

TEDXBINNENHOF, VIEWING PARTY BELGRADE 31 MARCH 2014

LIST OF SPEAKERS

1 BERT WECKHUYSEN (CLIMATE ACTION)

THE CITY OF THE FUTURE

Assume you leave your home in 2050. Would you still take a car to work? And how different would this transportation vehicle be? Would a new type of car ride on solar energy and will its rubber-based tires be made in bio refineries instead of oil refineries? Surely, we have redesigned a lot of our appliances in order to meet the new circular economy standards.

Prof. dr. ir. Bert Weckhuysen is professor Inorganic Chemistry and Catalysis at Utrecht University. His research focuses mainly on analysing and dissecting chemical and catalyst processes for optimization. The resulting knowledge plays an important role in these future developments. By showing the latest technological advancements Weckhuysen will present an outlook on the city of the future, which might even have a shortage of CO₂...

- **Themes:** *Circular, chemistry, biobased, technology, smart cities*
- **Horizon 2020:** *(3) Secure, clean and efficient energy, (4) Smart, green and integrated transport, and (5) Climate Action, environment, resource efficiency and raw materials.*

2 JEROEN RONDEEL (FOOD SECURITY)

BLUE INNOVATION

Plants have always been a great source of nutrients for animal and man, but always at the cost of the plant itself. Jeroen Rondeel has developed a technique with which he can “milk” the nutrients from plants without causing too much damage to them. After 3 weeks the plants will have healed sufficiently to be milked again.

- **Themes:** *Chemistry, agro*
- **Horizon 2020:** *(2) Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy*

3 HELEEN HERBERT (EFFICIENT ENERGY)

HYDREA THERMPIPE

It sounds uncanny, generating warm water from the sewer system. But it is sustainable. The average temperature of sewer-water is 18 degrees. At the moment, this energy flows, without being used, through the drains to the sewage filtration system. With the Hydrea Thermpipe, an innovative 'energy drill pipe' designed by Heijmans, this warmth can be reused in a clean and safe way. This way, the energy-neutral system is one step closer.

The warm water from this installation can, via a heating pump, heat the adjacent parcels (the system works up to a distance of about 300 metres). By reversing the system, it is also possible to cool office buildings and factories. In one transport pipeline, a heating and cooling system is combined. That saves lots of energy.

- **Themes:** *Circular, energy, sustainability, smart cities*
- **Horizon 2020:** *(3) Secure, Clean and Efficient Energy, and (5) Climate Action, Environment, Resource Efficiency and Raw Materials*

4 RUDI DIELEMAN (SUSTAINABLE AGRICULTURE)

PECTCOF

Pectcof technology unlocks the potential of the coffee pulp as a source of biobased materials, at the same time detoxifying the waste stream produced by the second most traded commodity in the world. Pectcof's cradle-to-cradle concept not only adds value to the waste stream of coffee, but will assure sustainability in the coffee supply chain. Pectcof's first product is coffee pectin; this product has special characteristics that are desired by food processors and pharmaceutical industries. Because pectin is defined as a natural ingredient, has unlimited potential of availability and contains unique functionalities, coffee pectin has the potential to conquer an important part of food additives on the world market. Other compounds like polyphenols are being studied for purification and market introduction.

- **Themes:** *Biobased, waste, agro & food*
- **Horizon 2020:** *(2) Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy*

5 GEOFFREY VAN DEN BERG (RESOURCE EFFICIENCY)

TURNING THE CHEMICAL INDUSTRY UPSIDE DOWN

Jeoffrey is a modern high-tech entrepreneur with a vision, which he can communicate like no other. Together with Technical University Eindhoven, he has been developing a technology that is very special. Their vision? The days of big manufacturing plants are over and the future lies in a lot of small factories. Materials need to be produced where the materials are available and needed (close to the end-users). The same goes for ingredients and additives. At the moment, these materials, ingredients and additives are produced in extremely big plants of – for example – Shell and DSM. In the near future, this can be done on a much smaller scale. Safe, sustainable and flexible.

- *Themes: Chemistry, high-tech, sustainability*
- *Horizon 2020: (2) Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy, and (5) Climate Action, Environment, Resource Efficiency and Raw Materials*

6 COEN VAN DE STEEG (WELL-BEING)

WEHELPEM

Coen van de Steeg has initiated the platform WeHelpen, which has led to a nationwide movement to stimulate and increase mutual support systems in the community at the local level.

- *Themes: Health, participation*
- *Horizon 2020: (1) Health, Demographic Change and Wellbeing, and (6) Europe in a changing world – Inclusive, innovative and reflective societies*

7 BARRY SCHOLTEN (EFFICIENT ENERGY)

SMART POLDER

The Smartpolder simultaneously pumps water, generates energy and helps avoid environmental problems, such as cyanobacteria. These functions taken together put the smart to the Smartpolder, which in combination with the city will produce many advantages and will create a cleaner environment.

- *Themes: Water, sustainability, energy, environment, smart cities*

- **Horizon 2020:** (2) *Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy*, and (3) *Secure, Clean and Efficient Energy*, and (5) *Climate Action, Environment, Resource Efficiency and Raw Materials*

8 MARJOLEIN HELDER (CLEAN ENERGY)

PLANT-E

Plant-e is producing products with which electricity can be generated from living plants. The technology makes it possible to generate electricity from almost every area that grows plants. The products use completely natural processes and are therefore secure for the plants and their environment. Research has shown that the growth of the plant is not limited by the process, so the plant will continue to grow while generating electricity.

- **Themes:** *Circular, energy, sustainability*
- **Horizon 2020:** (3) *Secure, Clean and Efficient Energy*, and (5) *Climate Action, Environment, Resource Efficiency and Raw Materials*

9 ONNO VAN SCHAYCK (HEALTH) (PROBABLY NOT BROADCASTED AT VIEWING PARTY BELGRADE)

CHIMNEYS AS PREVENTIVE MEDICINE

Onno van Schayck, as professor of Preventive Medicine, is involved in the project “A chimney for every child”. The goal of the project is to supply millions of houses in the slums of India with self-made chimneys (*or make-shift chimneys*). In the slums people cook inside their homes (without any space in between the houses) with children lying there in the smoke all day, every day. The goal is to be able to produce the chimneys locally and to place them in the homes for less than 2 euros a piece. In order for this to work, there is a need for real innovation. Doctors are working alongside technicians to make this happen within a timeframe of 6 to 12 months.

- **Themes:** *Nature & Environment, sustainability, health*
- **Horizon 2020:** (1) *Health, Demographic Change and Wellbeing*, and (5) *Climate Action, Environment, Resource Efficiency and Raw Materials*

10 MIKE EMAN – PRIME-MINISTER OF ARUBA (INCLUSIVE SOCIETIES) (PROBABLY NOT BROADCASTED AT VIEWING PARTY BELGRADE)

BO ARUBA | JOUW ARUBA

Four years ago, Mike Eman, prime minister of Aruba, expressed a very special ambition. In 2020, Aruba aims to be a fully sustainable, self-sufficient society. A 5-star society, as he likes to think of it. A sustainable society running on green energy, in which economic growth serves the wellbeing of the people. How?

Influential partners such as Carbon War Room (founded by Richard Branson), TNO, Harvard University and TU Delft have committed themselves to this project and are cooperating with Aruba to realize this ambition.

From schools and local neighbourhoods to (international) businesses... On all levels of the Aruban society, sustainable initiatives have been taken up to involve the whole population in this project and to become the first fully sustainable island on earth. Mike Eman himself will outline this ambitious plan in more detail on March 31, in the Ridderzaal at TEDxBinnenhof 2014!

- *Themes: Sustainability, energy, participation*
- *Horizon 2020: All*