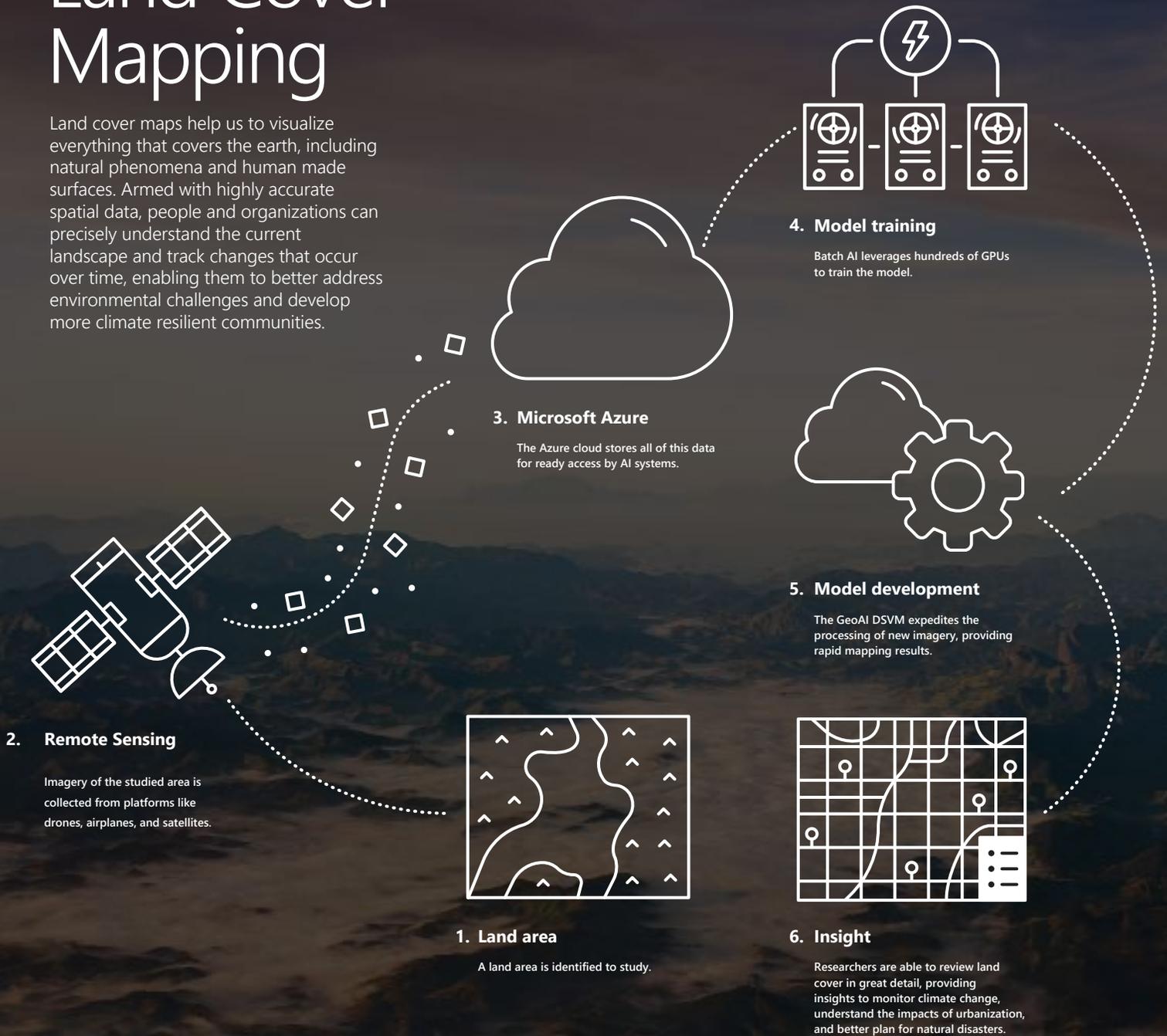


Land Cover Mapping

Land cover maps help us to visualize everything that covers the earth, including natural phenomena and human made surfaces. Armed with highly accurate spatial data, people and organizations can precisely understand the current landscape and track changes that occur over time, enabling them to better address environmental challenges and develop more climate resilient communities.



Challenge

Creating high quality land cover maps with today's high resolution imagery is a resource intensive process. There is high quality imagery available, but it takes a tremendous amount of work to sort, manage, and classify these images into land cover data. For example, a land cover map of the entire United States would require classifying nearly 10 trillion pixels. Without AI and cloud based power computing, this would require a level of technical expertise and computing resources far exceeding what most non profits and government agencies can afford.

Solutions

Microsoft partnered with the Chesapeake Conservancy to build a dynamic system for generating one meter resolution land cover data anywhere in the United States. Using algorithms on Microsoft's AI platform and integrating the data into Esri's ArcGIS spatial mapping software, we were able to create an accurate, current land cover map, giving conservationists access to regularly updated data with 900 times the information that was available before.

