**Objective:** Process current air quality in Belgium

**Data:** <https://registry.opendata.aws/openaq/>

**Description:** Company AirMax has built a new air filtration system and wants to instal it in all major cities in Belgium. To convince the various cities, they want to show a real-time view of the air quality independent of their own measurements. For this purpose they want to use the openaq dataset. The data exposes air quality data in various ways (s3 bucket, sns, api). Since AirMax is interested in the current air quality, SNS is the most interesting. AirMax want you to tap into this stream of data and provide a real-time view of the current air quality in various cities. AirMax defines the current air quality in a city as the average of the measurements over the last 3 hours. AirMax is also interested in the amount of measurements.  
We have already setup an SQS queue (openaq\_steven in the Ireland region) and linked it to the SNS topic (filtered on country BE). We want you to ingest and process the data (you could look at libraries like Alpakka) and send it to a database (this can be either RDS, Dynamodb, ES, your local machine). Bonus point if you can somehow visualise the results on a map. We have setup AWS credentials in a test environment you can use:

<https://287820185021.signin.aws.amazon.com/console>  
username: steven  
password: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Why is this relevant:** The core of what we do is integrating various data sources and help organisations build insights from them. We typically use many more technologies, and many more data sources. The business logic will also be a lot more complex. On top of that, we need to write production-grade code, we often deploy in cloud environments and we have to collaborate with several other teams to get it done. All of that is out of scope here. We don't expect any tests, any exception handling, any monitoring, ... We expect you to focus on the core of the problem.

**Results:** It would be great if you can come back to us somewhere in the coming weeks with a presentation. We expect you to treat us as the managers of AirMax that have initiated this proof of concept and we expect a report on the current state and next steps (dev, test, deploy, ... ). We are looking at the feasibility of this datasource for our use case. You don't have to make any slide deck. Just sharing your code is ok. But feel free to make a presentation if you think it helps. Make sure you have a storyline and a structure you want to follow.