



Slovenian pollution-measuring machine a sellout success

A Slovenian company has sold out of its first series of an innovative air pollution measuring instrument. It could revolutionise the study of climate change, and make it easier for city councils and environmental monitoring agencies to improve air quality.

The new tool, the Aethalometer AE33 developed by Aerosol, tests air pollution automatically and provides clear results on the spot over the Internet, helping air quality experts to focus on the meaning behind big data sets.

Since the launch of the new device in September 2012, sales exceeded Aerosol's director Griša Močnik's expectations – the first series sold out before the end of the year. His small firm, based in Ljubljana, Slovenia, has been able to grow its staff by twenty per cent and expects further additions to its team. 'If our sales continue at this volume our return on investment is going to be extremely high. We will cover our development costs, partly funded by the Eurostars programme, by the end of 2013,' says Močnik.

The air particle monitored by the Aethalometer is called black carbon, also known as soot, and owes a high share of the health problems caused by pollution. Soot is also theorised to be the second biggest source of global warming, but its emissions could be cut more easily than those of carbon dioxide, and measurements of its concentration and sources are crucial for climate mitigation. Little after the launch of the Aethalometer, Močnik realised that a large proportion of sales went

to the agencies responsible for air quality monitoring, instead of the of climate-scientists community who had been the usual end-user for his instruments. But Močnik's close association with scientists - he was a member of a United Nations' expert group on black carbon air pollution - is in his opinion what rocketed the sales of the new invention to experts based in public institutions. 'Only by putting ourselves into the shoes of our users are we able to understand what they want from us – first-hand experience allowed us to really grasp all the details,' he says.

Pollution regulation

The main feat of the device is that it allows users to pinpoint the sources of the air pollution. The information can then be used by regulatory agencies and city councils to find out whether pollution is produced locally or not, and whom to blame for it. The novel methodology to do so was created by the Swiss Paul Scherrer Research Institute, partnering with Aerosol and inNET, another start-up, in a common research project funded by the Eurostars programme.

'We want to automate the process to empower regulators to take the right pollution reduction measures, and monitor their success,' says Močnik. In a pilot project Aerosol carried out

in Klagenfurt, Austria, the instrument allowed to demonstrate how the introduction of gas-powered buses reduced air pollution. 'Abatement measures for air pollution could

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be much more sophisticated and targeted, than they are. With our instrument, you can measure which sources contribute more to air pollution throughout the day, and then regulate pollution sources in a more targeted way. Instead of imposing unpopular traffic controls all day, if data shows that traffic contributes most to air pollution in the morning, restrictions could be applied mornings only,' explains Močnik.

Project participants:
Slovenia, Switzerland

Budget: 0.7 MEuro
Duration: 42 months

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