Know your impact

Cifal Flanders talks UN sustainable goals to leaders across the region

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As of the end of last year, Flanders is home to one of 15 United Nations training centres that spread the organisation's sustainable development message around the world.

This year, Cifal Flanders will hold events in the city halls of Flanders' five provincial capitals to convince local lawmakers, entrepreneurs and civil society groups of the importance of the UN's vision of sustainability. That vision has been translated into 17 Global Goals, also known as Sustainable Development Goals.

At the beginning of this month, the UN flag was raised at Antwerp's city hall for Cifal Flanders' first UN City Hall Talk – a seminar on the challenges of realising the Global Goals. It was a logical choice to host the event in Antwerp since Cifal Flanders was born from the Antwerp ITCCO training centre, which has worked to convince business leaders, policymakers and civil society of the need for sustainable action since 2012. The next stop on the city hall talk tour is Ghent.

The talks are held to present the Global Goals through which the UN wants to create a better world by 2030. The Global Goals are best thought of as a hands-on guide to promoting sustainable development, with concrete calls to action for local leaders.

The goals include ending poverty, ensuring sustainable consumption and making cities inclusive, safe, resilient and sustainable. Each goal is split up into concrete targets, such as halving per capita global food waste at the retail and consumer level by 2030.

The UN lecture series aims to spell out why getting behind the sustainable agenda is good for business. "A great deal of innovative products and services will be necessary to achieve the goals," says Peter Wollaert, managing director of Cifal Flanders. He adds that one of the main goals is to build resilient infrastructure, promote sustainable industrialisation and foster innovation.

During the talks, Cifal highlights local projects that set a good example. The Antwerp audience was, for instance, introduced to the port of Antwerp's sustainable strategies and the StadsLab2050 initiative – a think-tank that gathers citizens' ideas.

Under the banner of "smart sustainability", the talks also emphasise the importance of digital technology. "Apps and digital platforms boost social entrepreneurship initiatives like car-sharing services," Wollaert explains. "But ICT administrators also have to become more aware of, for example, the environmental impact of computer servers."

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"Smart sustainability": Cifal Flanders director Peter Wollaert

The City of Things project, which is turning Antwerp into a real-life lab for intelligent digital products and services, offers another example of a local, smart sustainability initiative.

Cifal Flanders plans to close its region-wide tour with an event in the Flemish parliament in October. "We want to put the Global Goals on the agenda of electoral campaigns for the municipal elections of 2018, and the elections at the regional and federal level in 2019," says Wollaert.

But Cifal Flanders' influence reaches beyond the region. At the international level, the centre provides the region with a platform to put local innovative initiatives in the spotlight during UN meetings. This July, it will showcase the region's sustainability efforts at an event in Flanders House in New York, which represents the region's interests in the US.

Several good initiatives are currently underway in Flanders, but there is also a lot of room for improvement, as was illustrated by a recent German study that analysed the extent to which the world's developed nations are meeting the Global Goals.

Out of the 34 OECD countries, Belgium is the eighth-best at achieving the Global Goals benchmarks. With gender equality in particular, the country has an excellent record, thanks to a relatively small pay gap and a considerable number of female lawmakers in the federal parliament. The study also noted lawmakers' efforts to tackle poverty and inequality, which have resulted in a relatively small income gap between the rich and poor.

However, the researchers also noted that Belgium is the OECD country with the worst air pollution, and it ranks among the 10 countries with the worst access to affordable, sustainable energy. The researchers also pointed out that the sustainability of Belgian water resources is in serious jeopardy and that the agricultural sector is not taking sufficient action to prevent environmental degradation.

To better address these areas, Wollaert suggests that the government establish a task force to co-ordinate all legislative action related to the Global Goals across different policy areas. "We need an interdisciplinary dynamic," he says.

If all this has got you inspired to spring into action, but you don't know where to start, the UN has a practical "Lazy Person's Guide to Saving the World" for you. The guide offers tips like "donate what you don't use", "report online bullies" and "take short showers".

Q&A

Vera Rogiers and her research team at the Free University of Brussels (VUB) are developing a technique to test new drugs for their potential negative effects without resorting to the use of test animals. Rogiers recently received €30,000 in federal funding.

What alternative method are you developing exactly?
We reprogramme human skin stem cells into liver cells, which can be used to test the potential side effects of pharmaceutical substances. Certain drugs, like the pain killer paracetamol, have harmful effects on the liver when taken in excessive quantities. The safety of pharmaceutical substances is usually verified via tests on rodents and dogs, but we want to provide an alternative in vitro method for which no animals are needed and which additionally produces more relevant results for people.

Why can't you use liver cells instead of converted skin cells?
Because there are not even enough donor livers for transplantations, let alone for research. We use cells from circumcised foreskins specifically because this type of skin is so thin that it is practical to work with.

When will your technique be ready for general use?
We estimate in about five years. We currently use culture plates in the lab but are working hard to develop a lab-on-a-chip – a kind of miniature laboratory. With

these devices, created through 3D-nanoprinting, it will be possible to carry out the same tests with only a fraction of the cells needed now. This would make tests much cheaper and enable commercialisation since labs-on-a-chip can be mass-produced. We are working together with B-Phot, the VUB photonics team specialised in light technology.

How will you use the subsidy you have received?
We hired a PhD student, but €30,000 is only enough to finance her research for one year, and a PhD normally requires four years. So I hope to get additional funding. Thankfully, we recently also received a donation from a citizen, Mireille Aerens, which allowed us to establish a VUB chair that I lead. We are trying to get more funding from the Belgian and European governments but are also increasingly examining opportunities to collaborate with companies.

\ Interview by AF

WEEK IN INNOVATION

iMinds and imec to merge

Flanders' digital research institute iMinds in Ghent and Leuven-based nanotechnology research centre imec are merging. By the end of the year, they will form a single world-class research centre for the digital economy. The boards of directors of both institutions have approved the intention to merge, and this will later be converted into an actual merger. IMinds will continue operating from Ghent as a business unit of imec. The merger will combine the technological expertise of 2,500 imec researchers with the digital knowhow of about 1,000 iMinds researchers. "We are also uniting these 3,500 top researchers with an ecosystem of Flemish companies and start-ups," said iMinds CEO Danny Goderis.

Seagrass helps fight climate change

An international team of scientists, led by professor Yves Van de Peer of Ghent University and Flemish life sciences research institute VIB, has deciphered the genome, or DNA code, of seagrass. The discovery provides an insight into how ecosystems can adapt to climate change. Seagrasses evolved from land plants to organisms living in seawater and now thrive in shallow coastal waters. During its evolution, seagrass lost certain genes that are essential for land plants but developed new functions indispensable for survival in the salty and wet tidal zone. Deciphering its DNA code can advance ecological studies on how marine ecosystems in general might adapt to global warming.

Spin-off makes radiation-resistant electronics

A Flemish start-up has developed an advanced technology with which electronic devices can keep functioning under exceptionally high radiation, such as in space or in a nuclear environment. Magics Instruments in Mol, Antwerp province, is a spin-off of the University of Leuven and the Study Centre for Nuclear Energy. Exposure to radiation reduces the lifespan and reliability of electronics. Magics Instruments has created microchips that keep functioning in high radiation environments 1,000 times longer than the best technology currently available. The chips offer new possibilities for use during space missions and in the nuclear sector. \ AF