Introduction to Trimble Enterprise Survey Solutions

Agenda

- Trimble Land Administration Overview
- Field Data Collection Challenges
- Trimble Enterprise Survey Solutions Description
- Technology
- Benefits

Trimble Land Administration

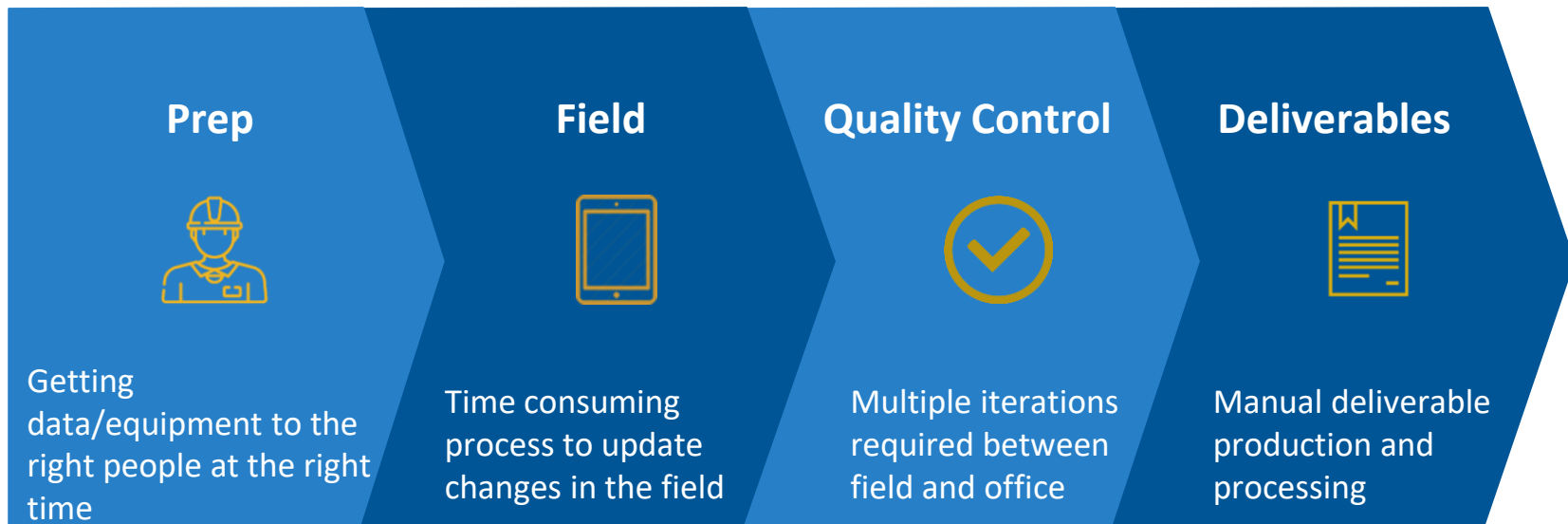Geodetic Control • Data Collection • Data Processing • Land Asset & Registration Management • Professional Services

The current survey data collection workflow, from prep through deliverable production, is fraught with <u>inefficiencies</u>.
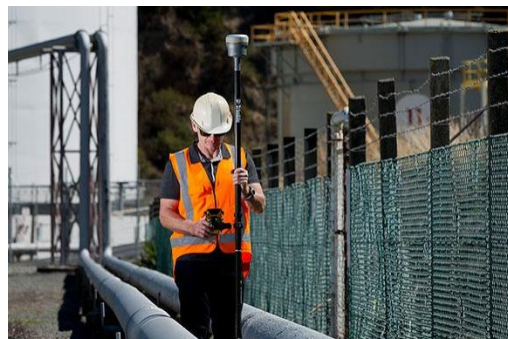
Prep

Getting data/equipment to the right people at the right time

Field

Time consuming process to update changes in the field

Quality Control

Multiple iterations required between field and office

Deliverables

Manual deliverable production and processing

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These same challenges apply to the natural resources sector.

Prep	Field	Quality Control	Deliverables

Getting data/equipment to the right people at the right time

Time consuming process to update changes in the field

Multiple iterations required between field and office

Manual deliverable production and processing

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Trimble Enterprise Survey Solutions deliver three capabilities to increase productivity in the survey workflow.

Map Based Data Collection

Penmap Data Collection Software

Data Validation and Verification

Automated Validation Wizard customized to project data model

Streamlined Deliverables

Custom data import and export with backend systems

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At the heart of Trimble Enterprise Survey Solutions is Penmap, a hybrid Survey and GIS data collection software.

Flexible

Simple

Accurate

For Ordnance Survey Northern Ireland we delivered a solution for 35+ survey crews in 12 months delivering a 30% reduction in return trips.

Company

Headquarters:
Belfast, Northern Ireland

Land and Property Services Division

Collect, manage and edit data for property taxation

Scope

17,335
Map Tiles Managed

22
New workflows introduced

2.5 GBP Project Budget
over 5 years

People

100+ Employees

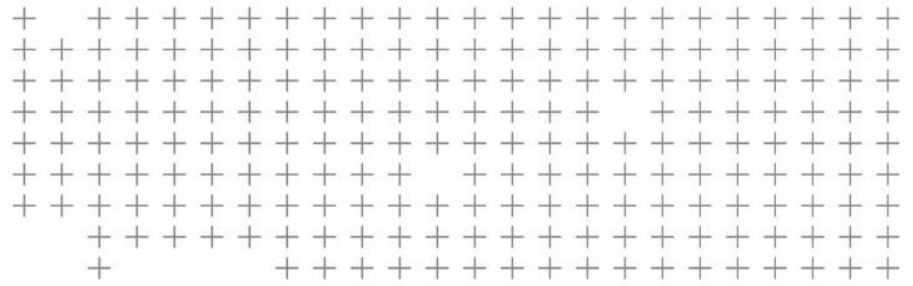**35+** Survey Crews

3 Offices

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Trimble Catalyst combines hardware and subscription services to deliver a flexible solution for data collection.

- Hardware
  - Trimble Catalyst Antenna
  - Android Smartphone Device
- Monthly Subscriptions
  - Trimble Catalyst accuracy level
    - meter, sub-meter, decimeter, or centimeter
  - Catalyst enabled software
    - Penmap, Terraflex, ESRI Collector, SDK
- Benefits: low cost, flexible, scalable

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Trimble Enterprise Survey Solutions help organizations achieve their survey productivity goals.

- Trimble Land Administration's focus on <u>field data collection</u> workflows enables us to deliver solutions that better fit your organization.

- Trimble Geospatial's leadership in hardware and software enable us to deliver <u>integrated</u> positioning solutions.

- Trimble Inc.'s 40 years of experience enable us to deliver <u>innovative</u> solutions which transform industries.

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Appendix

Penmap is designed to streamline the data collection process by increasing productivity for each job, in both the field and office.

- Reducing return trips
    - Real time verification in the field
    - Incorporating reference data for context
- Less time spent in the field
    - Streamlining data capture by standardizing
    - Rugged, reliable equipment you can trust
- Less time spent in the office validating field work
    - Improved data transfer
    - Validation wizard to confirm geometries, accuracies and attributes

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Trimble Enterprise Survey Solutions deliver increased productivity for each survey job, in the field and office.

Delivered Capability

- Reference data available
- Real time verification in the field
- Improved data transfer

- GIS query and stakeout
- Validation and automated QA

- Consistent data format for import and export
- Increased automation of deliverables

- Developed configurations for 3rd party hardware
- Combined Survey and GIS workflows into one solution

Increased productivity on each job

Fewer return trips (30% reduction)

Less time spent in the field on each trip

Less time spent in the office validating field work

17%
productivity savings

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Trimble Catalyst - Accuracy

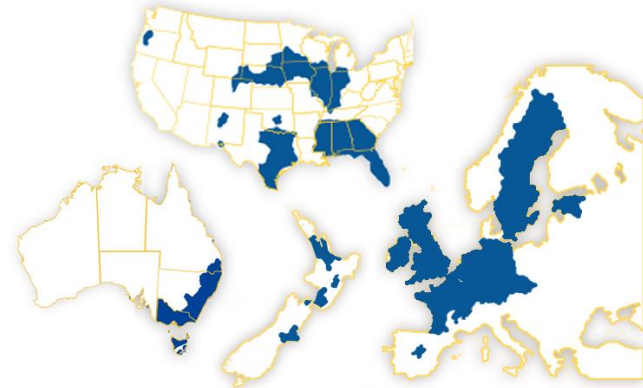| 1 Meter	Sub-meter	Decimeter	Precision

Catalyst Sub-meter: IP-delivered corrections coverage area (50 cm)

Catalyst Sub-meter: Satellite-delivered corrections coverage area (50 cm)

Catalyst Sub-meter: Trimble VRS Now and RTX Regional iono-model coverage areas (30cm)

Catalyst Decimeter: IP-delivered corrections coverage area (10 cm)

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