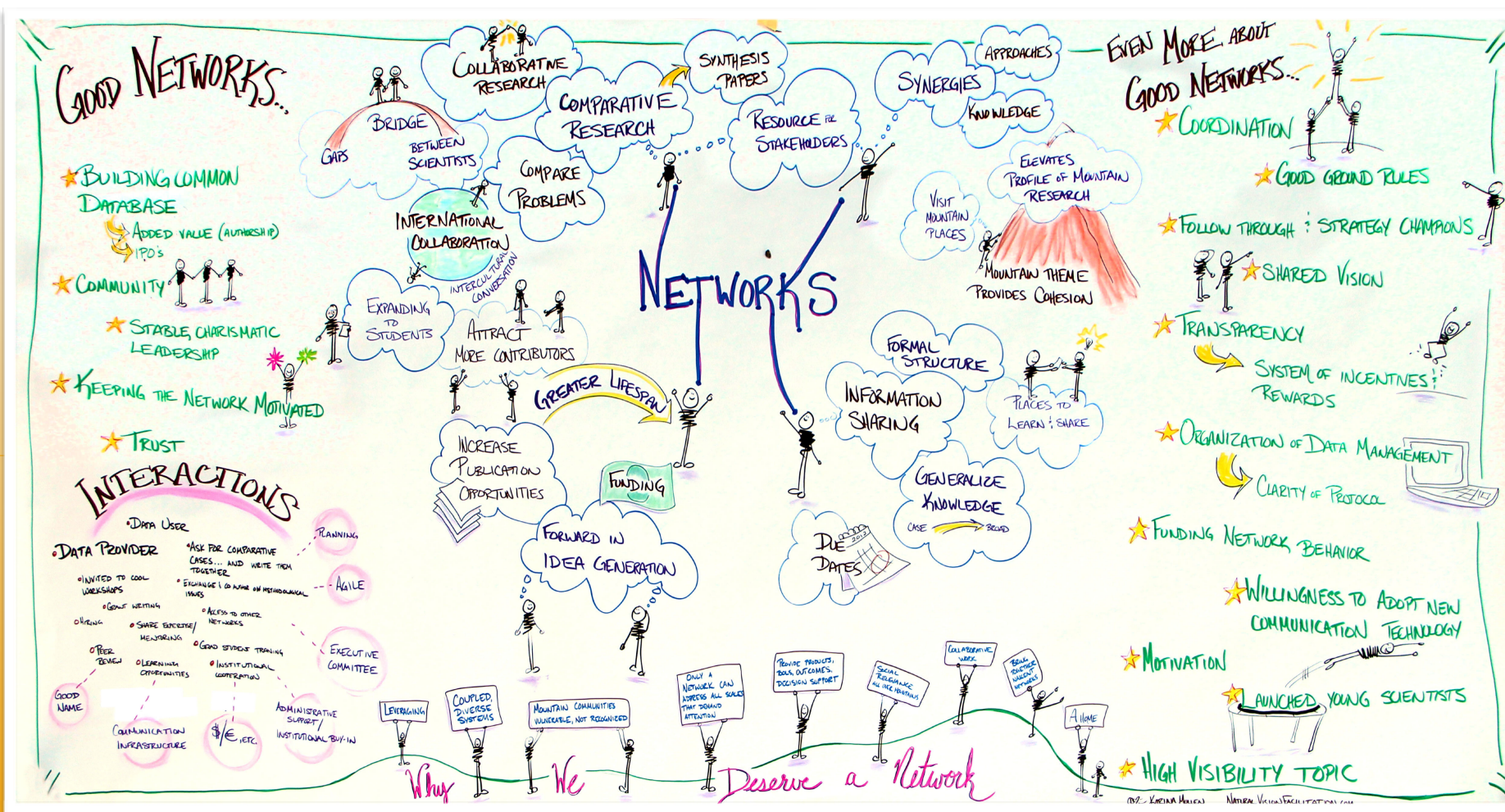


The Internet Of Things & Energy

Digital Grid Communications Overview

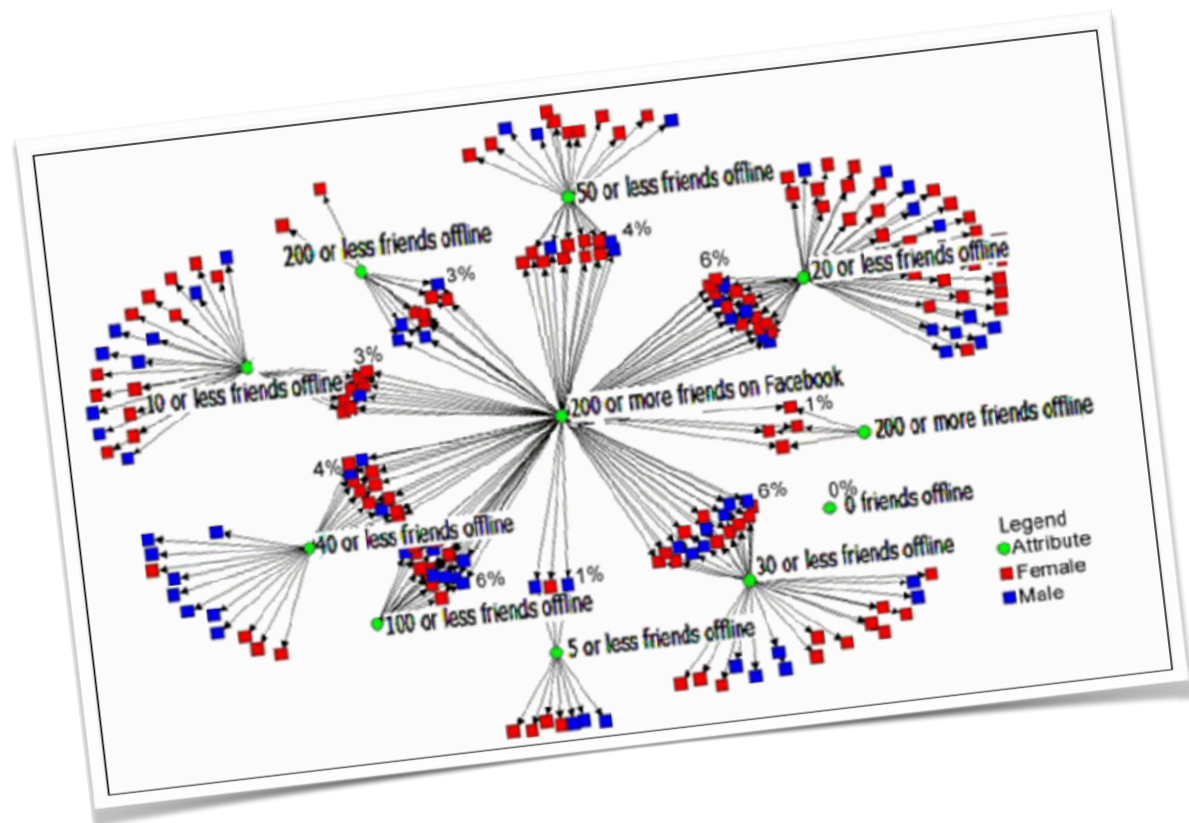


From Smart to Engaged Cities



Exploring human social networks

- People as parts of their broad networks
- Individual behaviour as a result of embedded network interactions
- Clustering
- Flow
- Memory



Technologies for everyone?



Biotechnology



Conclusions



JOIN ISWA TODAY

Put your local piece to global solutions

Expand your know-how

Find friends

Create networks

Thanks for your attention

antonis.mavropoulos@d-waste.com