Intelligent Agriculture

Southwest Research Institute® (SwRI®) develops smart agriculture solutions with software, data intelligence, perception systems, sensor fusion, and artificial intelligence (AI). Our customized solutions range from advanced perception to field analysis with AI, automated systems, and other farm automation technologies to support growing, cultivating, harvesting, and management.

Vineyards/Orchards

SwRI applies AI-powered Internet of Things (IoT) to operate systems under challenging conditions related to specialty crops and help growers make better decisions to ensure product quality.

- Multilayered environment modeling and mapping
- Pedestrian safety classification
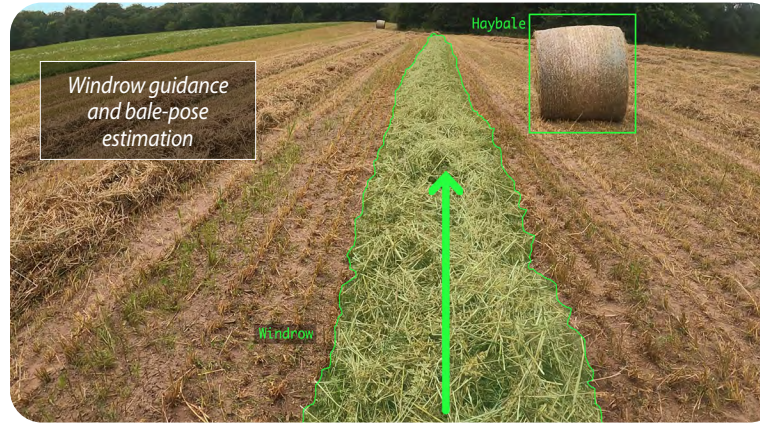- Intelligent low-cost row guidance system

Broad Acre Agriculture

SwRI leverages more than three decades of industrial robotics and automation expertise to create innovative technologies for broad acre agriculture.
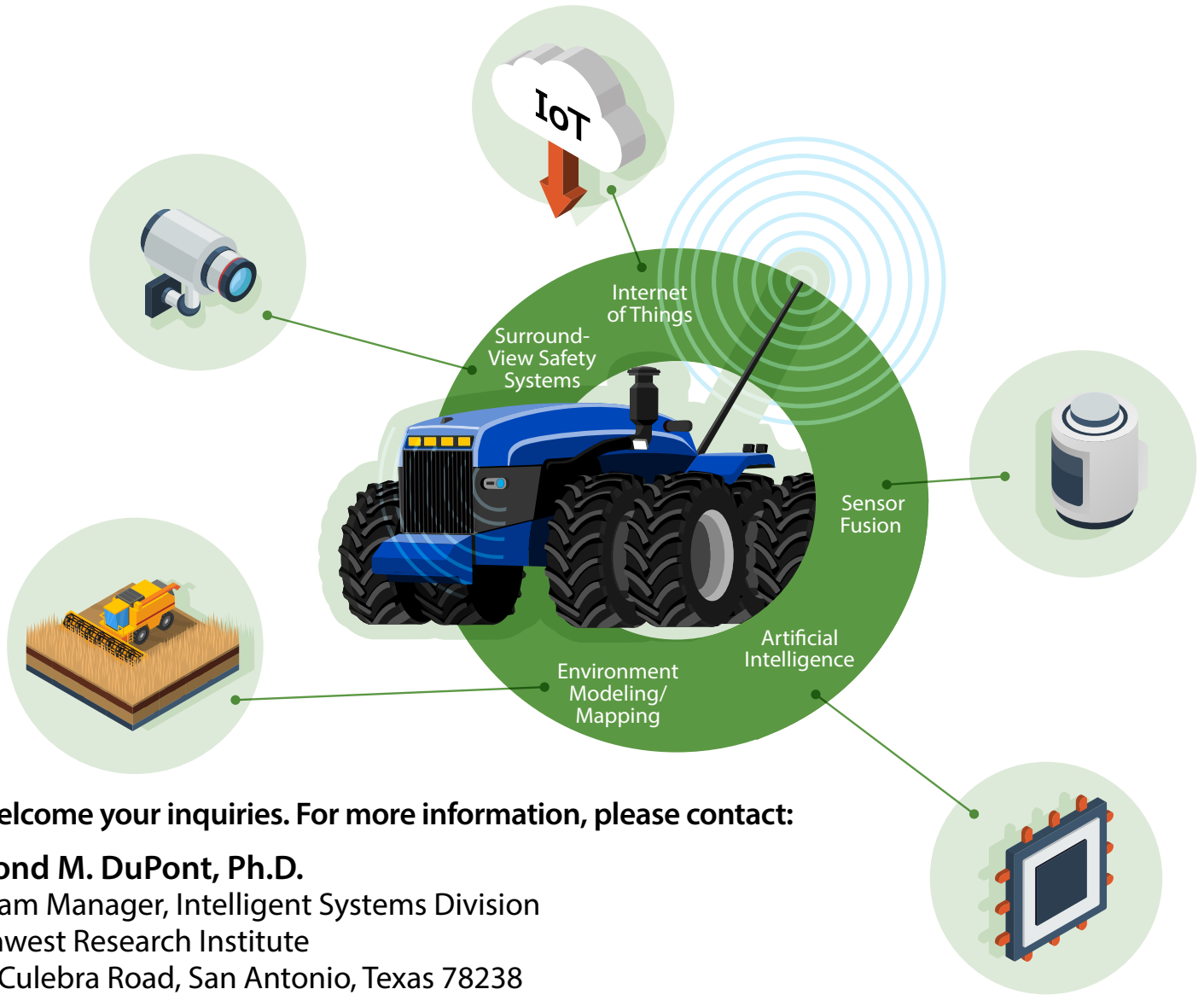
- Intelligent perception for crop/weed management
- Harvested/non-harvested classification for precision guidance
- Surround-view safety systems

Forage Agriculture

SwRI advances the state-of-the-art with integrated AI solutions to reduce the operator workload and improve production efficiency.

- Round-bale pose estimation for autonomous guidance
- Intelligent windrow tracking and guidance system

Camera/LIDAR data fused vineyard mapping

Multi-view crop/weed classification

Windrow guidance and bale-pose estimation

Internet of Things

Surround-View Safety Systems

Sensor Fusion

Artificial Intelligence

Environment Modeling/ Mapping

IoT

We welcome your inquiries. For more information, please contact:

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