LIFT Scholarship Exchange Experience for Innovation & Technology (SEE IT)
Sponsored by: WRF, WEF, and NACWA

TRIP REPORT

SCHOLARSHIP UTILITY: South Platte Renew

SCHOLARSHIP UTILITY CONTACT: Anna Schroeder, Engineering Supervisor,

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ATTENDEES: Anna Schroeder, Pieter Van Ry

TRIP DATES: September 11-17, 2022

UTILITIES/SITES VISITED: World Water Congress & Exhibition, Copenhagen, Denmark/ VCS Denmark

TECHNOLOGIES/INNOVATIONS SEEN: Pilot and Research and a culture of innovation and excellence

TRIP BACKGROUND and RATIONALE (250 WORDS): What technology did you select to visit? What is the problem you are trying to address? How did you envision the LIFT SEE IT scholarship trip helping your utility?

South Platte Renew (SPR) is facing new regulatory limits in 2027 for nitrogen and phosphorous that will require the installation of new treatment processes with an estimated capital cost of $150 million. SPR has committed to developing a pilot framework that prioritizes addressing future regulations to find the best solution unique to SPR. Due to travel restrictions, SPR delayed using the 2020 grant funds until travel restrictions lifted. During this time, SPR developed a sister utility relationship with VCS Denmark, a leading innovator in the water and wastewater field, and built a strong partnership sharing ideas on innovation, management, and technologies. SPR Director, Pieter Van Ry, and Engineering Supervisor, Anna Schroeder, successfully visited VCS Denmark and attended the World Water Congress & Exhibition in September 2022, strengthening the sister utility partnership and providing SPR exposure to best-in-class innovation and technology.

TRIP SUMMARY:

Why did you select the specific utility and technology for the visit?

SPR is interested in learning about the administration and management of pilots and associated research to aid in the development of the SPR Pilot and Research Center (PARC). By traveling to other successful pilot and demonstration facilities, SPR will gain invaluable knowledge and experience for implementing its own PARC. VCS Denmark is known as one of the most innovative water renewal facilities in the world. They are often the first facility to pilot technologies in the wastewater field and have been highlighted as keynote speakers at water and wastewater conferences around the world. SPR and VCS Denmark conducted multiple virtual meetings were conducted discussing innovation, management, and technologies so that SPR can reach the next level of piloting, research, and partnerships. SPR believes that visiting VCS Denmark provided the opportunity further build this relationship and witness the technological innovations firsthand.

Based on your visit, do you think this technology/approach works for your utility?
Promoting piloting and research at SPR is beneficial as SPR desires to be proactive in the regulation planning efforts by developing an in-house piloting program to help direct future capital planning and help dictate the best full-scale treatment process to meet regulations. SPR is participating in a voluntary program that offers up to a 10-year time extension for meeting Regulation 31. As technology improves and rapidly changes, the time extension allows innovative technologies to mature and develop prior to SPR investing in significant infrastructure upgrades. SPR will continue to promote information sharing with VCS Denmark and through other partnerships to foster technology development and piloting.

How useful was the trip in your decision-making process?
*S*PR is finalizing the development of a piloting program, PARC. The PARC is a unique approach, which addresses the long-term treatment challenges and organizes the piloting strategy for the facility. With the goal to work with external entities such as vendors, manufacturers, universities, schools, and other research facilities to test their technologies or equipment on SPR's process flows. Being able to meet VCS Denmark in person and discuss innovation was reaffirming in SPR's efforts to invest into innovation. VCS Denmark shared insights on risk management of vetting technologies and creating a culture of innovation, and SPR is able to incorporate that advice into the PARC framework and program development.

What were some of the trip highlights and takeaways?
*T*he LIFT SEE IT scholarship allowed SPR to meet the key players of piloting and research at VCS Denmark and discuss their path to gaining a reputation as a leader in wastewater innovation. The biggest takeaway was that, inherently, there is no one path to innovation. The most successful innovations are powered by passionate people, not funded by fancy technologies or lab spaces. In fostering innovation is truly to foster curiosity among staff and to allow people to try out ideas that they find interesting.

Along with technology innovation, SPR is adding suitability and optimization to capital projects. The World Water Congress & Exhibition, attended by SPR staff while visiting VCS Denmark, emphasized the UN's Sustainable Development Goals, which SPR would like to integrate into projects; focusing on the goals of Industry, Innovation, and Infrastructure, Sustainable Cities and Communicates, Affordable and Clean Energy, Responsible Consumption and Production, and Clean Water and Sanitation.


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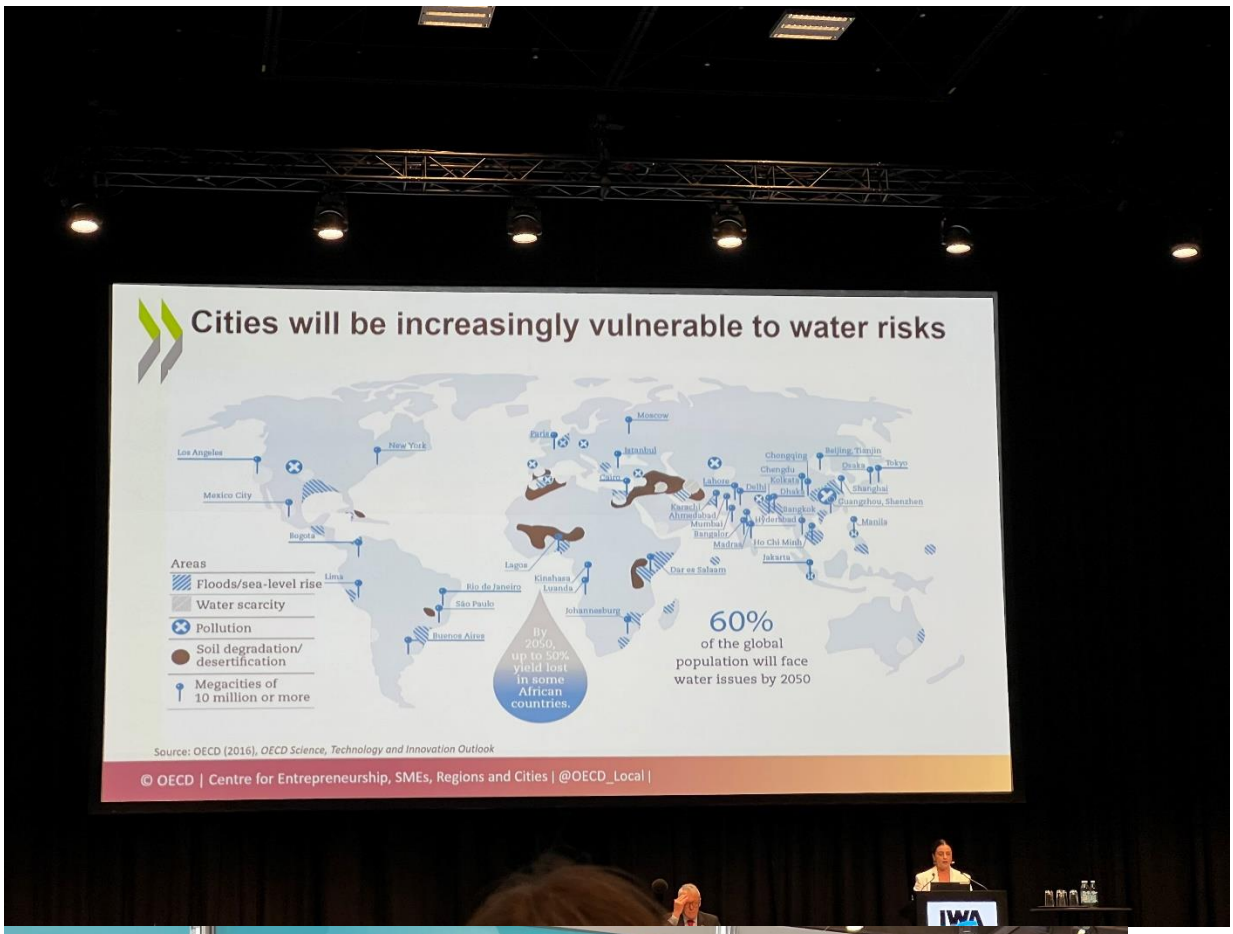
Cities will be increasingly vulnerable to water risks
Areas
Floods/sea-level rise
Water scarcity
Pollution
Soil degradation/ desertification
Megacities of 10 million or more
By 2050, up to 50% yield lost in some African countries.
60%
of the global population will face water issues by 2050
Source: OECD (2016), OECD Science, Technology and Innovation Outlook
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