AI for Earth

Conservation Metrics

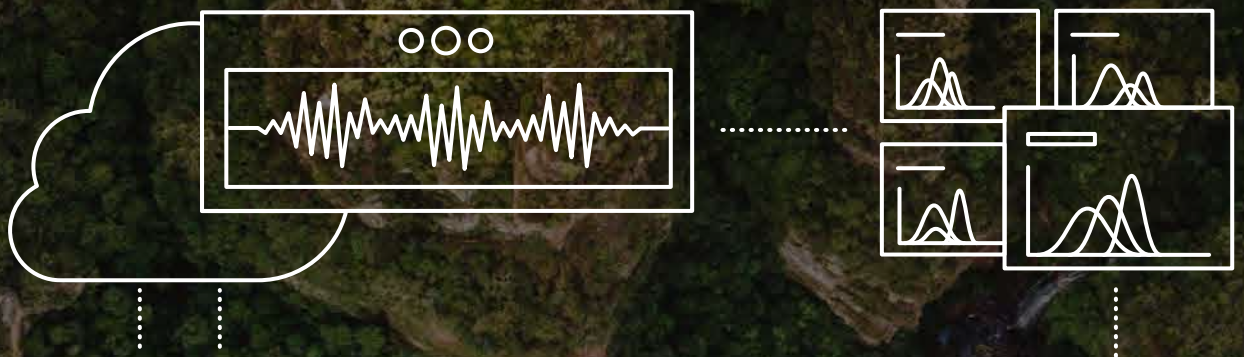
Conservation Metrics works with partners to develop solutions for automating the collection, processing, and analysis of wildlife survey data using deep learning techniques.

3. Species detection and identification

Machine learning models scour millions of images and thousands of hours of recordings to detect the target species. Findings are confirmed by an analyst.

4. Statistical models

Bayesian statistical models help researchers estimate classification errors and produce rigorous, repeatable metrics of ecological change and trends.

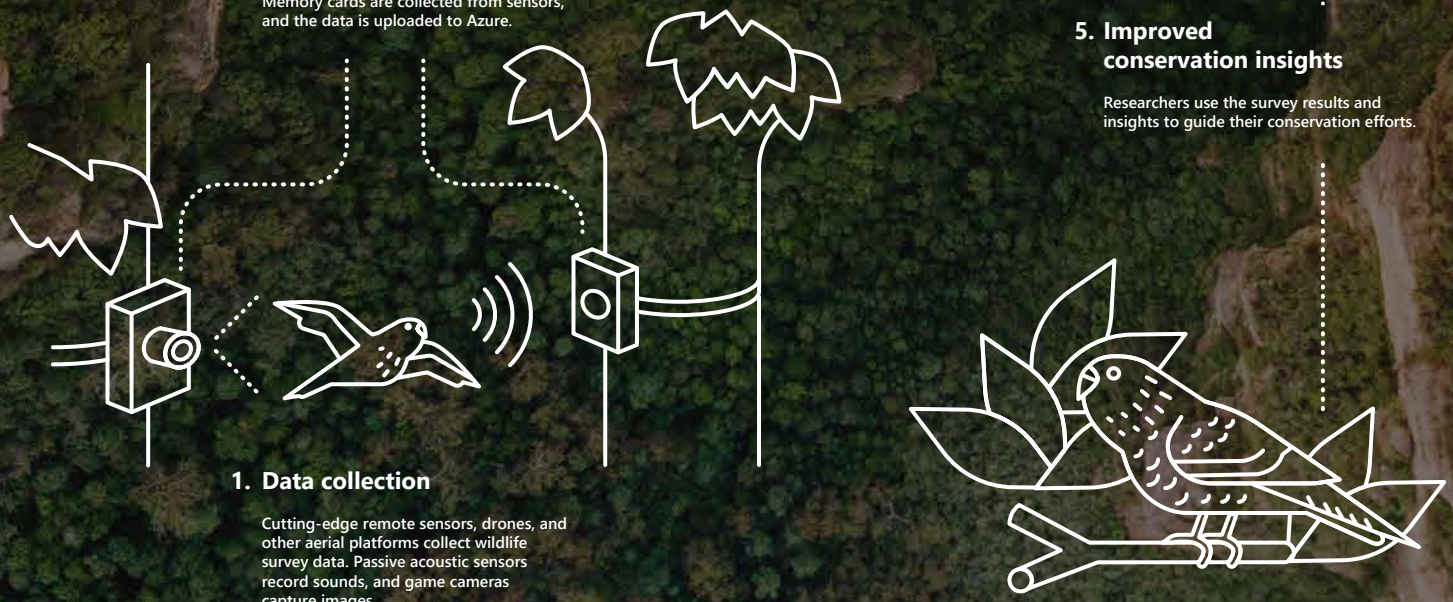


2. Microsoft Azure

Memory cards are collected from sensors, and the data is uploaded to Azure.

5. Improved conservation insights

Researchers use the survey results and insights to guide their conservation efforts.



1. Data collection

Cutting-edge remote sensors, drones, and other aerial platforms collect wildlife survey data. Passive acoustic sensors record sounds, and game cameras capture images.

Challenge

Traditional boots-on-the-ground wildlife surveys are logistically challenging and expensive. Sensor networks have enabled drastic increases in the spatial and temporal scale of monitoring efforts. The next challenge is processing the large data-streams being collected from wild places.

Solutions

Conservation Metrics has developed a machine learning workflow in Azure to process data from wildlife sensors to produce rigorous metrics for conservation. Cloud-based workflows allow project timelines to scale according to need, reducing processing times from months to days. Azure-based solutions help preserve biodiversity by providing metrics on the status of species in time to optimize conservation investments.

Agriculture | Water | Biodiversity | Climate change

Microsoft