

Overview

Precision Arrow Placement LLC (PAP) produce TopRanger™ branded advanced technology agricultural sensor systems and are developing cloud and AI-driven platforms to integrate data from virtually any existing sensor into a uniform hardware, firmware, and cloud environment so that data can be provided in a consistent format and manually utilized or leveraged by application of AI.

What We're Doing: Use of Funds

Following >2 years of founder/angel funding, we are now seeking equity funding for this round to speed-up commercializing 2 existing product families & develop 1 new product platform.

1) **Commercialize** existing TopRanger™ SPL (Single Point Laser) and Binster™ AI-driven cloud hardware (HW) and SaaS software (SW) product lines developed for on-farm use for measuring and predicting feed consumption and for tracking bioscience data. These products are slightly post-sales.

2) **Commercialize** existing TopRanger™ 3DL three-dimensional multi-point scanning laser HW and SaaS SW system for measuring off-farm solid materials' volumes with ultra-high precision. Commercialization of 3DL product line will be driven primarily by geographic expansion as the product has been extensively sold within the off-farm national-level grain market in South Africa for several years.

3) Speed **Development** of TopRanger™ FarmPrism™, a suite of sensor-agnostic hardware and cloud platform software to cost-effectively integrate all on-farm data sources into a uniform cloud environment allowing the future application of AI to enhance logistical and bioscience results and to dramatically reduce cost of data so that large masses of data can be made readily available.

complete including 3rd generation Binster™ 2.2 cloud that integrates AI to predict future performance. This product has completed trials and a few preliminary sales in USA, South Africa and China.

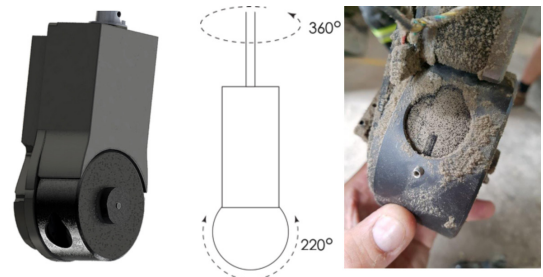
The SPL product family needs sales resources applied in USA,



China, and Europe for simple commercialization activities.

TopRanger™ 3DL Product Family

Development of TopRanger™ 3DL started in 2008 as custom, bespoke engineering projects on a per-site basis to measure grain volumes with accuracy up to 99.8% - more than 15 - 30 times lower error than competitive systems.



3DL Scanner Existing Product.

Why are we doing this? Why agriculture?

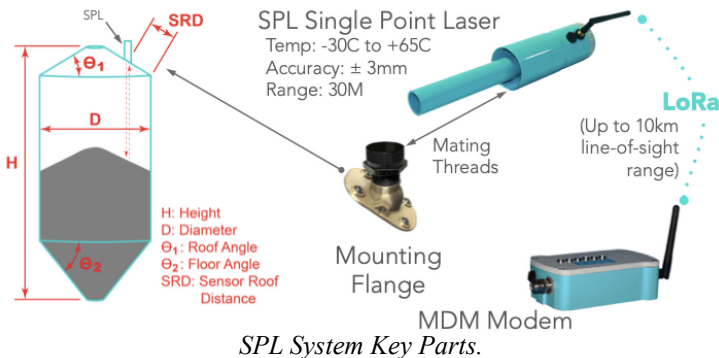
Growing global population, changing climatic factors, topsoil degradation and erosion, increasing suburbanization and the reduction in available arable land, along with normal competitive pressures are persistent & unrelenting market drivers that are global, foundational, multi-generational factors that will for the foreseeable decades force significant innovation in the agricultural industry.

People need to eat. Logistical efficiency and bioscience productivity improvements are required.

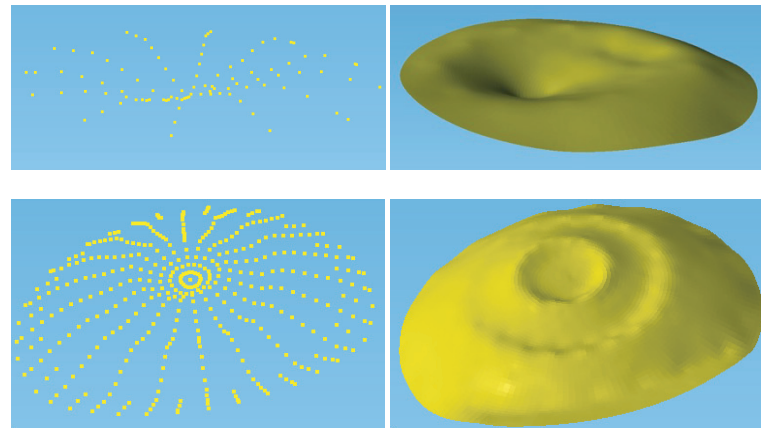
Existing Product Families

TopRanger™ SPL Product Family

Development of TopRanger™ SPL started in 2017 and is now



The product has since been developed into a fully engineered off-the-shelf solution and sold extensively in South Africa.



Grain Volumes Measured by 3DL Laser Scanner.

The 3DL product family needs sales resources applied in USA, China, and Europe for simple commercialization by geographic expansion. The design is inherently safe, but some certifications for explosion resistance may be required in USA and Europe.

Seasoned Management

Experience

- 6 Members
- 170 Years Combined
- 87 Countries
- >\$3B Revenue Generated
- 25 Militaries Served

Foundational Skills

- Laser/Optics, Software/Firmware, Analog/Digital Design, Mechanical Design, In-house CNC, RF Design, Acoustics & Ultrasonics, Radar, Cloud, AI, Material Science, Automotive Safety

Education

- Controls
- Chemistry
- Agronomy
- Mathematics
- Electrical Engineering

Company:
Precision Arrow Placement LLC
<http://topranger.us>
<http://topranger.us/home-cn/>

USA Contact: Tracy Crawford
Email: crawfordt900@yahoo.com
Telephone: +1 (229) 356-8599
WeChat: [crawfordt900](https://www.wechat.com/p/crawfordt900)

联系人: 运营总监 Kristina Kang 康莉
邮箱: kristinaspinksky@hotmail.com
手机: +86 138 1690 7016
微信: KristinaKang

New Product Family

TopRanger™ FarmPrism™ Product Family

TopRanger™ FarmPrism™ is a new hardware and cloud platform that connects and receives data from virtually any type of sensor into a single uniform hardware and cloud environment drastically reducing the costs to install multiple sensor systems and to greatly ease the integration of data from the new sensor into a uniform cloud environment.

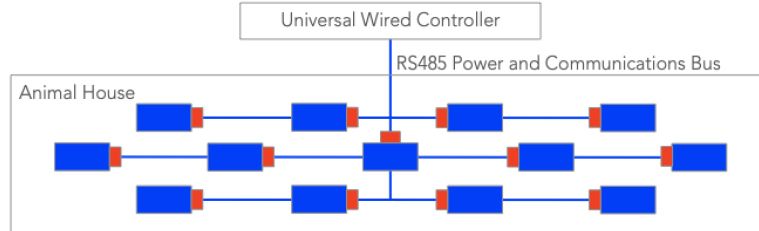
TopRanger™ FarmPrism™ is planned for functionality with existing wired sensors and to make some existing wired sensors functional as wireless.

FarmPrism™: Product or Platform?

FarmPrism™ does both because both are required.

Products to measure daily feed consumption do not exist in cost-effective installed deployments, so we have developed them. Other required next-generation sensors also do not exist, so we are developing them.

Many other sensor types exist but are not deployable in a cost-effective manner and in a manner compatible with a uniform, cloud-accessible data environment. We are developing Farm-

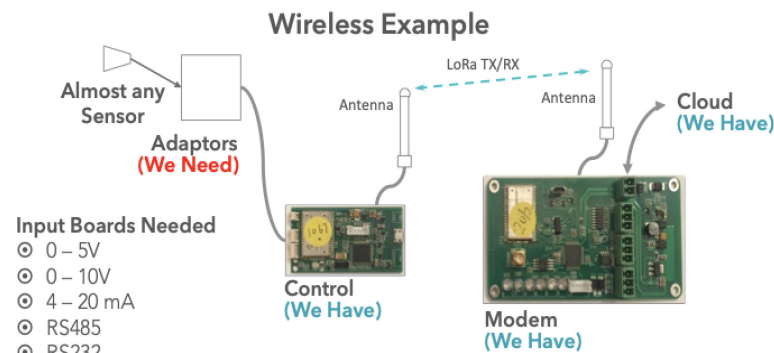


■ Power Supply and Signal Adaptor. Supports all common power requirements and converts all common signal types to RS485

■ Existing Wired Sensor

System Architecture for FarmPrism™ Using Off-the-Shelf Sensors.

Prism™ wired and wireless hardware adaptors and uniform data formats for compatibility with the FarmPrism™ cloud format.



Converts Almost any Wired Sensor to Wireless.

This product strategy fills in gaps where gaps exist while creating a modular suite of hardware and software products to act as a platform to leverage existing third party products so that third-party products can often be made wireless and compatible within a single data environment thereby enabling cost-effective deployment.

Customer Benefits

Reduced Costs

Reduced material waste
Less labor
Fewer deliveries
Lower fuel/energy consumption
Lower logistics costs

Increased Revenue

Increased yields
Less disease
Lower mortality
Higher growth rates

Business Status

- Total Available Market for SPL and 3DL is ~USD1,200,000,000
- Total Available Market for FarmPrism™ is ~USD3,000,000,000

- We're marketing in the US, Canada, South Africa and China
- Seeking distribution in North America
- General Manager in China & 5 Chinese resellers
- Two significant trials completed in USA
- Multiple trials completed in China and multiple additional Chinese trials planned
- Production operations established in South Africa
- Contract operations partner and facility agreed in China
- Fulfilled about 20 purchase orders
- >50% Gross Margin

Technology Status

Key Technologies include:

- 100-meter range ultra-precise (<0.1% error) single point laser
- Precision scanning laser
- High capacity (>3 year), low temperature (<-30C) industrial battery power
- >10km range robust spread spectrum wireless communications

Product Status

Two major product families exist, SPL and 3DL, with sales accounting for 5 hardware product part numbers and 5 software (including SaaS) product part numbers.

Company Background

Precision Arrow Placement LLC (PAP) was formed in early 2017 by the principals of Crux Research SA from South Africa and their long-time United States associates who bring extensive management and international business development skills including experience in two Fortune 500 companies and especially, deep experience in agriculture and deep experience in China.

PAP Locations:

- USA: Management
- South Africa: Hardware and Software R&D, Operations
- China, Shanghai and Changzhou: Cloud and AI, Business Development, Technical-support, Contract Operations

Crux Research's legacy products were primarily military weapons laser-based ranging and aiming systems.



Sold to the Militaries of Over 25 Countries.

PAP was formed to help bring advanced technology to the technologically-under-served agricultural market and to help feed growing populations under increasingly adverse environmental conditions.

**TopRanger™ products reduce costs
AND
increase revenues!**

Please contact us for more information.

Company:

Precision Arrow Placement LLC
<http://topranger.us>
<http://topranger.us/home-cn/>

USA Contact: Tracy Crawford
Email: crawfordt900@yahoo.com
Telephone: +1 (229) 356-8599
WeChat: [crawfordt900](https://www.wechat.com/p/crawfordt900)

联系人: 运营总监 Kristina Kang 康莉
邮箱: kristinaspinsky@hotmail.com
手机: +86 138 1690 7016
微信: KristinaKang