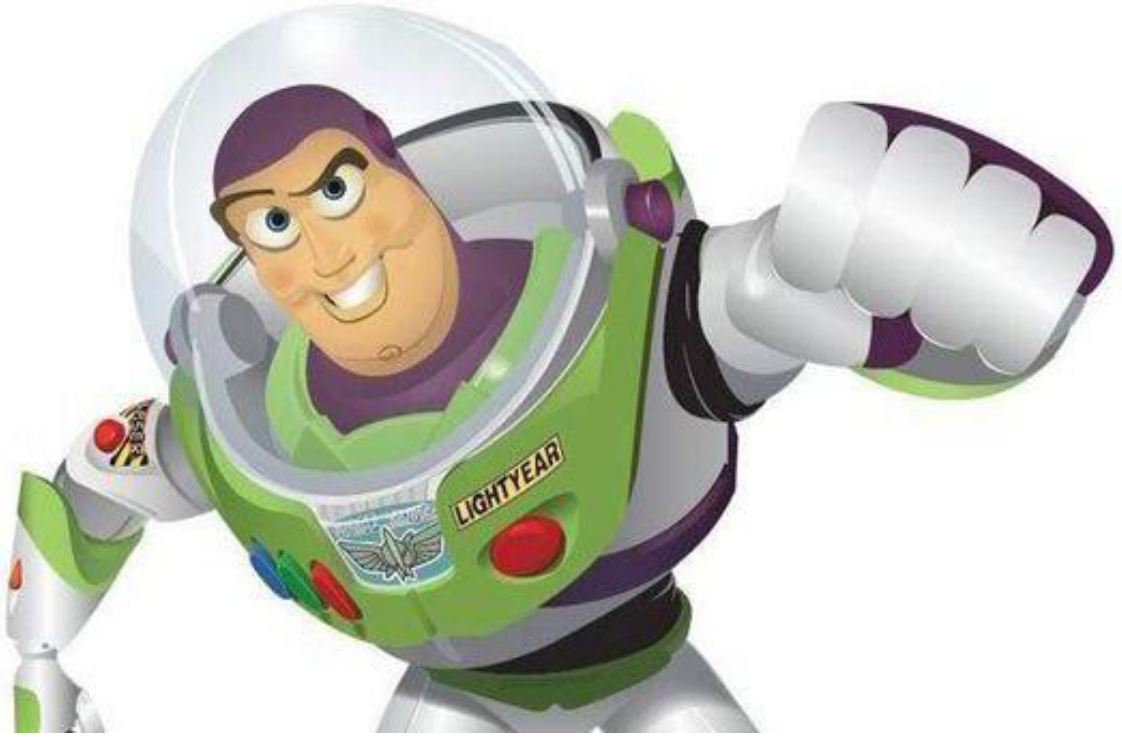
Advanced Water Solutions
Beyond the Bathroom



Paul Bassett
Water Savers, LLC
An Envocore Company

Advanced Water Solutions

Low Impact Development Water Harvesting
- Rainwater
- Air Handler Condensation
- Ground Water Sumps

Storm Water Management
- Bioretention/RainGardens
- Green Roofs
- Turfgrass Removal/Xeric Conversion

Irrigation Systems
- Design/Audit
- Retrofit
- New Installation
- Management

Smart Utility Metering
- Automatic Metering Infrastructure
- Sewer Deduct/Credit Meters
- Insertion Meters

Water Leak Detection
- Shadow Meters
- Underground Leak Detection

Water Resiliency
- Ground Water Wells
- Cooling Tower Make-up
- Domestic Water Supply

Jails/Prisons Detention Facilities
- Intelligent Controls
- Showers
- Combination Units
- Toilets/Faucets
- Stainless Steel

HVAC and Process Equipment
- Condenser Water Treatment
- Pumps, Compressors, Condensing Units
- Cooling Towers
- Boilers

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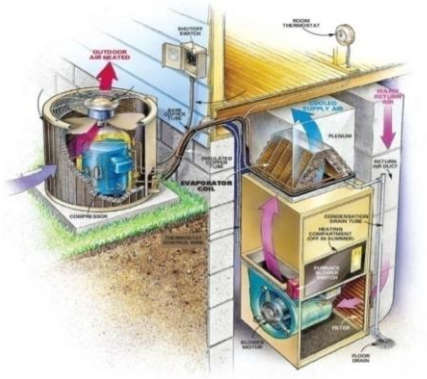
Water Reclamation Solutions

Rainwater Harvesting

A rainwater harvesting system collects water from a roof and diverts it to a storage tank where it is then used either inside or outside a building or home. Designs range from a simple rain barrel at the bottom of a downspout for watering a garden to extensive cistern systems that can provide a substantial amount of the water for cooling tower make-up, irrigation systems, water features, and vehicle washing.

Air Conditioning Condensation Harvesting



Cooling systems rely on evaporator coils through which refrigerant fluid changes from liquid to vapor, cooling the coils in the process. Air blowing past the coils cools off as it goes by, and moisture from the air condenses on the coils. Condensate drains carry away the water, usually into the sewer. Instead of wasting it, more and more buildings, especially in parts of the country with hot, humid summers, are capturing that condensate for reuse.

Ground Water Collection

Many buildings have underground sump with pumps that collect ground water to ensure the building and sub-structures stay dry. This water can be re-used inside or outside the building for cooling tower make-up, toilet flushing, irrigation, and other non potable uses.

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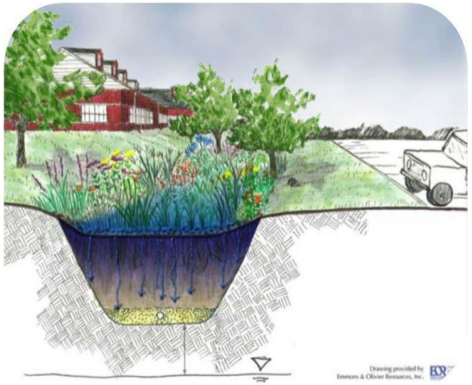
Low Impact Development

Bioretention/Rain Gardens



Bioretention areas function as soil and plant-based filtration devices that remove pollutants through a variety of physical, biological, and chemical treatment processes. The reduction of pollutant loads to receiving waters is necessary for achieving regulatory water quality goals.
One of the primary objectives of LID site design is to minimize, detain, and retain post development runoff uniformly throughout a site so as to mimic the site's predevelopment hydrologic functions

Green Roofs

A green roof is a roof of a building that is partially or completely covered with vegetation and soil, or a growing medium, planted over a waterproofing membrane. Benefits of a green roof include: reducing heating and cooling loads on a building, increases the roof life span, reduce storm water runoff, and filter pollutants. A concentration of green roofs in an urban area can reduce the city's average temperature during the summer months.

Turf Grass Removal/ Xeric Conversion

Landscape irrigation accounts for over half of water use in non-urban parts of the US. Replacing lawn areas with drought-tolerant native plants can cut landscape water use by over 80%, resulting in potential savings of around 750 gallons per week during the peak of summer for every 1000 square feet. A garden of native plants can provide color, texture, and seasonal interest while at the same time offering the single greatest opportunity for to reduce outdoor water usage.

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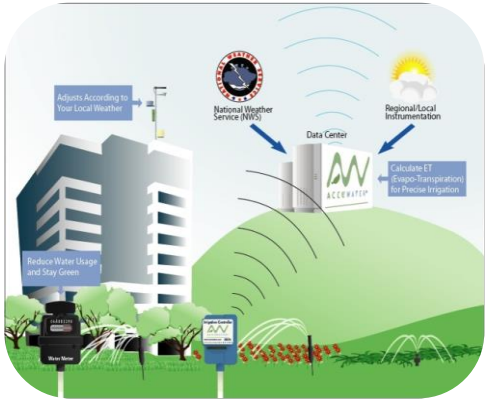
Irrigation Services

Efficient Designs

Our design team has certifications from the Irrigation Association as Certified Irrigation Designer (CID) and is recognized by the EPA as a Water Sense Partner. When an irrigation design is required for a site a thorough evaluation is done to include, water pressure readings, soil analysis, plant water requirements, micro-climate, flow rates, water meter inclusions. We design to the meet or exceed the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) water efficiency credit by integrating, rainwater, smart controls.

Smart Control Systems



"Smart" irrigation controllers work by monitoring and using information about site conditions (such as soil moisture, rain, wind, slope, soil, plant type, and more), and applying the right amount of water to the landscape based on those factors. Once the "smart" controller is installed and set up, the "smart" controller automatically takes care of seasonal weather/site specific adjustments, and allows for remote access for daily updates of the onsite conditions via the internet.

Proper Management

Management of the irrigation system is the one of the most vital aspects of water conservation for an irrigation system. Our team is trained to audit existing irrigation system to determine operating efficiency and recommending upgrades to make improvements. We evaluate soil type, precipitation rates, head and drip spacing, pressures, pump curves, flow rates, and existing schedules. Our program of upgrades includes retrofitting control systems to a central control, improving distribution systems, and managing the systems onsite and remotely via web-based controls.

Cloud-Based Central Control Irrigation Management

Cellular Network

Cellular Network

Smart Water Manager:
Manage schedule and monitors water use. Remote site visibility and control

NOAA Climate Center:
Calculates weather data specific for each site

AWS-Hosted Management Software:
No Dedicated PC or Proprietary Software

Smart Scheduling Engine Software:
Maximizes water use and reduces water waste

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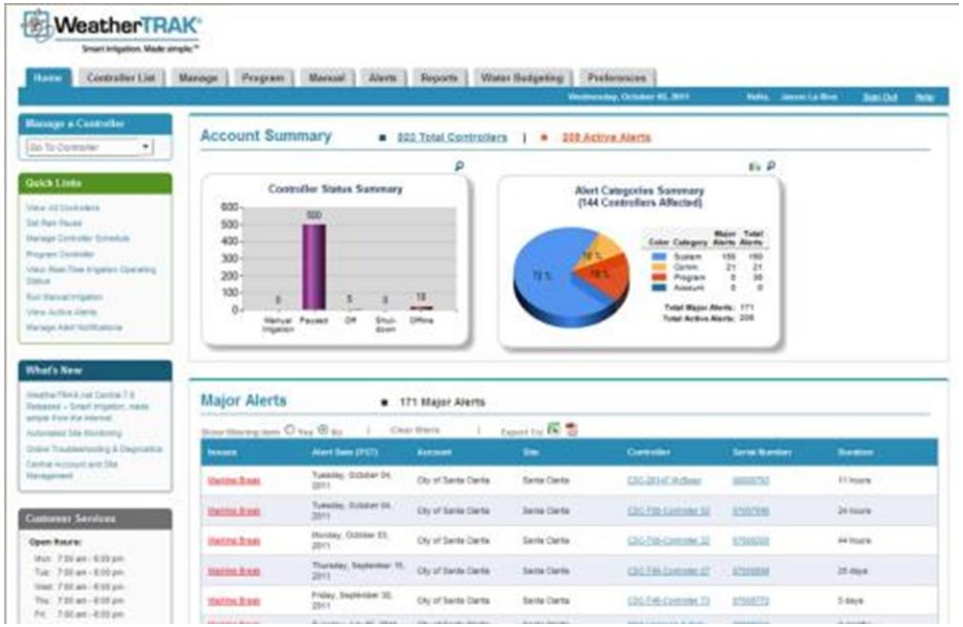
Cloud-Based Central Control Irrigation Management



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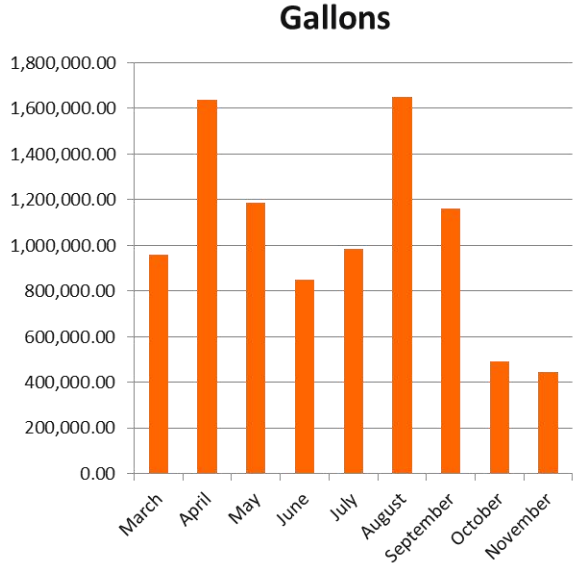
The Business Case for Flow Sensors



~ 10 million gallons saved in 2017 between March and November by shutting down valves with breaks within 1-2 minutes

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Irrigation Services (Ft. Bliss-El Paso, TX)

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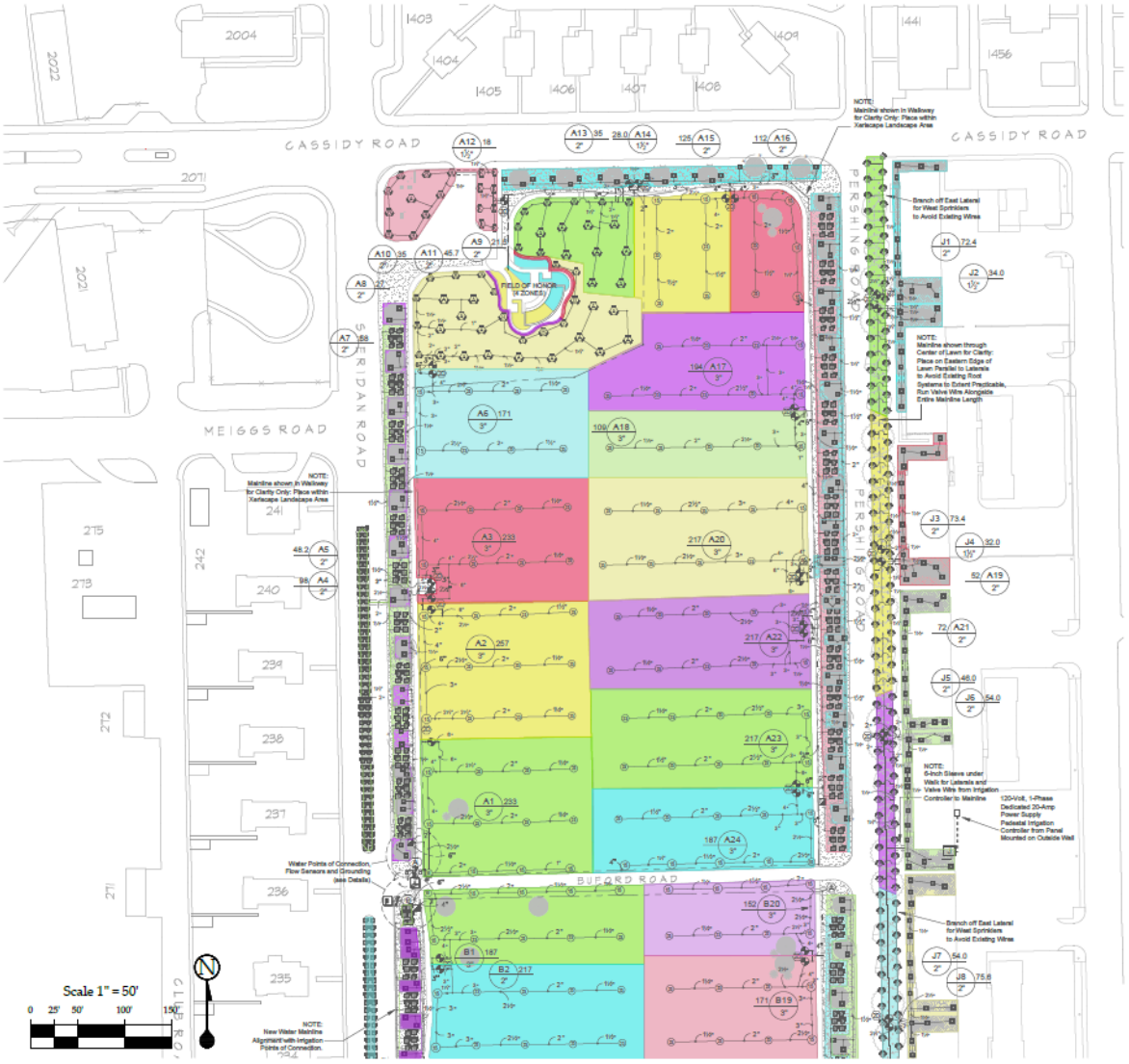


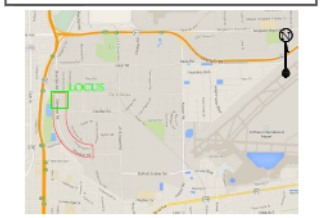
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	PSI
	Hunter PROS-06-PRS30-CV-R 5' strip spray	40
	Hunter PROS-06-PRS30-CV-R 8' radius	40
	Hunter PROS-06-PRS30-CV-R 10' radius	40
	Hunter PROS-06-PRS30-CV-R 12' radius	40
	Hunter PROS-06-PRS30-CV-R 15' radius	40
	Hunter PROS-06-PRS30-CV-R ADJ	40
	Hunter PROS-12-PRS30-CV-R 8' radius	40
	Hunter PROS-12-PRS30-CV-R 10' radius	40
	Hunter PROS-12-PRS30-CV-R 12' radius	40
	Hunter PROS-12-PRS30-CV-R 15' radius	40
	Hunter MP1000 PROS-06-CV-R	40
	Hunter MP2000 PROS-06-CV-R	40
	Hunter MP3000 PROS-06-CV-R	40
	Hunter MP Strip PROS-06-CV-R	40
	Hunter MP1000 PROS-12-PRS40-CV	40
	Hunter MP2000 PROS-12-PRS40-CV	40
	Hunter PCB-R	30

SYMBOL	MANUFACTURER/MODEL	PSI	GPM	RADIUS
	Hunter I-20-06-SS-R	55	1.80	25'
	Hunter I-20-06-SS-R	55	2.60	28'
	Hunter I-20-06-SS-R	55	3.40	31'
	Hunter I-20-06-SS-R	55	5.70	33'
	Hunter I-20-06-SS-R	55	6.70	35'
	Hunter I-25-06-SS-R	70	5.60	40'
	Hunter I-25-06-SS-R	70	7.90	49'
	Hunter I-25-06-SS-R	70	12.1	53'
	Hunter I-25-06-SS-R	70	13.3	55'
	Hunter I-40-06-SS-R	70	12.2	51'
	Hunter I-40-06-SS-R	70	16.6	57'
	Hunter I-40-06-SS-R	70	23.0	64'

SYMBOL	MANUFACTURER/MODEL
	Hunter ICV-G-FS-R
	Hunter HQ-SLRC
	Calsense CS3000 Decoder Controller (A - J)
	Calsense Two-Station Two-Wire Decoder
	Nelsflo Reed Switch Register (Controller A - J) Conventional Wire to Controller POC Terminal
	Municipal Water Connection (1 per Controller A - J)
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Class 200 SDR 21

Valve Callout: Controller and Valve Number; Valve Flow; Valve Size



Regional Locus Map
Scale 1 inch = 4,000 feet

PRIME CONTRACTOR: Johnson Controls

SUBCONTRACTOR: Water Savers; The Water Sense Group

PROJECT TITLE: Fort Bliss Landscape and Irrigation Renovation Project (D.O.7) - Parade Ground, El Paso, Texas

DESIGNER'S SEAL

SHEET DESCRIPTION: Parade Ground Irrigation System

DESIGN: M. SOO
REVIEW: P. BARRETT
DATE: 10/26/13
SCALE: 1" = 50'

PROJECT NUMBER: 24-2013

AB 1.1

2 OF 16

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Irrigation Services (Ft. Bliss-El Paso, TX)

April 2014

April 2017

Nov. 2017

May 2018

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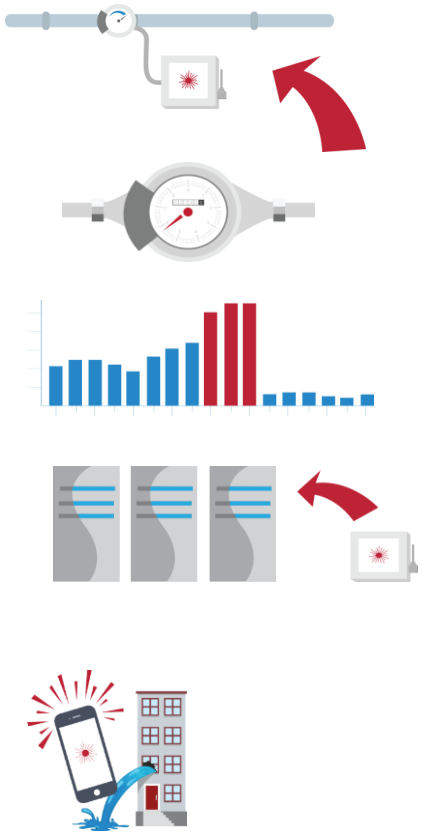
Measurement and Verification

New Water Measurement Technology

1) Install the Shadow Meter technology at the source of measurement: The Water Meter.
2) Water Compass manually calibrates the device to ensure accuracy.
3) Data from the water meter is collected continuously in real-time.
4) Collected meter data is uploaded to a secure data center. All meter data is available 24/7 and is accessible through any internet connected device.
5) If a leak occurs, the Water Compass system will alert you via email and SMS text message indicating which water line ruptured as well as how much water was lost.



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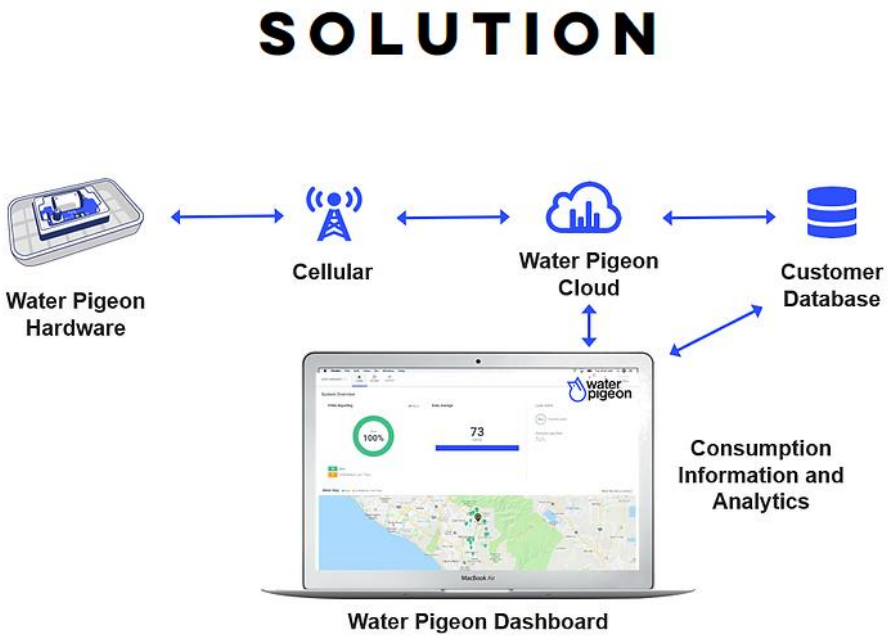
Measurement and Verification

New Water Measurement Technology



We use today's technology to capture photos of a water meters face and run our optical meter reading software to create a numerical reading for the water usage. These numerical readings are then sent to the cloud software using the cellular network to insure a secure and reliable data transfer. Once received, our dashboard gives the manager control and visibility of field units by offering them read scheduling and live analytics.

Thank You

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