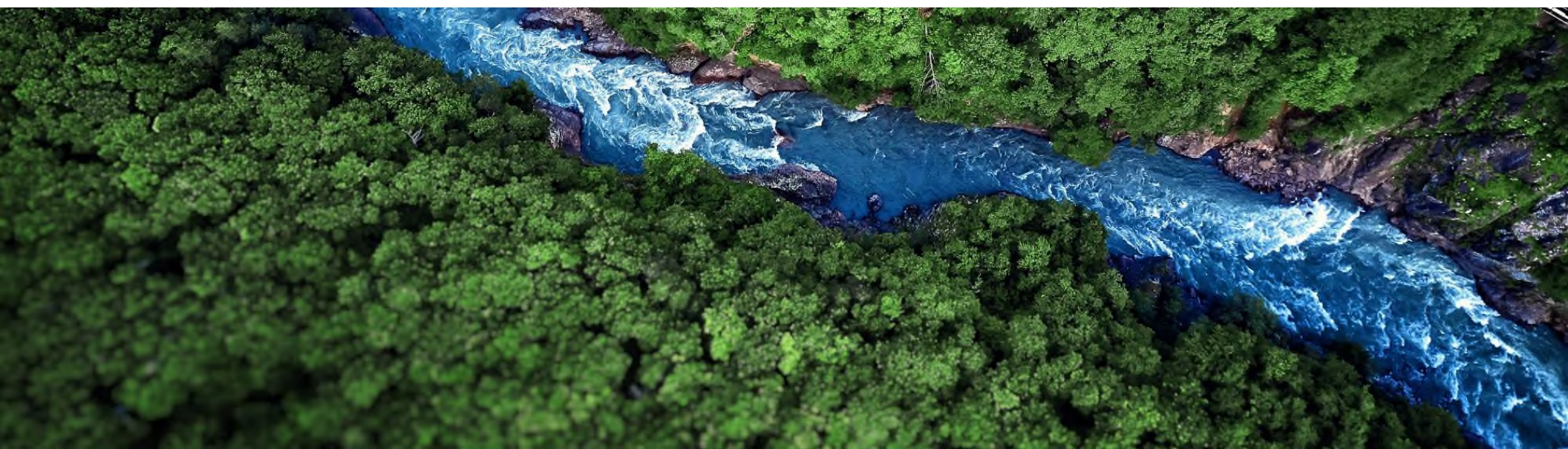




Conducting a Robust and Objective Evaluation of Environmental Data Management Systems

Shana Whitney

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Woodard & Curran

Introduction



➤ Previous Data Management Landscape – 3 Systems



EnviroData

- 3rd Party software
- Northeast US team



edf

- Custom-built
- Western/Rocky Mountain US team



DART

- Custom-built
- New Jersey team

➤ Why Unify to One System?



**Enviro
Data**



edf



DART

One Environmental Data Management System (EDMS):

- Enhanced project delivery
- Increased knowledge sharing and collaboration
 - Improved resource balancing
- Simplified maintenance and communications

> **Goal:** Identify EDMS that:

- Meets project delivery/client needs
- Is the 'right' tool across 3 data management teams
- Meets leadership objectives

A **Robust** and **Objective** evaluation
required to address needs and goals of
every stakeholder

EDMS Evaluation Dimensions



Technical

- Data types
- Schema
- Backend accessibility
- Performance



Operational

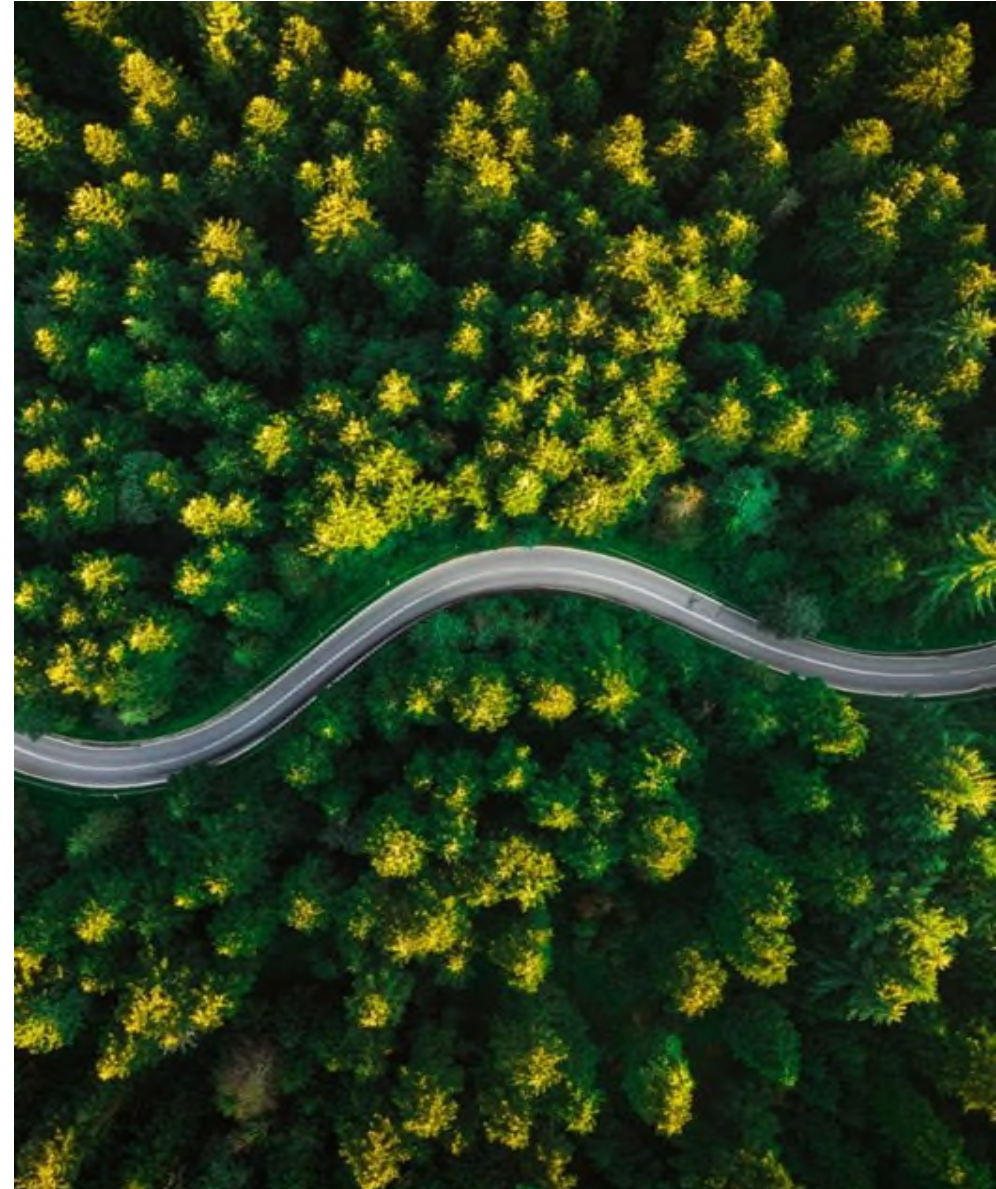
- Ease of use
- Interoperability with tools
- Fit into current workflows
- User support



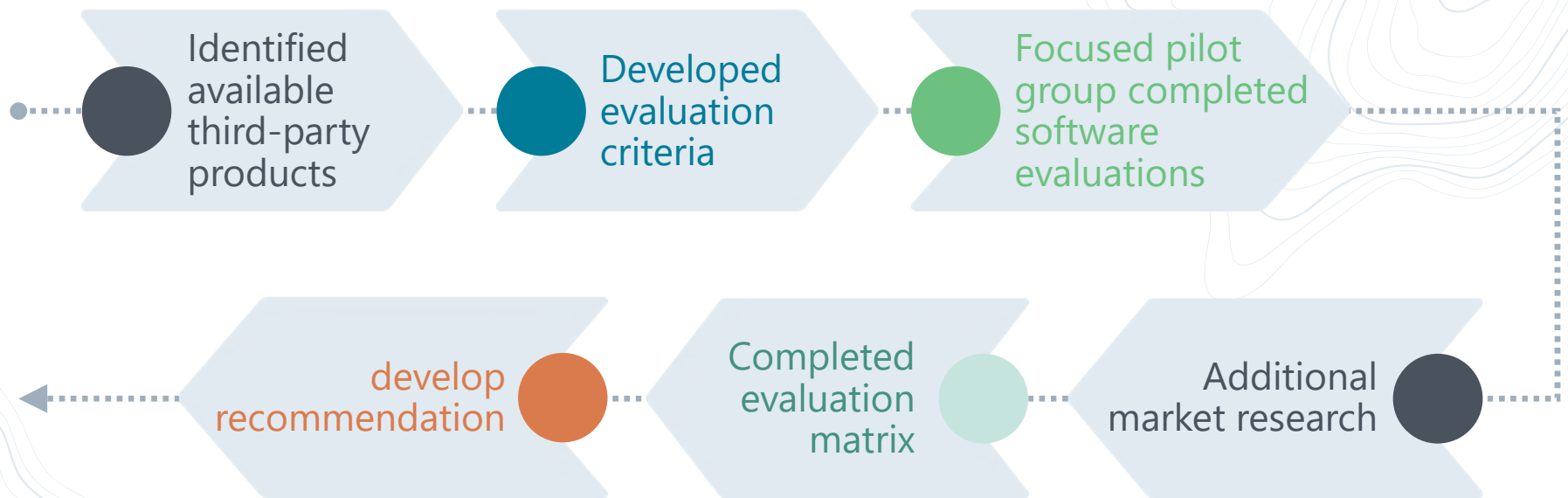
Organizational

- Cultural fit
- Data governance
- Client/market perception
- Strategic value

EDMS Evaluation Framework



➤ Evaluation Process Roadmap



➤ Identify 3rd Party Products

- EnviroData
- EQulS
- ESdat
- Locus EIM

Identified by:

- Vendor focused on analytical laboratory data
- Industry knowledge/research
- Professional networks
- laboratory familiarity

➤ Identify 3rd Party Products

- EnviroData
- EQuIS
- ESdat
- Locus EIM

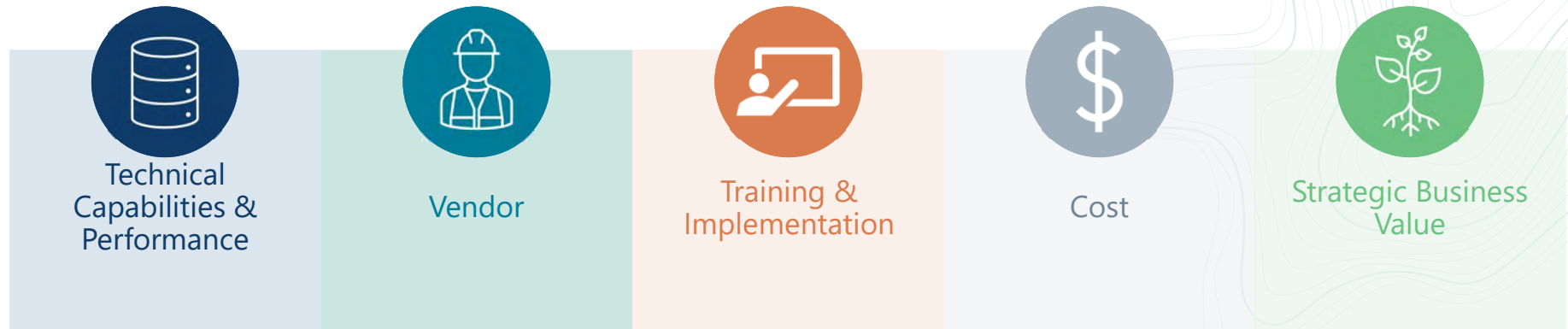
Identified by:

- Vendor focused on analytical laboratory data
- Industry knowledge/research
- Professional networks
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Why not build a custom system?

- Costly/difficult to maintain
- Knowledge loss/bottlenecks
- Not cost effective

➤ Developed Evaluation Criteria/Matrix



- 47 specific criteria items
 - ~40% based on pilot group feedback
 - ~70% based on market research, vendor information, etc.
- Quantitative and qualitative scoring

➤ Technical Capabilities & Performance

Laboratory EDD Management

- Imports/rollbacks
- Lab familiarity

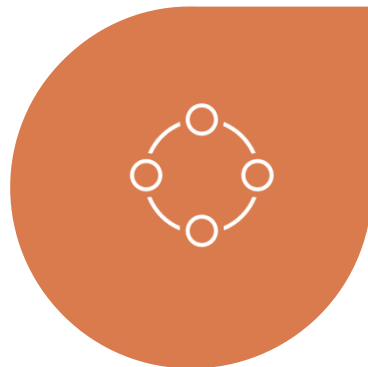


Data Exports

- Crosstabs and flat files
- queries

Interoperability

- Connections
- APIs



Platform

- Schema
- Data types
- User permissions
- Valid values/QC
- Customization
- Audit trails



Vendor

General Metrics

- Years in business/company size
- Security



Market Presence

- Traffic/followers
- News
- Clients

Technical Expertise

- Technical roles
- CS or related degrees
- Consulting/industry experience



Support & References



Training & Implementation

Documentation



Training Materials



Training Users



Accessibility

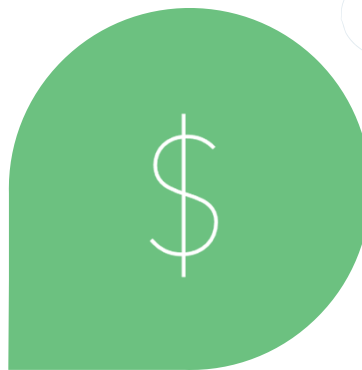




Annual Licensing
Cost



Vendor
Implementation Cost



Internal
Implementation Cost



Cost Model



> Strategic Business Value

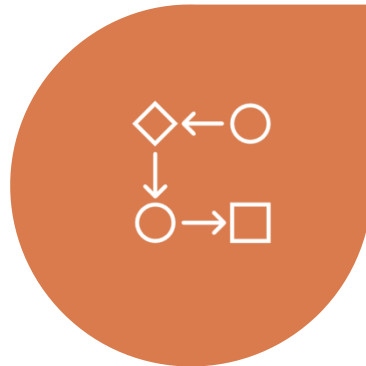
Client Perception



Cultural Fit



Workflow
Improvements



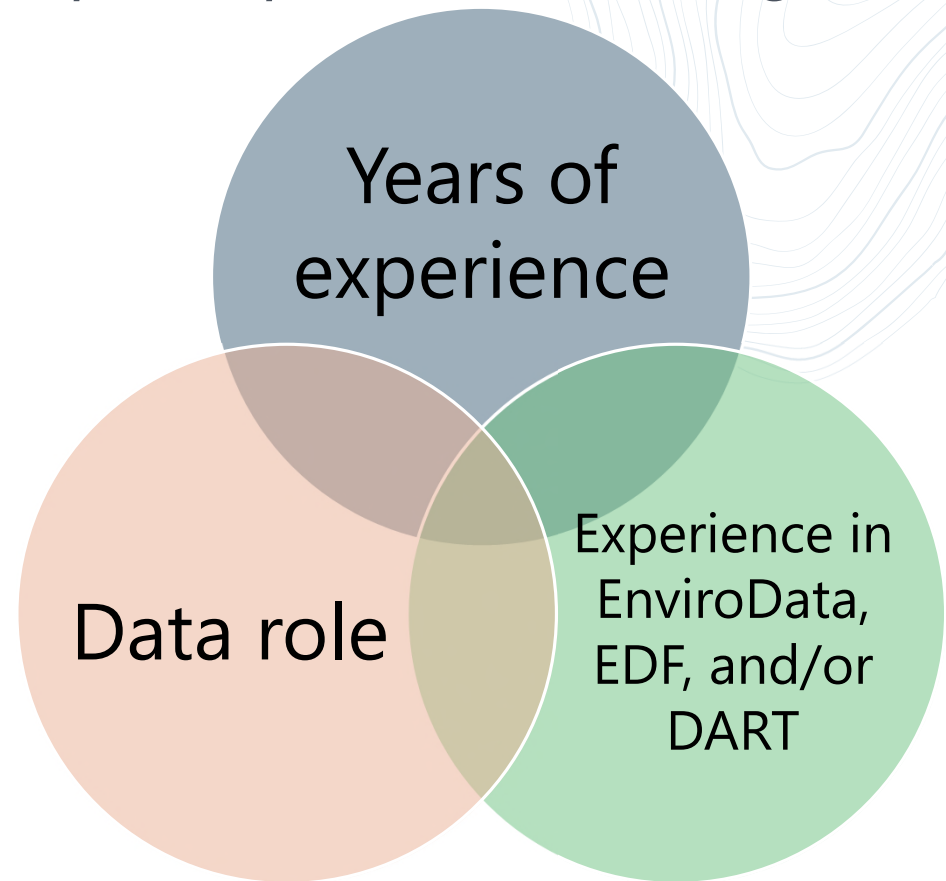
Emerging
technologies



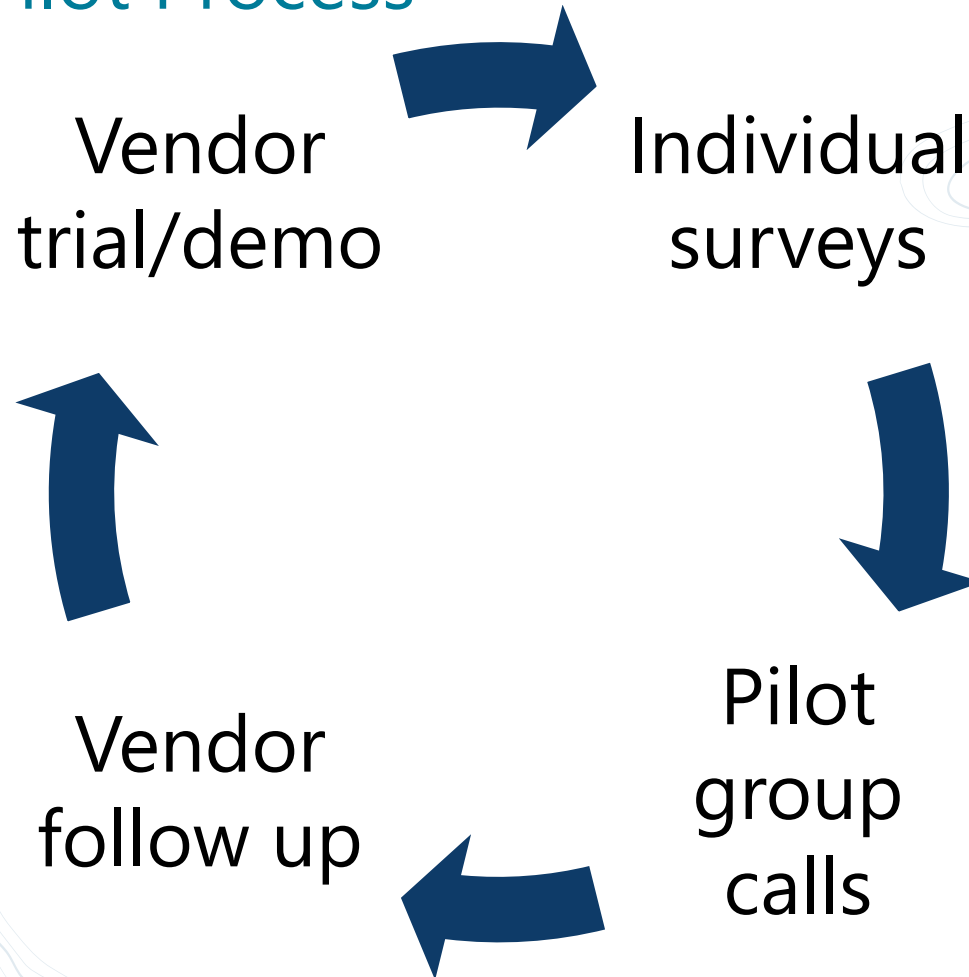
➤ Focused Pilot Group

17 participants with a range in:

Goal: Rank/score criteria in the matrix that required feedback from multiple perspectives



➤ Focused Pilot Process



➤ Focused Pilot Initial Results – **No Clear Winner**



Why?

- Diverse perspectives!
- Each product had a 'fatal flaw' – ranked top for one person, and bottom for another



Next Steps

- Candid discussions on dealbreakers/major needs
 - User interface
 - Direct querying/backend access
 - Schema
- Consensus-building



Takeaways

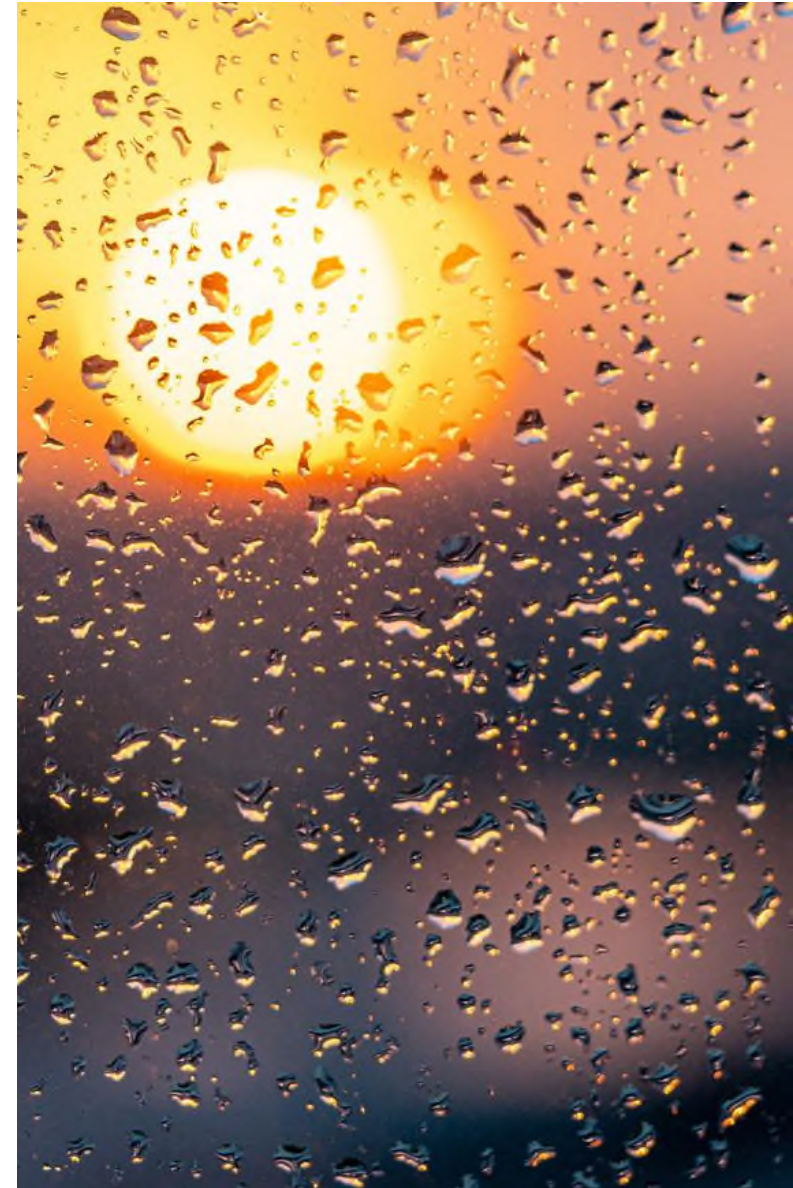
- No 'perfect' solution
- Vendor support
- Take the time to come to a consensus

➤ Completed Evaluation Matrix and Recommendation

- We were able to identify the product that was right for us
- ESdat
 - Customization, etc.
- ...and leadership accepted our recommendation!

➤ Next Steps

- Created an implementation plan
- Database migrations
- Improvements in collaboration and knowledge sharing across teams!





Shana Whitney



swhitney@woodardcurran.com

Questions?