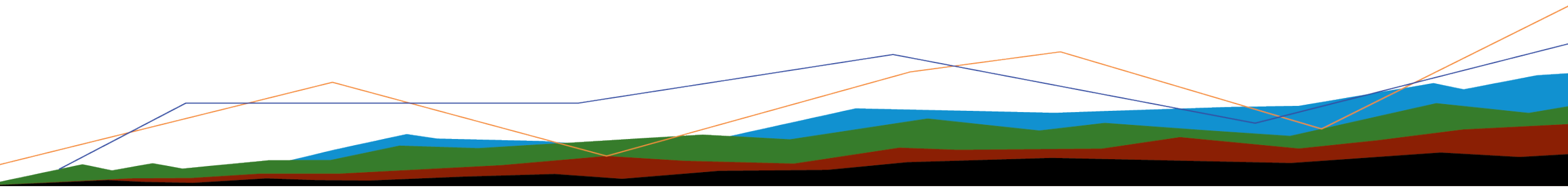
# Scaling Up/Scaling Down: EQuIS for All



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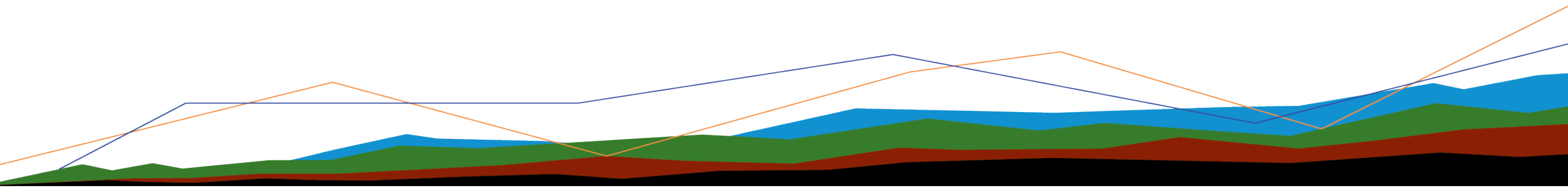
# Lowering the Barrier to Entry

"We need a large project to justify the set-up cost for EQuIS"

Vs.

"EQuIS is already set up, go ahead and enter your data"



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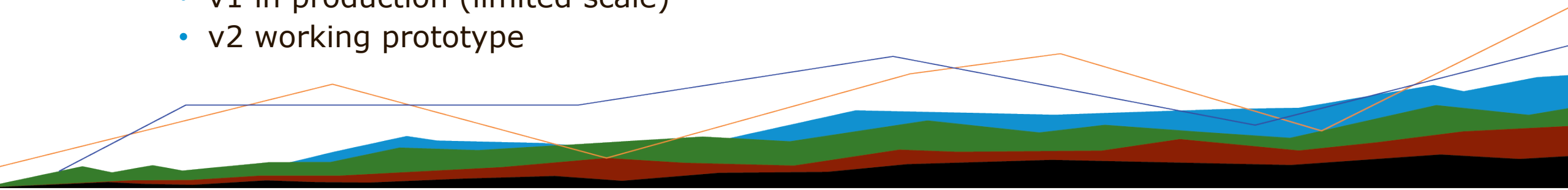
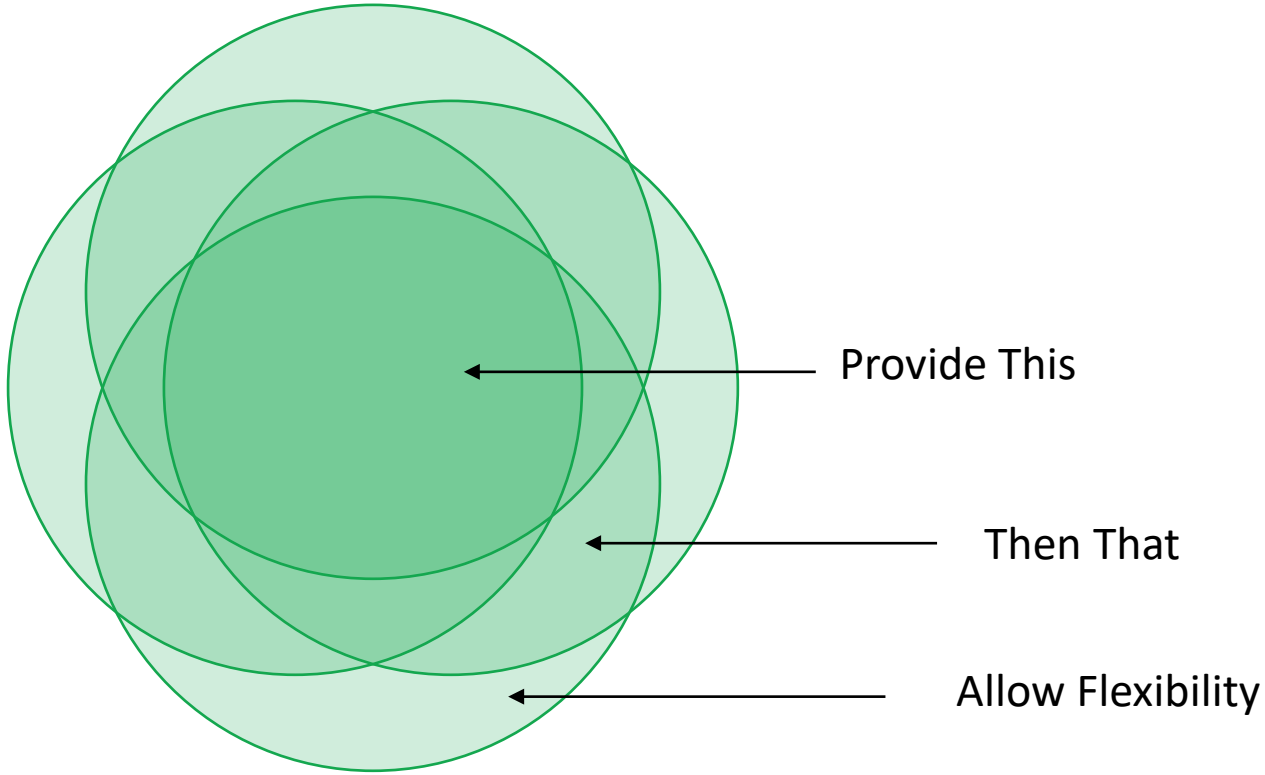
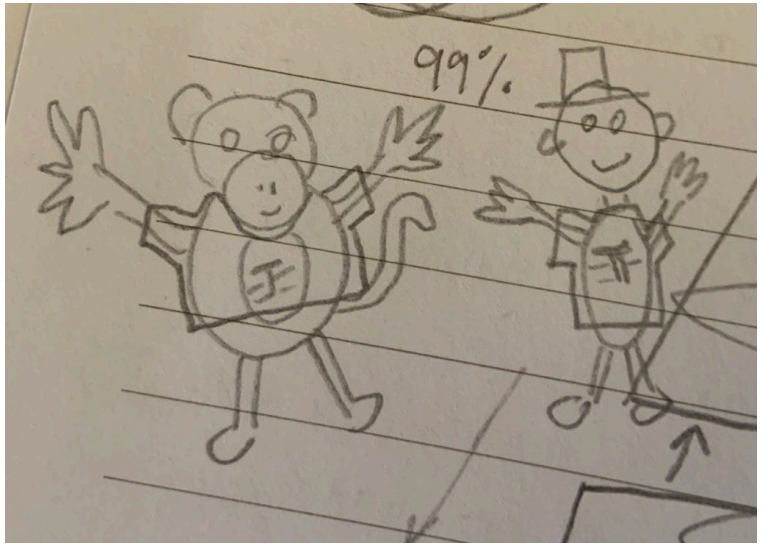
# Initiatives

- Geotechnical gINT Replacement
  - Field and lab data entry web interface, standard boring log, fence diagram, and lab test reporting
  - ~12,000 small projects per year, ~1,200 users
  - EQuIS Geotech with Earthsoft
  - In pilot testing
- Environmental Project Workflow
  - Web interface for loading analytical and field data, screening tables, field data reporting, boring log, and cross section
  - ~4000 small projects per year, ~400 users
  - Adapted existing tools & Geotech
  - v1 in production (limited scale)
  - v2 working prototype

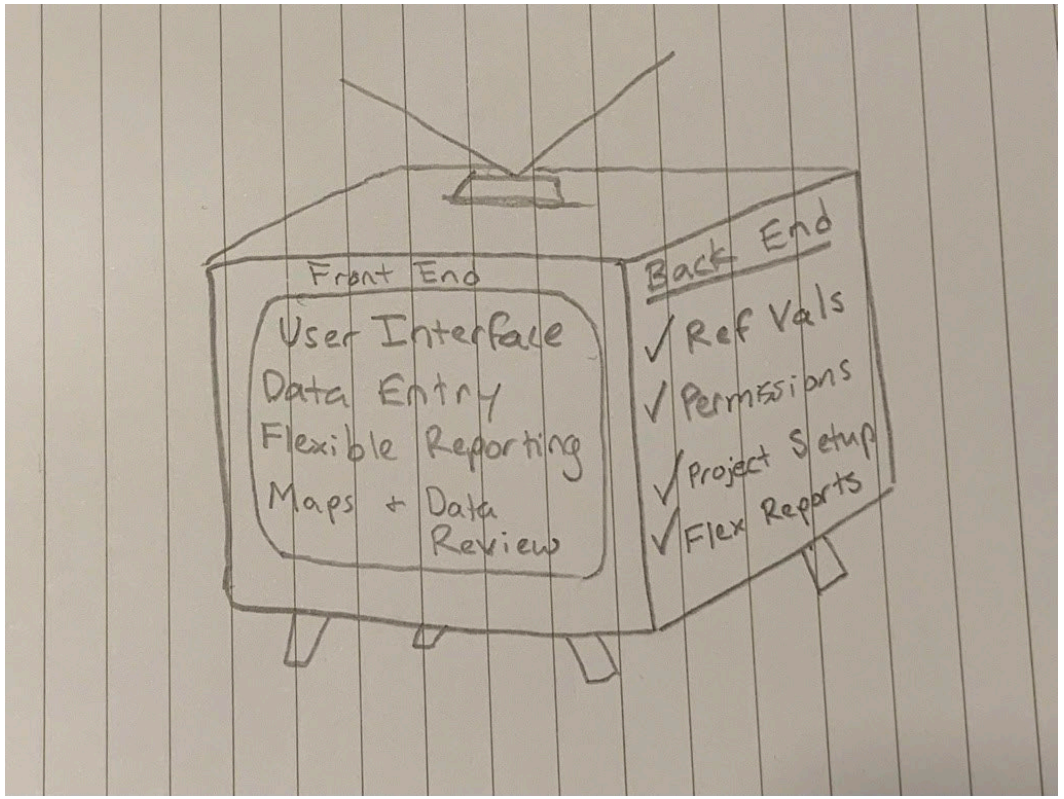


# Finding the Commonalities



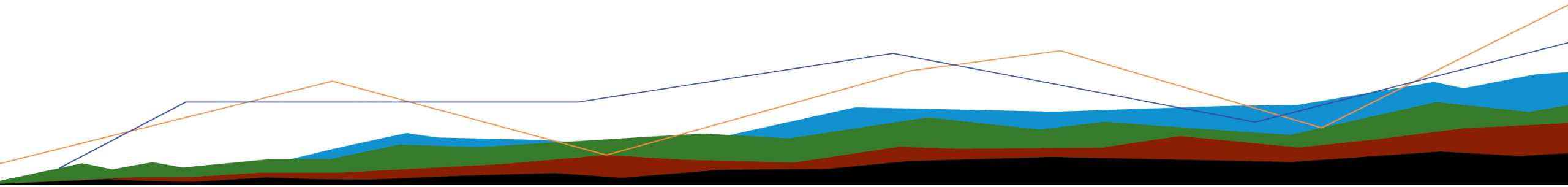



# How do we take something that is designed for large scale projects and roll it our for small projects?



# Challenges…

## And Successes!



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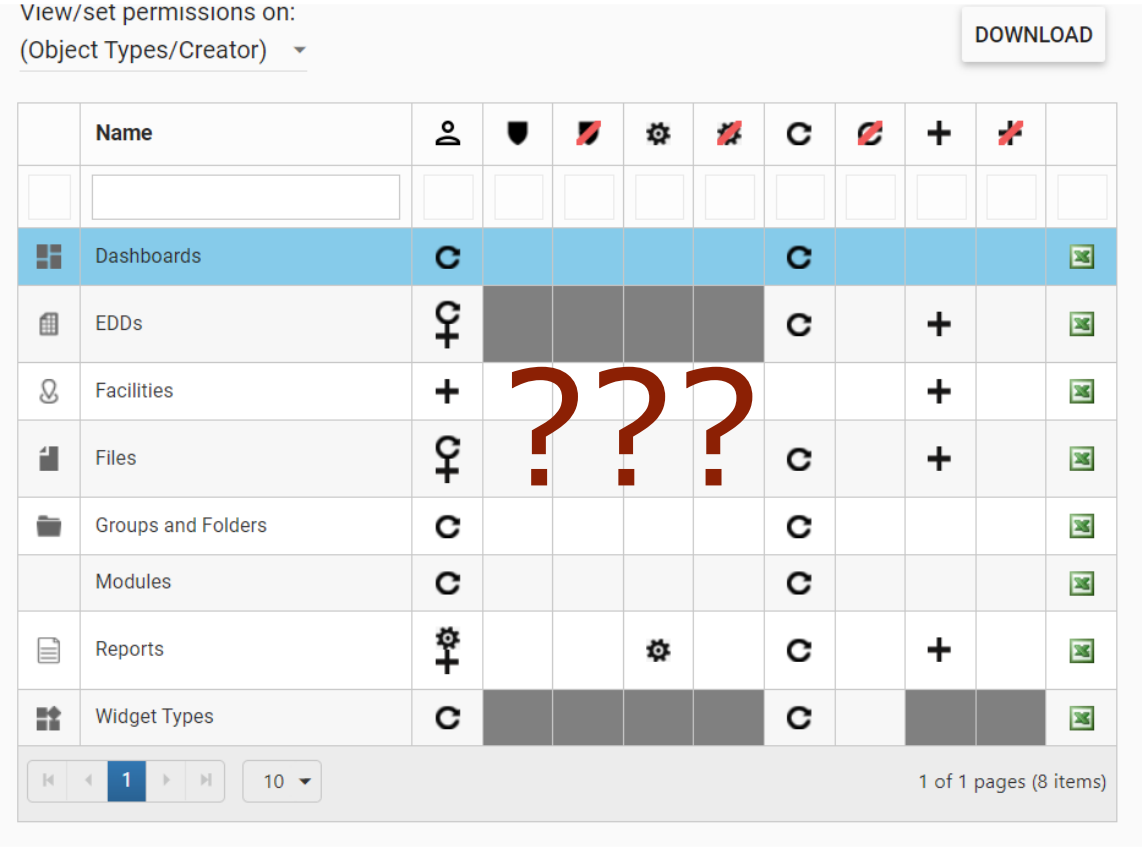
# User Permissions at Scale

- Permissions can easily become a huge complicated mess
  - Complex relationships
  - Easy to give too many or too few permissions

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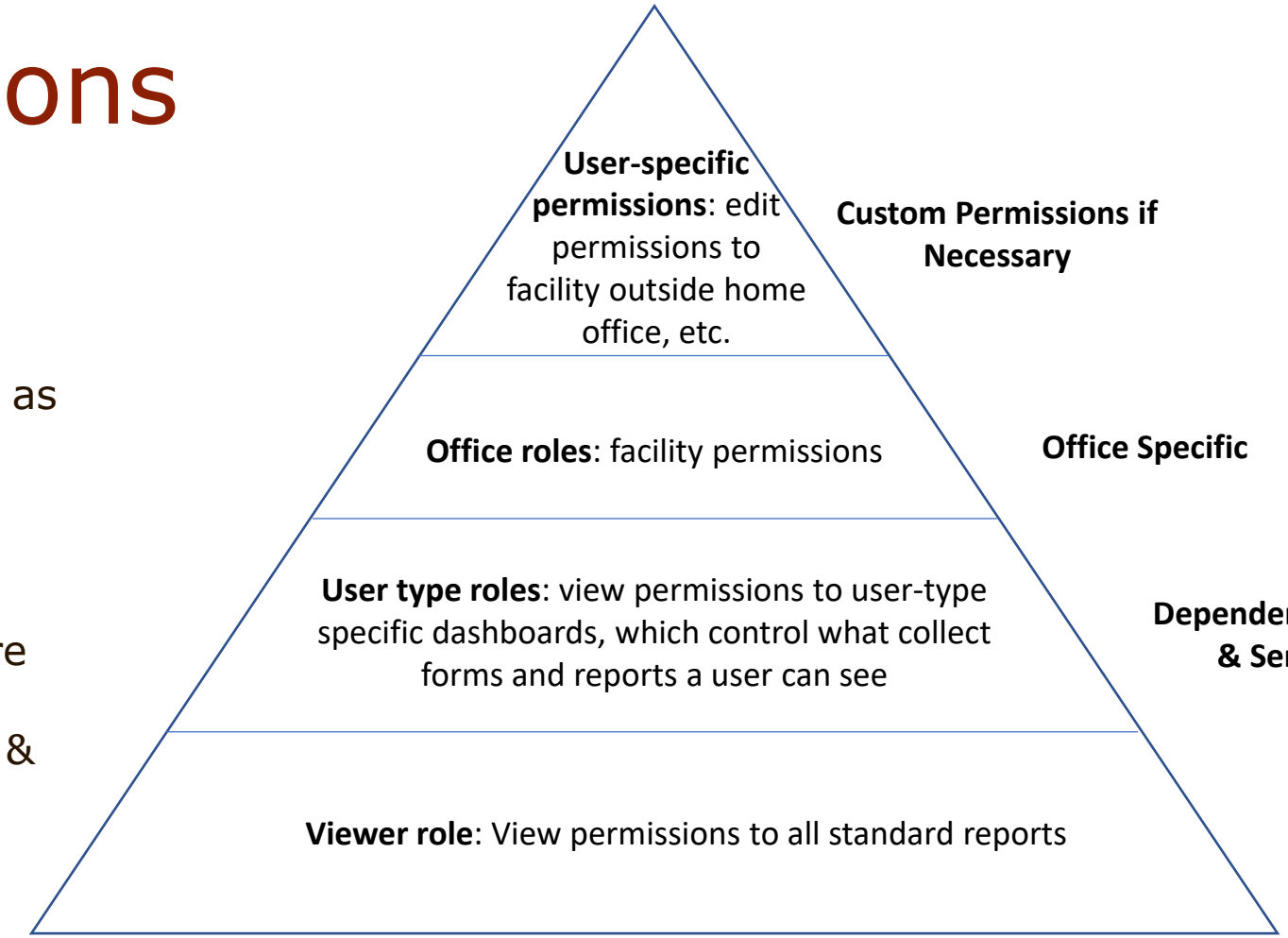
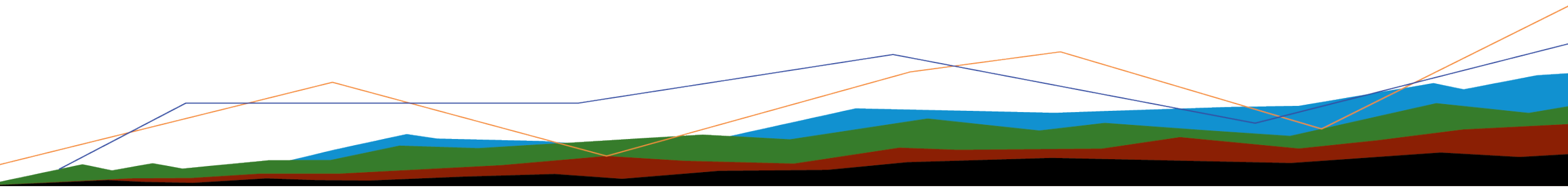
# User Permissions (cont'd)

- Some guidelines
  - Give users as few permissions as possible
  - Isolate each variable, make changes one by one
  - Impersonate users
  - Keep manual changes to a bare minimum
  - Manage permissions by folder & user roles



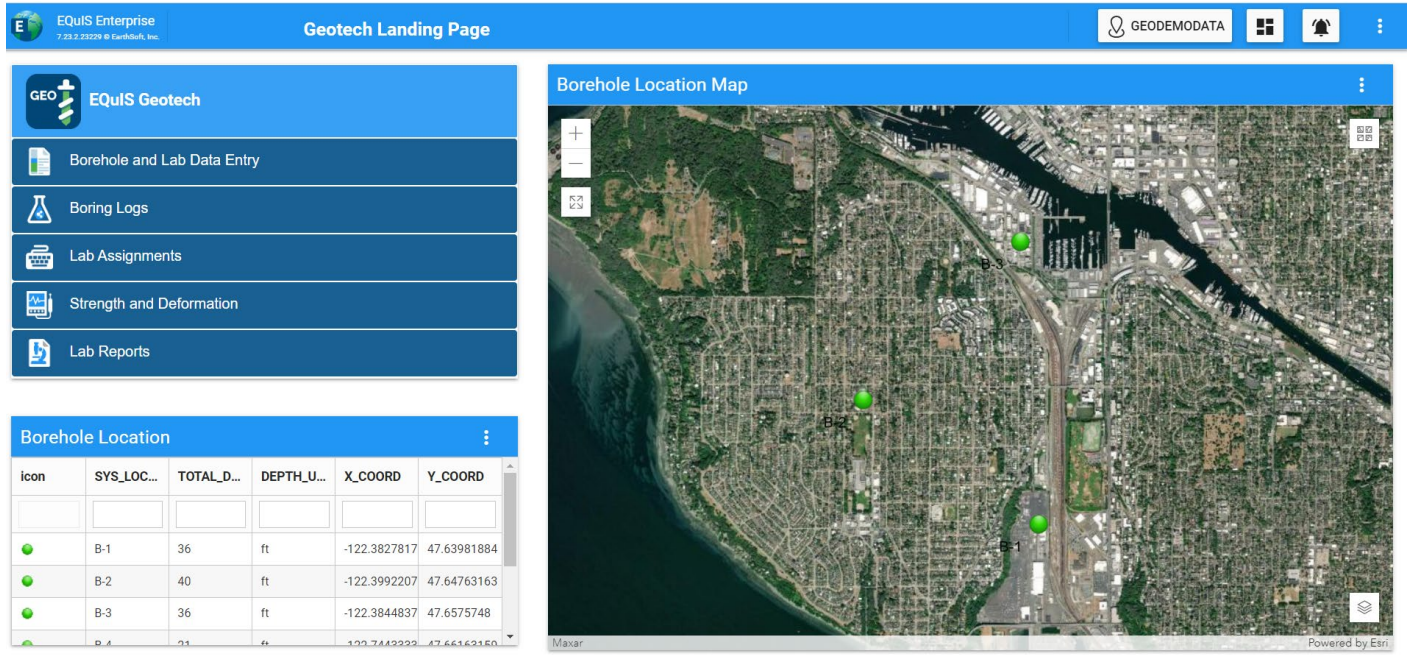
# Automating Project Setup

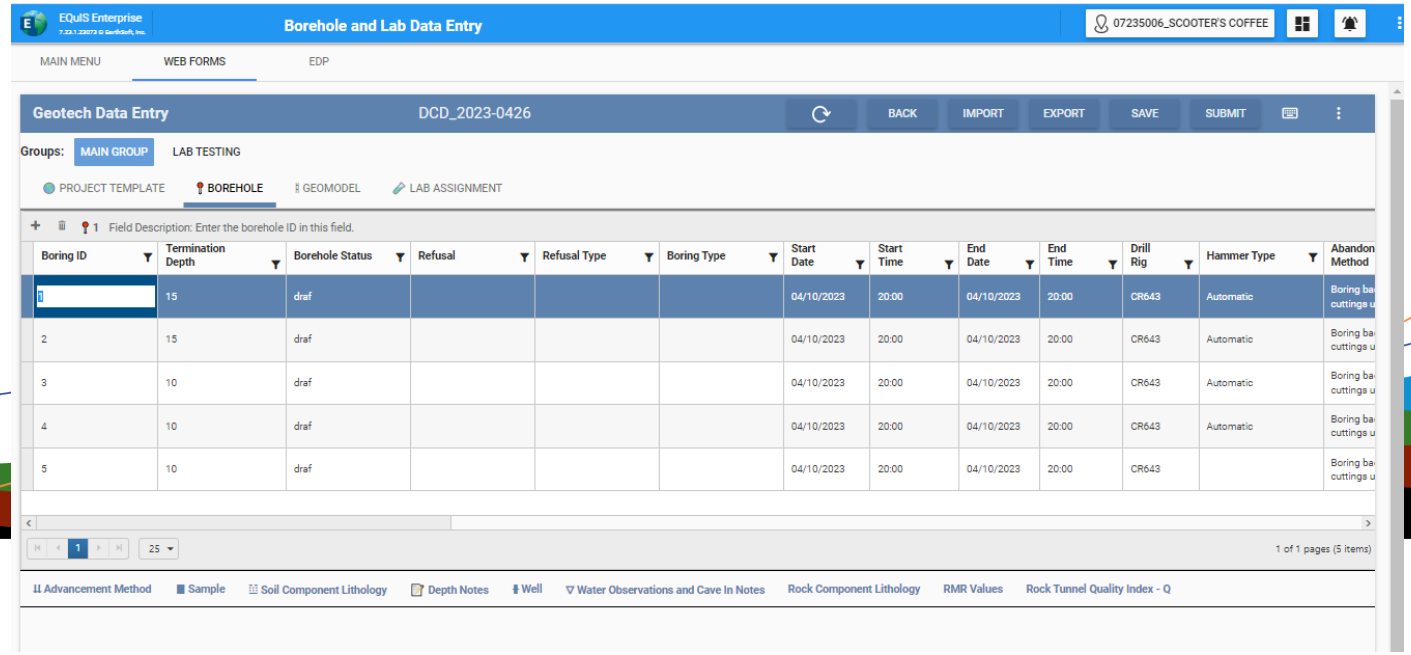
- With so many projects, it is impractical to set up all projects and users manually
- Automated facility creation
  - Each time a new project is registered in project management system, an EDD is generated
  - EDD is loaded automatically via EQuIS Link script & API
  - Automatically added to appropriate permission folders
  - Closed projects get inactivated
- Enables users to immediately access their projects and begin adding data



# User Interface

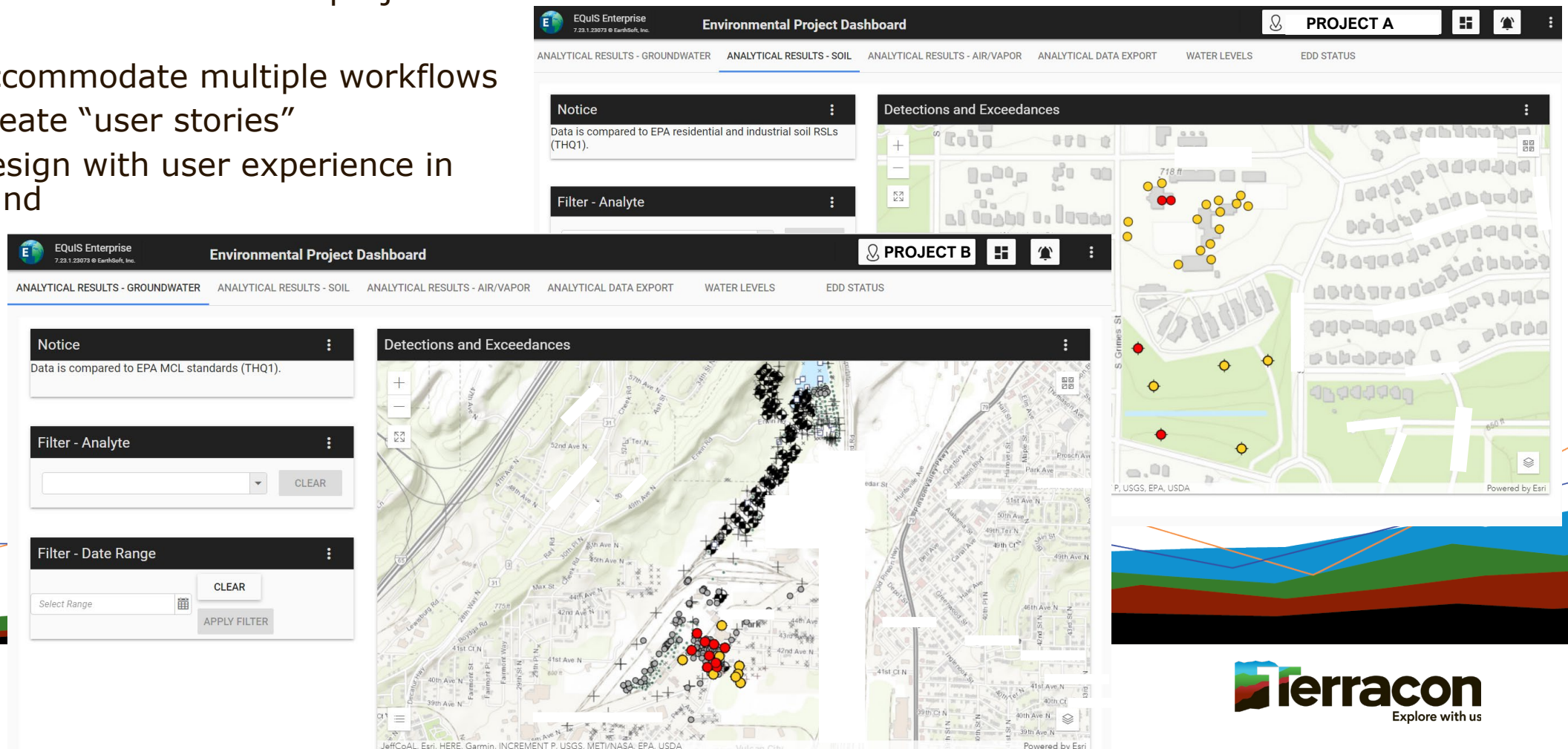
- Platform considerations
  - Many of Earthsoft's tools are very facility-driven
    - EQuIS API, Many Dashboard Widgets, Power BI connector, EQuIS Professional, ArcEQuIS, etc.
    - This limits what we can use for our user interface & workflow
  - Must provide adequate data access through Enterprise
  - NO USERS will have EQuIS Professional other than admins



# User Interface (cont'd)

- Single web interface for all projects
  - Accommodate multiple workflows
  - Create "user stories"
  - Design with user experience in mind

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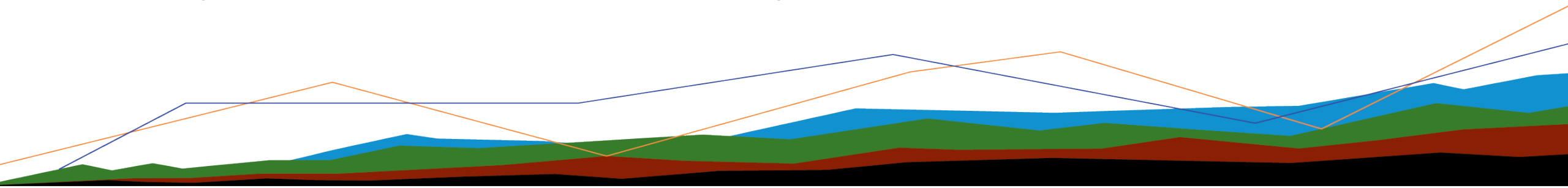
# Education and Understanding

HOW TO…

- set users up for success?
- get users to understand the value of their data and owning the data?
- provide support without taking on the traditional data manager role?
- sell the story to users?
- make system accessible for many with limited data training?
- educate users and enforce data standards?
- Capture user feedback to drive workflow improvements?



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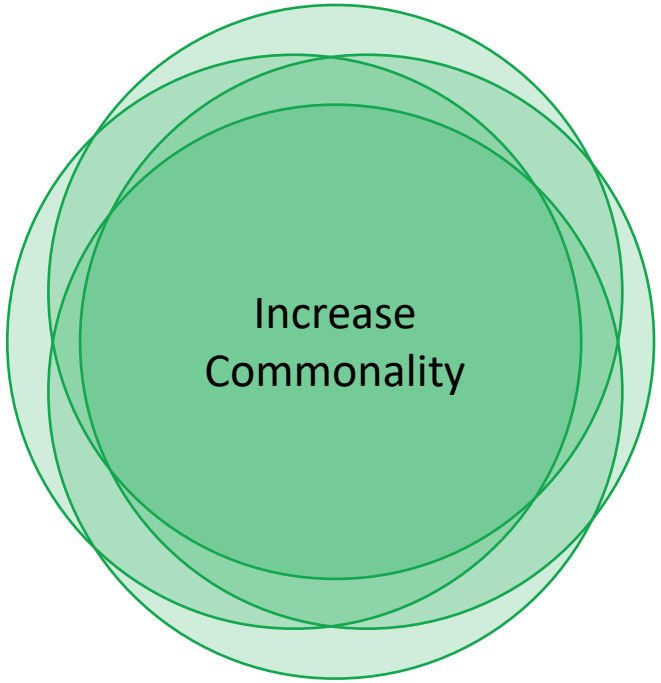
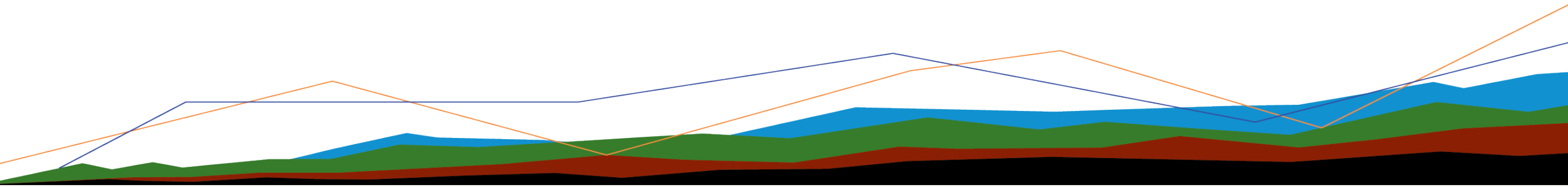
# Standardized/Flexible Reporting

- Standardized reporting products allow us to increase the commonality between projects
- Standard reports needs to allow flexibility



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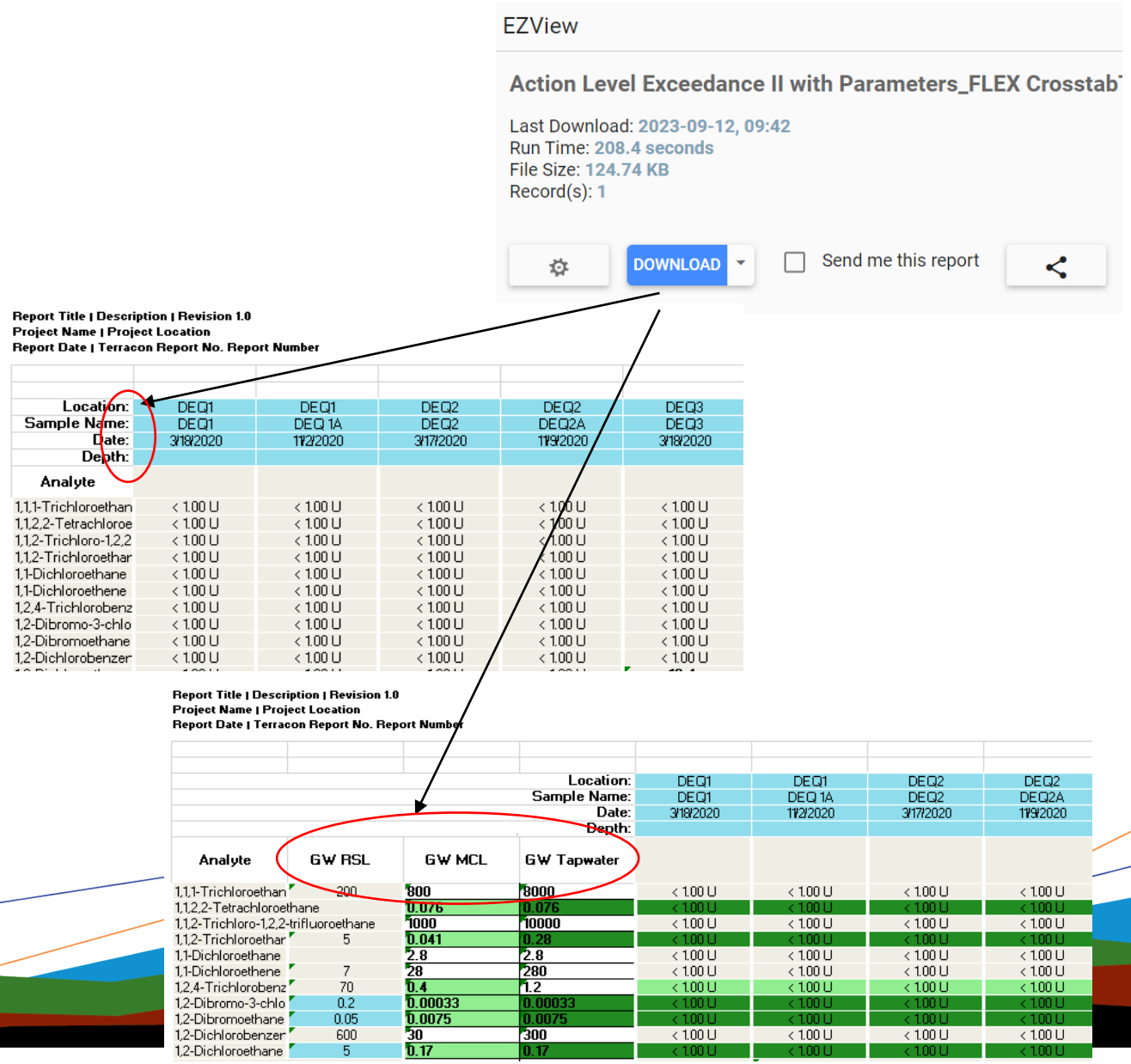
# Flexible Crosstab

- Problem: Fixed Number of Action Levels
- Different sites need different numbers of action levels
- "Action Levels II with Parameters" report allows for flexible action levels – but number of action levels must be the same for a given crosstab template

- Solution: Custom FLEX Report
- Changes the way action levels are pulled, allows the crosstab report to run successfully with 0-4 action levels
- Uses the same crosstab template regardless of how many action levels selected
- Can save default action levels for a facility

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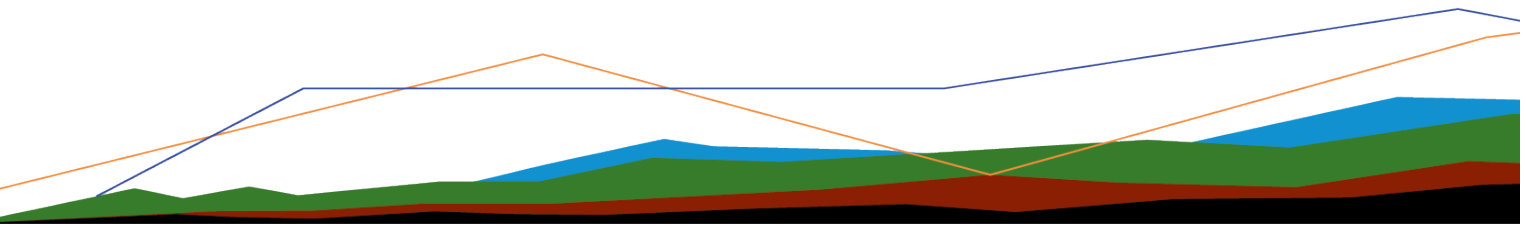
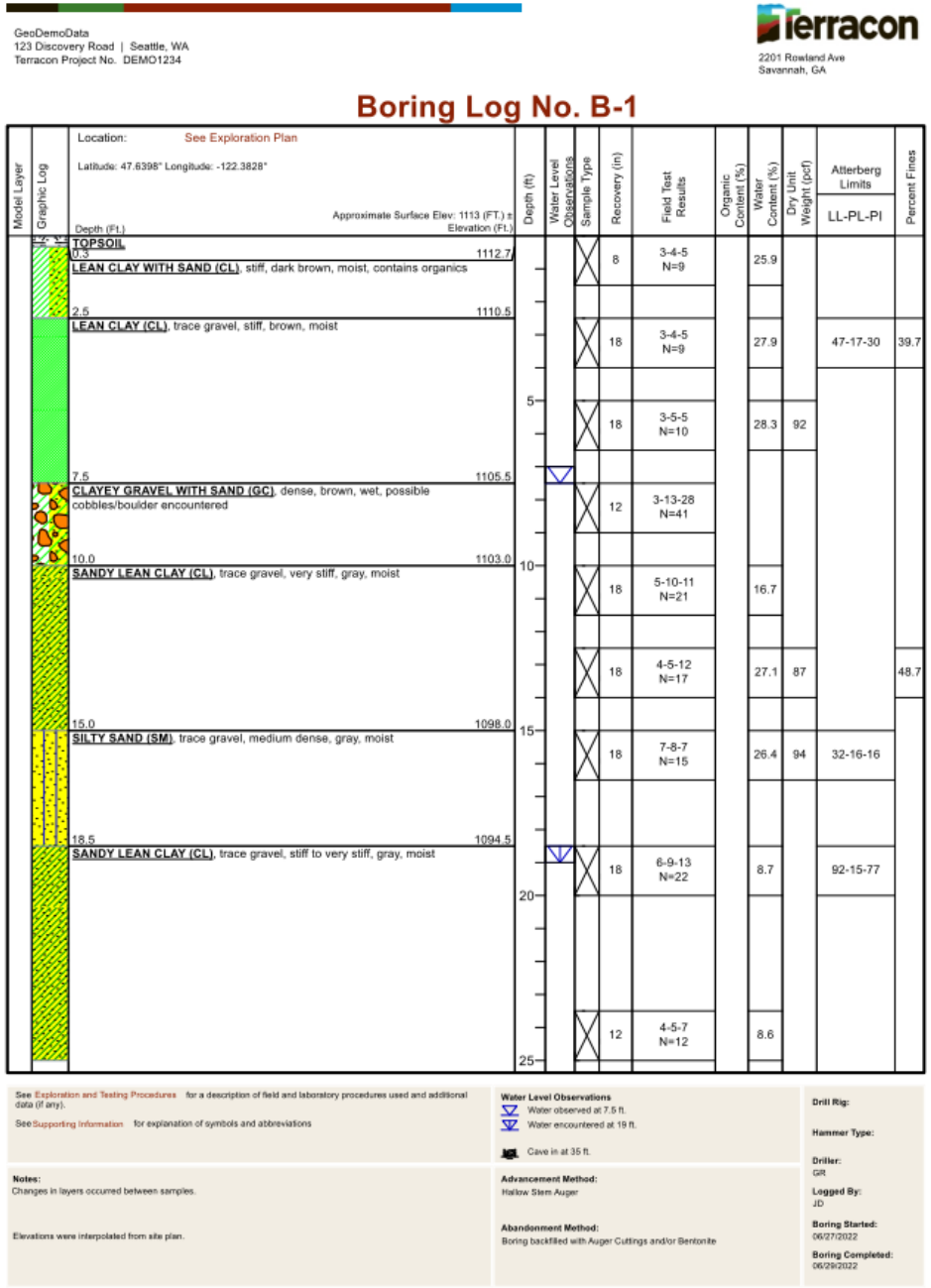
# Flexible Boring Log

- Problem: Do not want to maintain hundreds of templates for every boring log configuration
- Solution: Flexible crosstab
  - Users can choose columns to show or hide
  - Headers accommodate different units





GeoDemoData
123 Discovery Road | Seattle, WA
Terracon Project No. DEMO1234

Terracon
2201 Rowland Ave
Savannah, GA

**Boring Log No. B-1**

Location: See Exploration Plan
Latitude: 47.6398° Longitude: -122.3828°
Approximate Surface Elev: 1113 (FT.) ± Elevation (Ft.)

| Depth (Ft.) | Elevation (Ft.) | Material Description | Depth (ft) | Sample Type | Recovery (in) | Field Test Results | Water Content (%) | Dry Unit Weight (pcf) | Atterberg Limits LL-PL-PI | Percent Fines |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.3 | 1112.7 | **TOPSOIL** | | | | | | | | |
| | | **LEAN CLAY WITH SAND (CL)**, stiff, dark brown, moist, contains organics | | | 8 | 3-4-5 N=9 | 25.9 | | | |
| 2.5 | 1110.5 | | | | | | | | | |
| | | **LEAN CLAY (CL)**, trace gravel, stiff, brown, moist | | | 18 | 3-4-5 N=9 | 27.9 | | 47-17-30 | 39.7 |
| | | | 5 | | 18 | 3-5-5 N=10 | 28.3 | 92 | | |
| 7.5 | 1105.5 | | | | | | | | | |
| | | **CLAYEY GRAVEL WITH SAND (GC)**, dense, brown, wet, possible cobbles/boulder encountered | | | 12 | 3-13-28 N=41 | | | | |
| 10.0 | 1103.0 | | 10 | | | | | | | |
| | | **SANDY LEAN CLAY (CL)**, trace gravel, very stiff, gray, moist | | | 18 | 5-10-11 N=21 | 16.7 | | | |
| | | | | | 18 | 4-5-12 N=17 | 27.1 | 87 | | 48.7 |
| 15.0 | 1098.0 | | | | | | | | | |
| | | **SILTY SAND (SM)**, trace gravel, medium dense, gray, moist | 15 | | 18 | 7-8-7 N=15 | 26.4 | 94 | 32-16-16 | |
| 18.5 | 1094.5 | | | | | | | | | |
| | | **SANDY LEAN CLAY (CL)**, trace gravel, stiff to very stiff, gray, moist | | | 18 | 6-9-13 N=22 | 8.7 | | 92-15-77 | |
| | | | 20 | | | | | | | |
| | | | | | 12 | 4-5-7 N=12 | 8.6 | | | |
| | | | 25 | | | | | | | |

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).
See Supporting Information for explanation of symbols and abbreviations

**Water Level Observations**
Water observed at 7.5 ft.
Water encountered at 19 ft.
Cave in at 35 ft.

**Notes:**
Changes in layers occurred between samples.
Elevations were interpolated from site plan.

**Advancement Method:**
Hollow Stem Auger

**Abandonment Method:**
Boring backfilled with Auger Cuttings and/or Bentonite

**Drill Rig:**
**Hammer Type:**
**Driller:** GR
**Logged By:** JD
**Boring Started:** 06/27/2022
**Boring Completed:** 06/29/2022

# Questions?

Thanks also to the contributions from our whole team:
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Dominique Davis
Sarah Sokol
Jamie Gaynor

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