

VERTECH SUMMER SCHOOL 2019
Sustainable development in smart cities
Namur, July 13-20th

The second edition of VERTECH summer schools was held at Namur, Belgium, on July 13-20th 2019. As part of the VERTECH CITY network activities (www.vertechcity.com) and inspired by RELIEF international schools (www.univ-smb.fr/international/ecoles-internationales-dete/), VERTECH summer schools are providing up-to-date knowledge and an advised outlook about environmental, socio-economic and socio-entrepreneurial issues of cities and regions and on technological or social innovations our approaches to solve or mitigate these issues. These schools are also organized to show the important role of cities in research, technology transfer and innovation, to give an unique experience in internationalization for students and to bring teaching and research institutions closer to their cities. This year thematic was about sustainable development within smart cities. Green technologies, ecoparks, smart people-community, sustainable mobility, urban agriculture, waste management, renewable energy, sustainable chemistry, etc., were several of the themes discussed with researchers and experts and through industrial and touristic visits, panels, participation to other city host events... More details on this year edition are still available on <http://summer-school.unamur.be>.

This 2nd edition was a success and thanks to NAMUR EUROPE WALLONIE (NEW) for playing an important role in it. About five countries (Canada, USA, Belgium, Mexico and Burkina Faso), four disciplines (chemical engineering, biology, electric engineering, political sciences) and three universities (U. of Louisiana at Lafayette, U. of Quebec at Trois-Rivières, U. Namur) were represented. Representatives of cities such as Lafayette (Mrs Robert Melanson and Christophe Pilut for the Lafayette International Center), Victoriaville (Mr Vincent Guay, director of the Corporation du développement économique de Victoriaville et sa région) and Trois-Rivières (Mr Denis Roy, city counsellor at Trois-Rivières) were also present. During the school, there were 5 researchers experts in energy and waste conversion and one expert in marketing communication who accompanied the students throughout the duration of the school: professors William Holmes and Jonathan Raush, and the research scientist Kary Ritter from the Energy Institute of Louisiana at U. Louisiana at Lafayette, professor Simon Barnabé from the Institute of Innovations on Eco-materials, Eco-products and Eco-Energy (I²E³) at University of Québec at Trois-Rivières (UQTR), Dr. Benoît Moreau from HEPH-Condorcet and Mr Denis Roy from City of Trois-Rivières. The organizing committee would like to thank these people again for their time and devotion for this school.

For the VERTECH/RELIEF summer schools, multiple interactions with the host city are essential and the students have been privileged for this edition. Saturday July 13th, it started with a warm welcome from the Mayor of Namur, Mr. Maxime Prévost, at the City Hall following by a participation to a traditional Namur event to underline the national birthday of France and the participation to the *8ième édition de Namur Capitale de la bière* on the summit of the Namur citadelle.





The next day (Sunday July 14th), before the official opening of the school, NEW brought the participants to visit the city of Namur and its citadelle.



Monday July 15th, the school officially started with speeches of Mr Naji Habra, president of U. Namur, and M. Luc Gennart, president of VERTECH CITY and alderman of Roads and Public Facilities Skills at City of Namur. Professor Annick Castiaux of U. Namur, also VP at U. Namur, made a great opening conference on smart cities.



Afterwards, other speakers took the floor (Mr Bernard Hanquet, Bureau Économique de la Province de Namur – Environment division; Professor Loïc Boulon, Hydrogen Research Institute of UQTR; Miss Julie Henry, PhD student at U. Namur) and discuss about household waste management in Belgium, hybrid and electric vehicles of future as well as digital citizens and the importance of education for the future of cities. That day and all the other days of the school was facilitated by professor Simon Barnabé from UQTR. He also gave a lecture on July 15th Tuesday morning on circular economy and regional resource recovery following by an another set of renown speakers (professor Haissam Jijkaldi, Gembloux Agro-Biotech at U. Liège; Dr. Benoît Moreau, HEPH-Condorcet; prof. Annick Castiaux, U. Namur; and prof. Alain Bouscaryol, U. Lille in France) on many other relevant city's themes such as urban agriculture, sustainable chemistry, industrial parks & ecoparks and sustainable university campus.



Tuesday day finished with the participation of the VERTECH summer school students at the celebration of the 40 years of Namur – Lafayette twinning. They have even been invited for this occasion to the provincial palace of Namur to meet its governor and all his distinguished guests.



The traditional VERTECH-RELIEF summer school citizens' day was held on Wednesday, July 17. Citizens of Namur were invited to participate to the VERTECH school panel event. After a speech from the Mayor of Namur, Mr. Maxime Prévost, on the smart projects under course at Namur, a panel with municipal representatives (Mr Luc Gennart, Namur City; Vincent Guay, Victoriaville City; Mr Maxime Van Wonterghem, Namur City; Mr Robert Melanson, Lafayette City; Mr Denis Roy, Trois-Rivières City) was held and animated by prof. Simon Barnabé (UQTR). Several topics were discussed (road maintenance in Namur; attraction of the Victoriaville ecopark; 3D city cartography available to Namur citizens; waste management in Lafayette; and the OPEN project at Trois-Rivières). Citizens of Namur were then invited to interact with the panelists as well as the summer school students.







This citizen day was concluded with the visit of the TRAKK (<https://www.trakk.be/>) and a formal gala – Vertech dinner with distinguish guests such as the Mayor of Namur (Mr Maxime Prévost), the president of UNamur (Mr Naji Habra), the president of VERTECH CITY (Mr Luc Gennart) and general director of the Bureau Économique de la Province de Namur (Mr Renaud Degueldre).





On day July 18th, Vertech school participants visited the Ressourcerie (<https://www.laressourcerie.be/>) and then assisted to the presentations of a speaker from Henallux (Mr Alexandre Marchal) on entrepreneurship, and the UL Lafayette researchers on energy transition, solar energy, microgrid, waste conversion into value products and the green city of tomorrow.



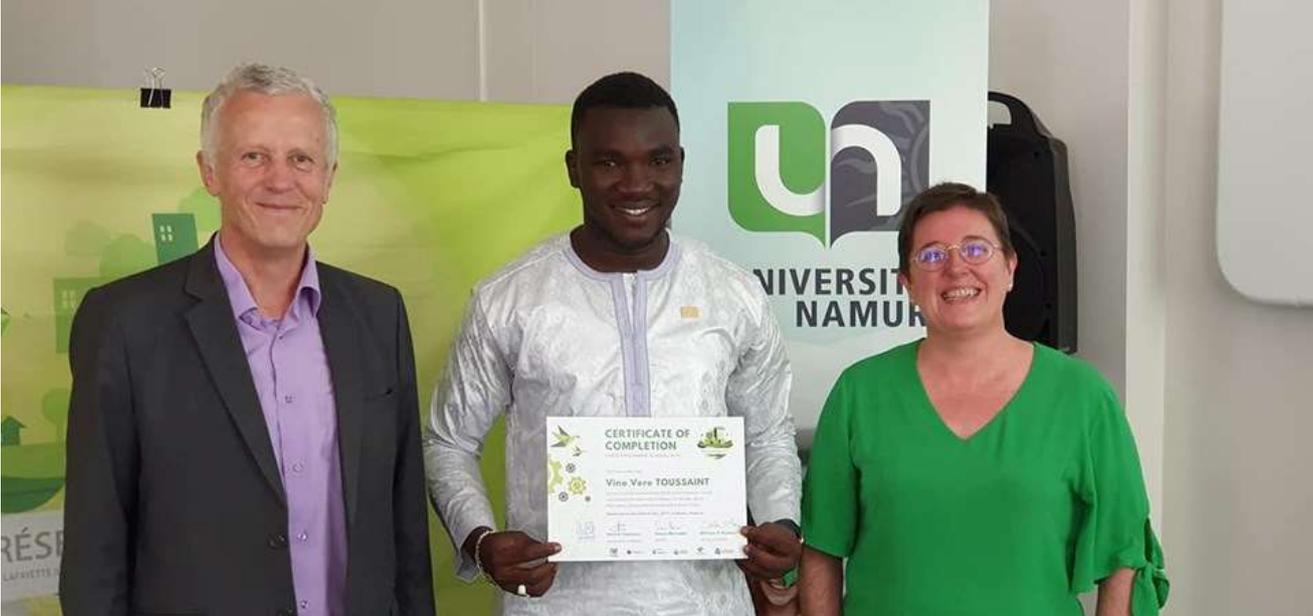
In all VERTECH (RELIEF) summer schools, there is a student team work focusing on co-creativity in an interdisciplinary environment. Students were invited to imagine a city being an international reference by tackling the issues with sustainable development & circular economy approaches and tools. In very few hours during the week, they valiantly put together a presentation throughout the week with the new knowledge learned during school and with the advices of the speakers. Their presentations were presented on July 19th to a high-calibre jury composed of Mr Luc



Arnould (former commissioner of international affairs at Namur, now consulate in Canada), Annick Castiaux (VP education quality and communication of U. Namur) and Philippe Gustin (founder of VERTECH CITY network and former director of Lafayette International Center). Two multinational teams made a presentation: team SCM² (Michelle Boivin - UQTR, Sarah Simoneaux & Chelsea Trahan – UL Lafayette, Matias Pool Marquez – U. Namur) and team Tequisol (Julia & Lauren Prudhomme – UL Lafayette, Vïno Bere – I2E, Ingrid & Marguerite Cinq-Mars – UQTR). Team SCM² presented an audacious sustainable version of the Houston City in USA with implantation of urban agriculture, solar panels and smart buildings (where bridges would connect their rooftop gardens). Team Tequisol presented a circular economy solution based on new ways of valorization of agave bagasse, a solar technology and a new blue-algae tequila to convert the so-called smart city of Tequila in Mexico into a sustainable city. Their presentations are available on the web site <https://www.vertechcity.com/fr/>. Team Tequila was selected by the jury to present their project in the next major event of the VERTECH CITY network where a student design competition on the city of tomorrow will be held.



Finally, the school ended with the formal delivery of the certificates of participation to the VERTECH summer school students.



In addition to NEW's contribution, the success of this event was made possible thanks to the organizers (UNamur – Service des Relations Internationales, UQTR – I²E³, UL Lafayette – Institute of Energy, VERTECH CITY network) and many other partners:



Special thanks to Ms Natacha Strauss of NEW and Ms Melissa Milioto of U. Namur for the event logisitc and Mr Frederic Laloux of NEW for connecting the school to the city so well. We look forward to seeing you at the next editions of the VERTECH summer schools and symposiums. **One last special thanks to the students of this edition who have proven that they are the scientific and professional young people that tomorrow's cities need.**

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For the organizing committee of the VERTECH Summer School 2019

