A DESKTOP APPLICATION FOR CHEYENNE & LARAMIE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

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OVERVIEW

• OPERATING ENVIRONMENT
  • Cheyenne & Laramie County GIS Cooperative
  • Cheyenne & Laramie County Health Department

• PROBLEM
  • 5-Year Tech Review

• SOLUTION
  • Requirements & Challenges
  • Researched Solutions
  • Proposed Solution

• Expected Results
CHEYENNE LARAMIE COUNTY GIS COOPERATIVE (CLCGISC)

- Laramie County
- Environmental Health
- City of Cheyenne
- Board of Public Utilities
- School District 1
- Assessors
- Planning (City and County)
- Public Works

Shares data amongst themselves along with an Environmental Science Research Institute (ESRI) Enterprise License Agreement
5-YEAR TECHNOLOGY REVIEW

- **Investigates how the Cooperative implements and performs Geographic Information Systems (GIS) against ESRI’s best practices and ESRI’s way-forward**

- **Review results**
  - **Migrating from Desktop GIS software ArcMap {10.7} to ArcGIS Pro**
  - **Transition from a centralized datastore environment to a federated environment between Cooperative participants**

- **Cheyenne & Laramie County Environmental Health Department**
  - **Several areas needing attention before the department can implement the enterprise environment**
CLCEHD 5-YEAR TECHNOLOGY REVIEW RESULTS

- Lack of support for MDB & ACCDB databases in ArcGIS PRO
  - Man-hours
    - Coordination between 3 or 4 people is needed
  - Attachments
  - Geocoding conflicts
  - Creates data redundancy at multiple locations
  - Permit data integrity

Scanned permit → Edits made in Access → Geocoded → Results (shp) → Imported into SDE

Permit number assigned → Linked permit

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CHALLENGES & SOLUTION REQUIREMENTS

- Data migration from Microsoft Access mdb's and accdb's tables to a different format
- Workflow & Man hours reduction

Solution Requirements

- Complexity of editing
- Create metrics & reports from the data by querying the data
- Permit PDF's

Solution Capabilities

- Name, store, and retrieve multiple attachments
- Provide attachments hyperlinks for public access
- User friendly, responsive, and able to perform all previously available operations

- Must not use Access or Excel
- Geocoding
SOLUTIONS EXPLORED

• Modification and continuation of current workflow
• Window Presentation Format desktop application using ESRI’s .Net Runtime SDK
• Web Application using Web App Builder
• Commercial Off The Shelf (COTS) solutions
• Desktop application written in Python
• Complete management within ArcGIS PRO
• A Standalone Corehost Application for PRO using ArcGIS for PRO SDK
SOLUTION – CUSTOM DESKTOP APPLICATION USING ARCGIS PRO SDK
EXPECTED RESULTS

- **Single Data Store**
- **Attachment Linking**
- **Maintains Data Integrity**
- **Friendly GUI**
- **Inherit Geocoding**
- **Editing Attributes**
- **Attachment Management**
- **Public Access to Permit Attachments**

Data stored in SDE

Desktop Application

Web Map
CONCLUSION

- **Different Technologies**
  - **Modifications**
  - **Standalone Desktop Application**

- Data migration from Microsoft Access mdb’s and accdb’s tables
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  - Provide attachments hyperlinks for public access
  - User friendly, responsive, and able to perform all previously available operations

- Geocoding
QUESTIONS