



Inspirational story	IPKW: The most sustainable business park of The Netherlands	INST-01
Country	Netherlands	
Energy efficiency measures	Collaborative projects involving biomass, solar panels, windmills and a heat network	
SME sector	Mixed – business park	
Why	<p>"We want to leave the world a better place to the next generation. Therefore we aspire to become the most sustainable business park in the Netherlands" This is the ambition of IPKW, a former AkzoNobel industrial estate from the 1940s. The business park specifically focuses on housing energy-related companies - from start-ups to multinationals. The site accommodates parties involved in sustainability and innovation in energy and environmental technology. When Veolia committed itself to the site as operator of the utilities, the ambition arose for the area to become a testing ground for the most sustainable business park in the Netherlands in terms of energy, waste, mobility, buildings, and people. IPKW and Veolia see this as a joint task. The business park is considered as an ecosystem for work and education.</p>	
How	<p>Approach</p> <p>A 'future map' was used to visualise what IPKW as the most sustainable business park in the Netherlands means. This map describes projects that have been implemented in the past, those that are on the planning horizon, and a number of dream projects for the future. The 'future map' has been widely shared and supported at the business park. Several sustainability projects related to the subject of 'energy' have been initiated on the site, such as (a) producing electricity through solar panels, (b) installing windmills, (c) commissioning a biomass boiler and (d) constructing a residual heat network. The business park is still connected to the national grid for electricity and gas, but also has its own energy network. Tenants obtain steam, compressed air, various types of water, gases, etc. through their own network. Having their own network makes decision-making on sustainability easier.</p>	





Setbacks

The ambition to make IPKW sustainable had been around for a long time. However, the former operator of the power plant did not endorse the sustainability drive. This was the first setback in the sustainability ambition. The sale to Veolia, world leader in optimised use of raw materials and fuels, ensured that drastic steps towards sustainability could be taken. A second setback occurred when the biomass boiler went into operation. At the time the feasibility study for purchasing and commissioning the biomass boiler was done, it was possible to receive SDE subsidy and biomass was seen as a good transition fuel. However, the collective opinion on this technology changed over time. The bad image that biomass developed caused negative reactions. As a frontrunner in the transition, negative reactions are received alongside positive ones, which can make it harder to convince entrepreneurs to participate in the energy transition. Now that the biomass boiler is installed and provides substantial savings on gas consumption, the government is already inquiring about options to phase out the biomass boiler and switch to a more sustainable alternative. Finally, with innovative projects, it is difficult to make the business case cost-neutral. The newer the technology, the more difficult this is. IPKW employs staff on the topic of marketing and communication. Although this was initially an investment without initial payback, it is now paying off. In 2019, IPKW received the 'BT Circular Economy' award for most sustainable workplace in the Netherlands. Although challenges remain, IPKW is an inspiration to local authorities and other business parks

Whom

The municipality's varying attitude towards the biomass boiler made cooperation challenging. Nevertheless, currently they are very cooperative and the municipality is looking to connect with IPKW to learn and further disseminate knowledge and experiences. For instance, municipal officials have done internships to learn about how sustainability issues are successfully tackled at IPKW, highlighting the value of working together in the 'triple helix' for all parties involved.

What

There are currently 24000 solar panels on IPKW, generating 6.7 million kWh per year. There are four wind turbines on and around IPKW, supplying clean and locally produced energy to households in Arnhem. The biomass boiler at IPKW accounts for a 90% reduction in gas consumption. IPKW is currently exploring the possibility of installing a hydrogen network on the site. A hydrogen filling station already exists. Again, this is a challenging case, but a group of ambitious parties is trying to set up a business case that will make it easier for new parties to connect and share investment costs. Besides renewable energy and reducing CO₂ emissions, IPKW is an inspiration for other business parks and local authorities.

Lessons learned

IPKW's case study shows that being a leader in sustainability is challenging, but it also teaches about the opportunities offered when you work with a group of motivated





entrepreneurs. Having one owner with its own employees makes IPKW unique as a business park and makes it easier to organise sustainability. At regular business parks, several players are always willing to commit to sustainability, however they also need to keep their own businesses running. This makes it important that the local government can firmly support setting up a structure for sustainability projects, for instance by setting up an organisational structure on the business park and appointing a park manager who can support entrepreneurs in sustainability projects.



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