

Preventing pollution with Israel's Ministry of Environmental Protection & Google Cloud's technology

Israel's vibrant landscape is the source of deep national pride. With the country growing at a rapid pace, this diverse environment - arid deserts, rolling hills and a shimmering mediterranean coastline - needs careful protection.

With a growing population and the demands this growth creates, Israel is facing a variety of sources of air pollution - from industry, transportation, waste, agriculture, fires in open areas, etc.

Israel's Ministry of Environmental Protection plays a critical role in keeping the country green and healthy. It regulates hazardous emissions and industrial waste, and takes great efforts to prosecute offenders.

It's no easy task. In rural areas - which often are out of sight of authorities - there is a pattern of illegal activity. Especially waste dumping, which is almost impossible to track.

Hamstrung by on-premises legacy systems, the Ministry struggled to get a clear view of the big picture.

About the Ministry of Environmental Protection:

Israel's Ministry of Environmental Protection leads the charge against climate change, guarding and preserving the country's rich natural heritage.

Google Cloud

After migrating to Google Cloud, the Ministry of Environmental Protection was able to enjoy cutting-edge insights.

With scalable cloud-based resources, they built customized solutions to model, map, monitor and mitigate pollution levels, right across the country.

Using tools from Google Cloud, the Ministry launched several dynamic new initiatives:

- Modeling precise air pollution forecasts on a street-by-street basis with Google Cloud's high-powered computing and Kubernetes Engine.
- Identify trucks dumping illegal waste using live traffic-camera feeds and drones.
- Map urban noise pollution with BigQuery and Cloud Functions, empowering residents and legislators to take action.
- Sharing environmental data with pollution researchers, using BigQuery.

Future impact

Backed by Google Cloud's solutions, the Ministry has been living up to its name. They've helped researchers identify patterns and correlations for better monitoring, launched legislation to closely track commercial trucking, and empowered residents and lawmakers to take action on noise pollution.

With Google Cloud's flexibility and freedom to innovate, the Ministry continues to expand its monitoring projects, develop more self-service analytics, and drive forward impactful changes in environmental legislation.

With Google Cloud, the Ministry of Environmental Protection:

Scales up resources

60X faster

Forecasts
air pollution street-by-street

Monitors
pollution offenders

Maps out
noise pollution

> With Google Cloud, we're free to focus on the purpose of the Ministry – preventing pollution, and protecting the environment for the Israeli public – without being restricted by our technology.

Erez Avital, CIO, Ministry of Environmental Protection