# Technology Integration & Advancement

Transforming the way the world works!

# Technology Challenges

- 1. Which Technology- Too many choices?
- 2. How to achieve Consistency? Accurate Survey Data
- 3. How to Share information quickly with back office?
- 4. How to integrate data captured from various sources?
- 5. How to integrate with GIS software and update the records?



# Cadastral Applications

- Precise Survey & Mapping Applications
  - Control Points
  - Measure new or changed boundaries
  - Location of Land parcels
  - Establishing Land ownership
- Utilizing existing maps and updating the spatial and non spatial data in the field
- Land Use Pattern Information
- Feature Extraction





# **Technology Selection**







MOBILE

MAPPING



### **Trimble Survey and Data collection Solutions**

Combine all sensors for measurements and computations



#### **Integrated Surveying**

- One file one Job
- Higher quality and efficiency of data collection
- Higher accuracy Common scale factor
- Higher productivity
- Collected data and deliverables in Global Platform



2.4 GHz Radio





# Achieving Consistency



# CORS - Backbone to Achieve the Project Goals





#### The Benefits of a Common Reference Frame Individual Parcels Land Use urban/rura. Boundary/Zoning **Administrative** Boundary/Zoning Land Use (urban/rural) Construction/Utilities GeologyiSeismology **Individual Parcels** Monitoring/Deformation Geology/Seismology **Monitoring/Deformation** Natural Resources **Construction/Utilities** Administrative Natural Resources **SDI Development with a Common Sporadic SDI Development Reference Frame**





# Trimble Catalyst DA2 GNSS receiver

Brand new engine at the heart of the Catalyst positioning service

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# **Key DA2 Features**







## ProPoint Technology

Receiver performance in challenging\* GNSS environments, including operating under tree canopy or near buildings & other urban structures.

Advanced tracking and GNSS signal management delivers increased yield.

Advanced signal filtering and error modelling provide better protection against jamming and multipath errors.





# **Sharing Information**



## **TBC - Positioned as a Data Hub**



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#### **Folders and Files**

- Browse files and folders published to a Trimble Connect project
- Using Connect Sync you can sync data from your network to the cloud and the controller - retain your organizations folder structure
- Download selected
   Folders + Files to a
   Trimble Access Project



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#### Invite people to Project

To invite people to the project, and manage who is in the project team, select in the Projects screen and then tap Sync settings and select the tab

# Assign job to team member

- In the job details pane,
   tap +
- Select the team member(s) to assign to the job



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## Sync by tapping the cloud icons





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#### **File Conflicts**

File conflict popup now appears automatically asking how to manage the conflict

- Overwrite replacing local file
- Keep local file don't replace local file with cloud file. Replace cloud file with local file.





# **Data Integration**



# **Confidence**

### Ensuring data is right every time

- Stand confidently behind your deliverables
- Get consistent results you can trust
- Reduce the need to go back to the field



# Stamp Worthy Data

TBC IS THE BEST WAY TO MANAGE, PROCESS, CLEAN AND PREPARE YOUR SURVEY DATA FOR CIVIL 3D.



# **Rich Deliverables**

### Expand opportunities with unique deliverables

- Spreadsheets
- QA Reports
- Measurements
- Fixed / Custom Exports
- Adjustments
- Drafting + Designs
- Printed Plans / PDFs
- Digital imagery







### Transfer data among enterprise software



BENTLEY

C3D



## **Feature Coding Workflow**



1. Convert Existing Feature Library or System of Record



#### 2. Refine Control + Feature Codes



#### 5. Process Feature Codes



#### 3. Collect + Code Data



6. Generate Plan Set



4. Import Data



# **CAD + Drafting Workflow**







1. Prepare, Extract, + Draft Geometry

#### 2. Add Dimensions, Labels, + Tables

#### 3. Insert Drafting Template



4. Customize Plan Set



5. Create Digital Deliverables







# Integration with existing systems



### **The Solution**

### A seamless integration with a GIS data source



## **GIS Module – The new way**

- **1.** Connect to GIS Data Source
- **2.** Extract Schema and Create FXL
- **3.** Collect & Process Field Data
- **4.** *Integrate* data directly into a geodatabase

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## 1. Connect to GIS Data Source

### GIS Connection Manager

- Name the connection profile
- Specify the type of GIS data source
- Browse to the source

### - Manage connections

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	GIS Coordinate System Mapping	×	Add				
Note inste	e: we were not able to find an exact matching Trimble coordinate system for the GIS connection, ad we constructed a coordinate system from available parameters.	ОК	~				
The Sele	The selected GIS data source coordinate system does not match the project coordinate system. Cance Select the appropriate action.						
۲	Change the project coordinate system to match the GIS coordinate system. Do not transform grid coordinates when writing features to GIS.	Details					
0	Keep the project and GIS coordinate systems. Transform grid coordinates when writing features to GIS.						
0	Consider the project and GIS coordinate systems to be the same. Do not transform coordinates when writing features to GIS.						
			Remove				

GIS Connection Manager

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### 2. Extract Schema and Create FXL

### Get GIS Schema

- Choose the connection profile
- Select feature classes

#### - Generate and edit FXL in FDM

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## **3. Collect and Process Field Data**

### Process Feature Codes

QA/QC



## **4. Write Features to GIS**

- Select Connection Profile
- Select features to be written
- Write features to the geodatabase directly



## **File Geodatabase Import/Export**

- Schema doesn't exist yet
- Client requirement
- No connection possible
- Archiving

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# Questions

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