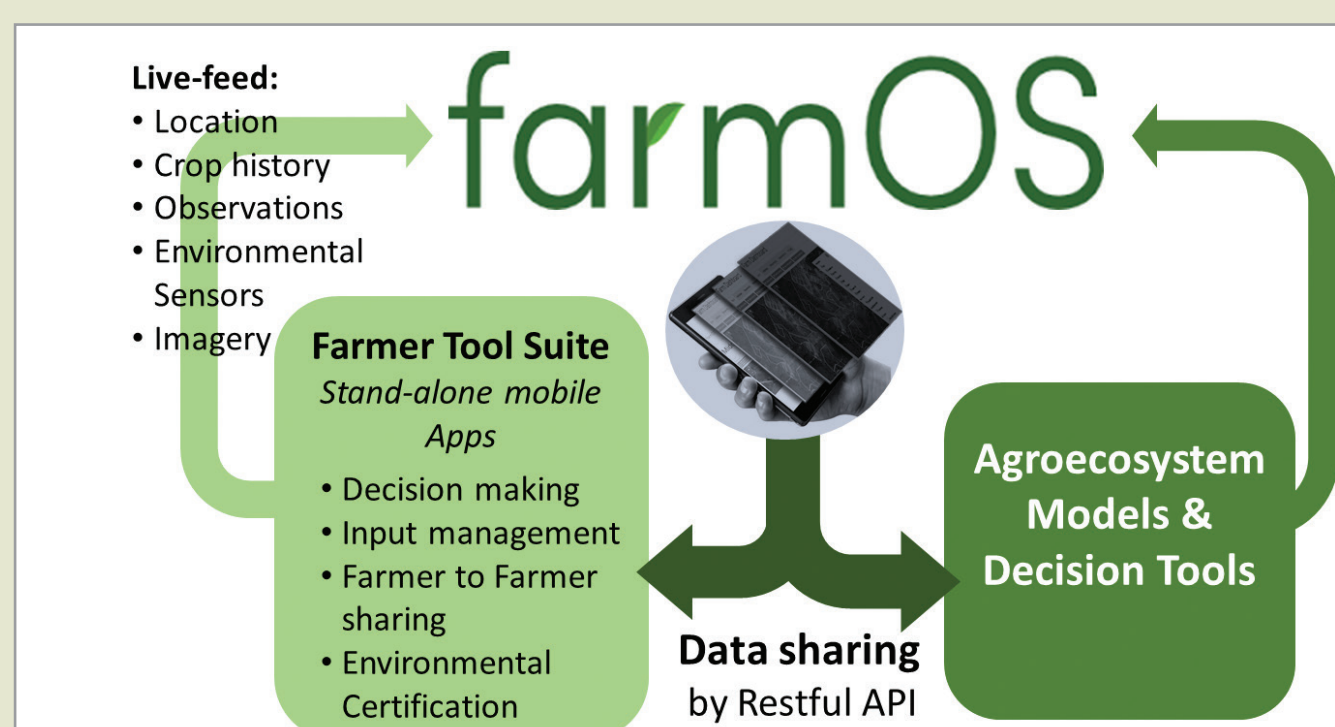**UNITED STATES**   INNOVATIONS IN AGROECOLOGY

FARMOS: FREE AND OPEN SOURCE FARM MANAGEMENT SOFTWARE PLATFORM AND DEVELOPMENT COMMUNITY

Scaling soil health and biologically based landscape restoration is knowledge rather than input limited. The FarmOS system leverages existing global, open-source hardware and software communities to provide tools to all scales and production systems. It is free to download, use and modify. Farmers control their own secure data to choose how to share knowledge with other farmers, researchers, businesses and the general public.

The interface supports mobile phone access and entry of all records anywhere, even in limited connectivity environments, and enables location-specific decision tools driven by farm records and soil and weather data.

AN OPEN AGRICULTURAL ARCHITECTURE FOR KNOWLEDGE EXCHANGE

FarmOS uses low-cost, open-source technology to link producers with other producers, researchers, businesses and the public, using a common format that leverages existing tools and enables the exchange of agricultural information and inspiration across geographies, production systems and cultural boundaries.

GLOBAL KNOWLEDGE ~LOCAL ADAPTATION

A global network of engineers, designers, roboticists, researchers and farmers partner to build collaborative development platforms, like Farm Hack and FarmOS, which democratize access to environmental monitoring to improve soil health, and agricultural production.
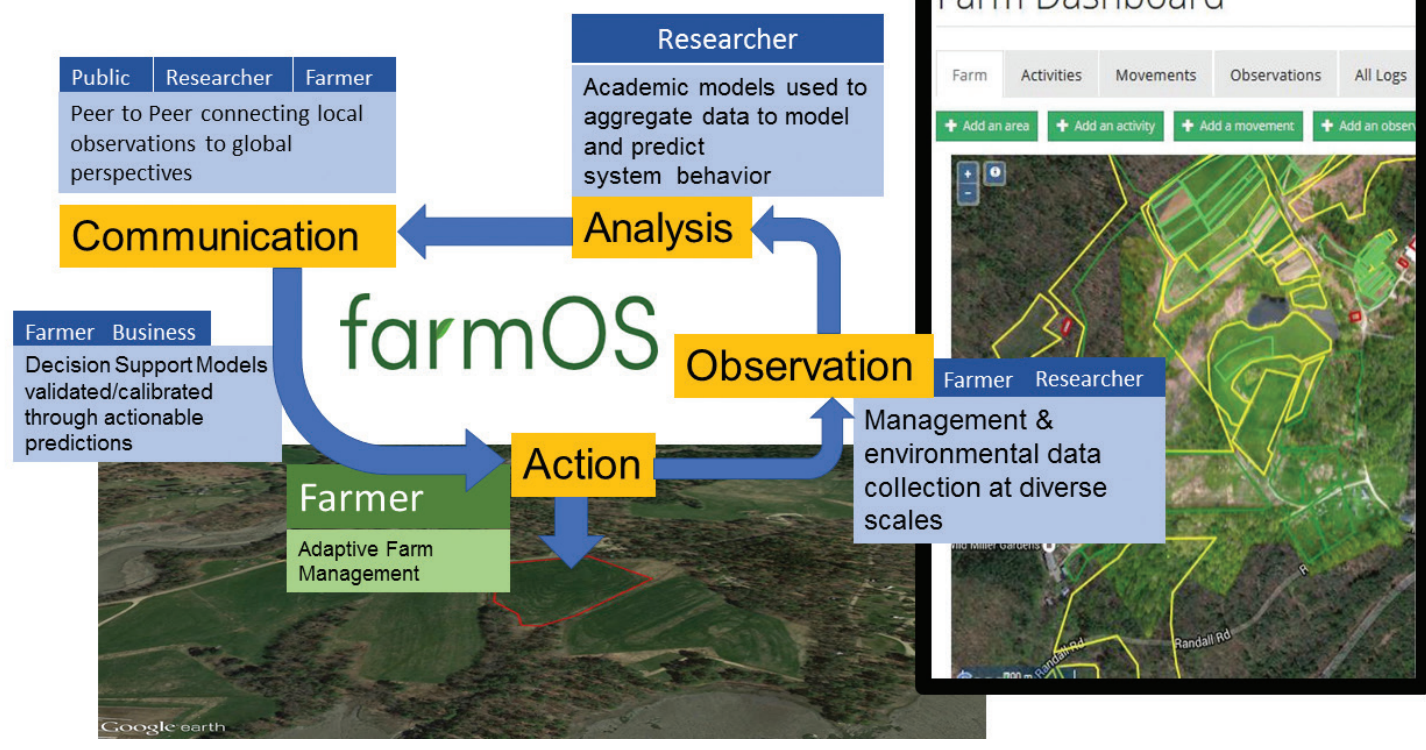

FARMER ENTERS DATA ONCE TO UNLOCK POWERFUL KNOWLEDGE-BASED TOOLS

Farm specific information, once gathered, provides access to data-driven, location-specific recommendations. Every Farm becomes its own farmer-driven research and education farm, and provides the foundation for outcome-based ecosystem services markets.

Example tool modules include:

» soil health monitoring and recommendations;

» food safety, supply chain and organic certification records;

» farmer-driven crop trial management;

» equipment records and Farm Hack tool library;
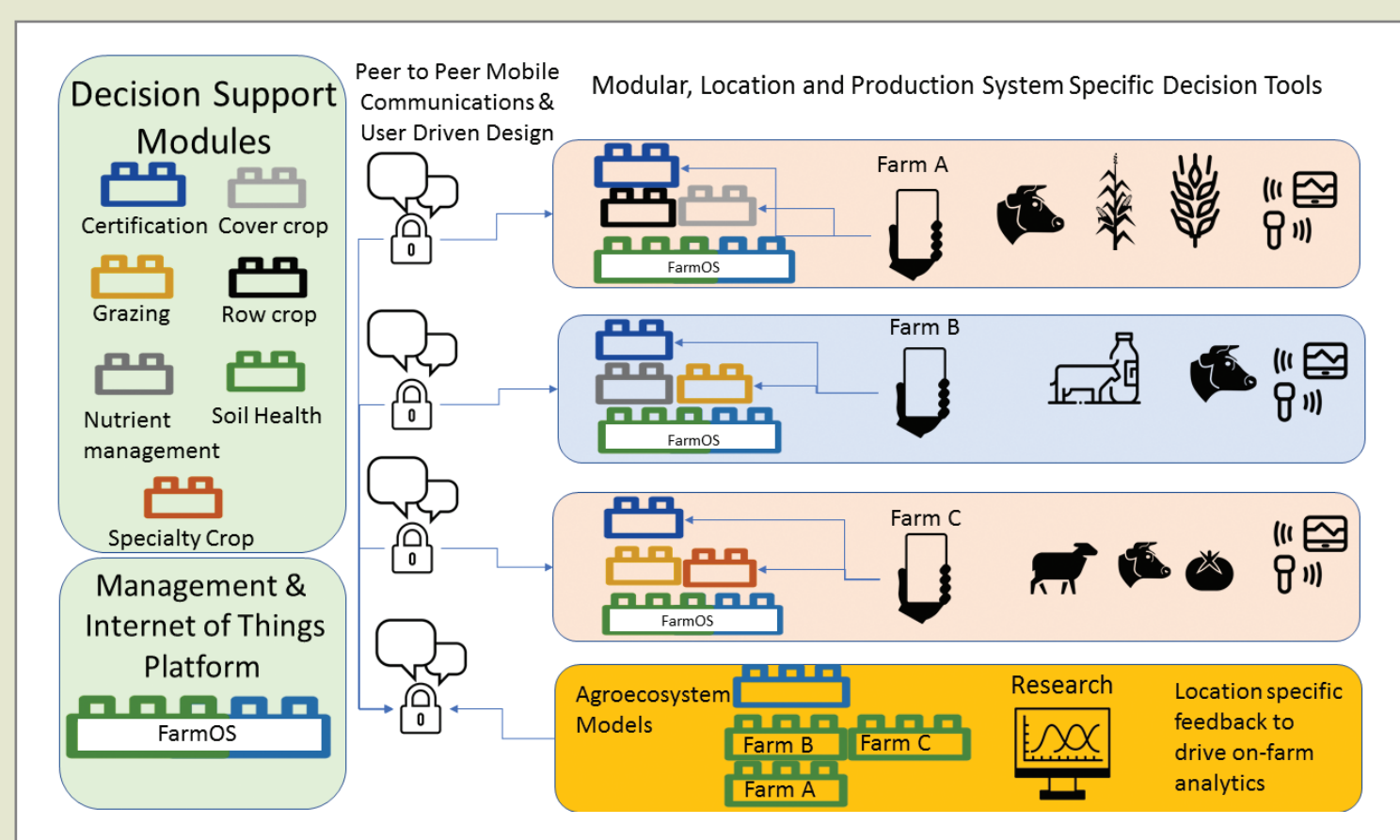
» Internet of Things (IoT) farm

automation and sensor-based alerts;

» adaptive nutrient and GHG management; and

» Cover Crop Decision Support Suite.

DEMOCRATIZE ACCESS TO AGRICULTURAL KNOWLEDGE

FarmOS creates a "pre-competitive" platform, which encourages local adaptation and the creation of innovative local enterprises with access to global agricultural knowledge.

A SHARED HUMAN ENDEAVOR

New distributed tools enable the exchange of agricultural knowledge on a global scale, driven by farmer trust and local innovation.