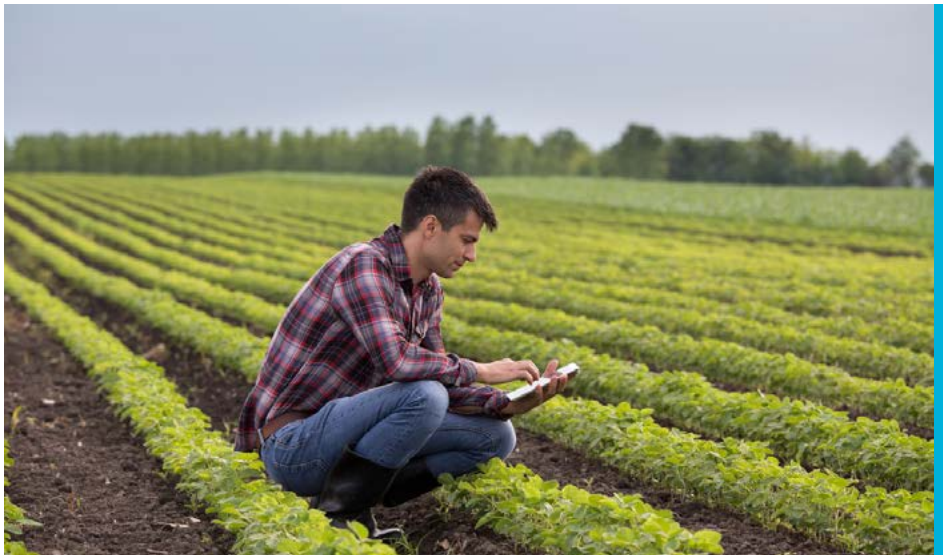

Business challenge

To launch its worldwide business, Emnotion Ltd. needed reliable, cost-efficient access to accurate, timely weather data for any location in the world.

Transformation

Emnotion sought to empower weather-sensitive enterprises to make more proactive, data-driven decisions. The company combined its advanced analytics with insights from The Weather Company, an IBM Business, delivered on IBM® Cloud™. Now, farmers can grow more profits and construction workers can operate with greater safety thanks to Emnotion's customized forecasts and alerts.

Ilya Shapira
Chief Executive Officer
Emnotion Ltd.

Results

~6 months to launch worldwide services
using a hybrid cloud model that also enables rapid growth and ROI

~2 days to scale services
for new customers, boosting satisfaction through streamlined delivery

Frees employees to focus on business development
rather than maintaining hardware and Internet of Things (IoT) devices

Emnotion Ltd.

Hyperlocal climate forecasting takes the surprise out of unexpected weather

Founded in 2016, Emnotion provides hyperlocal climate-forecasting solutions for customers in multiple industries, with a focus on agriculture, construction and government. Its innovative analytics and methodology enable it to create accurate behavior models, map climate change dynamics, and generate event scenarios for specific farms, districts, towns and regions. It employs four people at its offices in Rehovot, Israel.

"Once you have good, stable weather data and know how to work with it, you can make a lot of good things happen."

—Ilya Shapira, Chief Executive Officer, Emnotion Ltd.

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Planning ahead for erratic weather

Despite arid conditions and water shortages, agriculture thrives in Israel. The country produces most of its own food supplies and exports fresh produce and flowers globally. It also has provided the world with many farming innovations, including drought-resistant seeds and drip irrigation systems, which efficiently deliver water to plants at their base.

The Israeli government promotes water efficiency by requiring farmers to sign multiyear contracts for drip-irrigated water. To help ensure profitable yields, farmers must carefully forecast each crop's water requirements over the course of several years. However, increasingly unpredictable weather patterns often turn planning into a guessing game that can lower yields while driving insurance and other operational costs higher. For example, if farmers contract for water at low-flow drip rates and their region subsequently experiences exceptional heat and drought, crops can fail to thrive and even wither and die. Other variables tied to weather, such as greenhouse heating costs and consumer demand, also affect farmers' yields and profits.

The cofounders of Emnotion—Ilya Shapira, Chief Executive Officer, and Alexander Zogas, Chief Technology Officer—sought to help farmers plan with more foresight by launching cloud-based hyperlocal climate-forecasting services. They also wanted to help other types of enterprises that require climate data relevant to very specific areas, such as construction companies that must secure tower cranes during strong winds. Government entities and businesses that operate drones in cities also require information about wind conditions. "Winds behave in a very unpredictable ways in the city, and they can differ from street to street and block to block," explains Shapira, emphasizing that with the right climate data turbulent conditions can be predicted.

To develop and deploy its services, Emnotion sought a weather service provider that could deliver affordable, consistently accurate data for any location in the world, whether a farm field, construction site or city district. As a cloud-native startup, it also sought a provider with an open, high-performance cloud infrastructure designed for security.

Affordable, cloud-delivered climate insights

Emnotion compared the price, data quality and service level of several weather information providers before it selected The Weather Company. "We looked at how to best manage our expenses and still obtain very good data," says Shapira. "Then, we met with the IBM team, explained our solution and quickly proceeded to becoming an IBM client. Now, we work with the highest-quality data, aren't limited by geographical borders and have consistent service. The stability is extremely important to us."

Whereas most providers offer only regional or national—and often unreliable—information, The Weather Company operates one of the highest-resolution weather observation networks available. Drawing data from 250,000 personal weather stations and other, traditional sources, The Weather Company equips Emnotion with trusted, actionable insights. It delivers current and forecasted conditions, seasonal and subseasonal forecasts, lifestyle indices, severe weather and historical weather for any location in the world, all through weather data APIs on IBM Cloud infrastructure and supported by global data center capabilities.

Applying its proprietary algorithms and methodology to The Weather Company data, Emnotion can pinpoint any site—rural or urban—and generate detailed analyses of its climatological, meteorological and hydrological conditions, including event development scenarios. End users receive the insights through mobile or desktop portals on the company's private cloud, without needing to invest in hardware or IoT devices. They essentially have affordable access to a virtual weather station that provides short-, mid- and long-range forecasts, customized for their climate-related risks.

Shapira explains that the ability to receive up-to-date weather insights specific to their land plots and crop cultivation protocols can especially make a difference to small-scale farmers. Armed with this information, they can proactively manage all aspects of their operations, including seed planting, irrigation scheduling and pesticide spraying. "Through more effective planning and risk mitigation, small-scale farmers can finally achieve sustainability and increase their profitability," he explains.

Emnotion similarly helps construction workers in urban areas. Using short message service (SMS) alerts, the system automatically notifies laborers before extreme winds, heat and other dangerous conditions occur at their work sites, prompting them to act to protect themselves, nearby individuals and equipment. They can also better plan ahead to appropriately schedule deliveries and start projects that involve weather-sensitive materials, such as concrete and paint.

Global scalability drives a rapid ROI

Teaming with The Weather Company, Emnotion launched its innovative climate-forecasting services within six months, taking advantage of hybrid cloud computing to minimize capital and operational costs. Tapping into IBM's global weather network and cloud capabilities, the business also achieved a rapid ROI,

quickly scaling to bring new customers online. It currently helps businesses and organizations in Australia, Brazil, Canada, Eastern Europe, Israel and New Zealand.

Customers appreciate Emnotion's streamlined service delivery and the fact that they do not have to worry about hardware and IoT devices. Recently, for example, Emnotion brought an international development team in Turkmenistan online within two days, without requiring an employee to visit the country. The IBM name and reputation also helps Emnotion find and earn the respect of potential customers.

With its cloud-native business up and running, the company continues to receive excellent around-the-clock service from IBM. "We haven't needed to call on any of IBM's support services. Unfortunately, that doesn't happen very often with providers, but with IBM everything just works," says Shapira.

Given increasingly unpredictable weather patterns and events, the company plans to continue helping enterprises across industries and continents optimize planning, reduce costs and risks, and increase profitability. It also is developing services specifically for the elderly and other people susceptible to temperature extremes, drops in barometric pressures, air pollution and other environmental conditions. "Once you have good, stable weather data and know how to work with it, you can make a lot of good things happen," Shapira explains.

"Now, we work with the highest-quality data, aren't limited by geographical borders and have consistent service."

—Ilya Shapira, Chief Executive Officer, Emnotion Ltd.

Solution components

- IBM® Cloud™
- The Weather Company, an IBM Business

Take the next step

To learn more about the IBM solutions featured in this story, please contact your IBM representative or IBM Business Partner.

About The Weather Company, an IBM Business

The Weather Company, an IBM Business, helps people make informed decisions and take action in the face of weather. The company offers the most accurate forecasts globally with personalized and actionable weather data and insights to millions of consumers, marketers and businesses through its business solutions division and its own digital products from The Weather Channel (weather.com) and Weather Underground (wunderground.com). A global AI and Cloud company, IBM is the largest technology and innovation employer in the world and serves clients in 170 countries. For more about IBM's Weather business, visit newsroom.ibm.com/the-weather-company.

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