Legacy GIS Data Management

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US Army Corps of Engineers
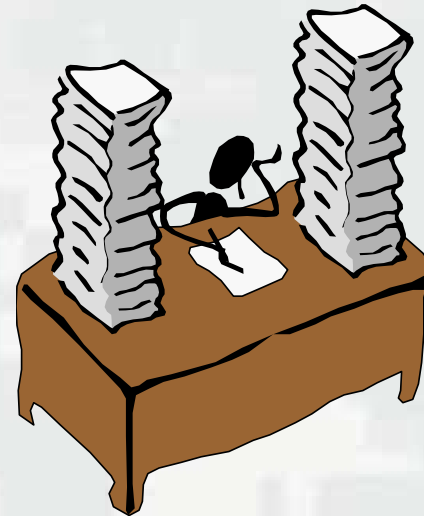**BUILDING STRONG**®

Outline

- What was the problem?
- How did we fix the problem?
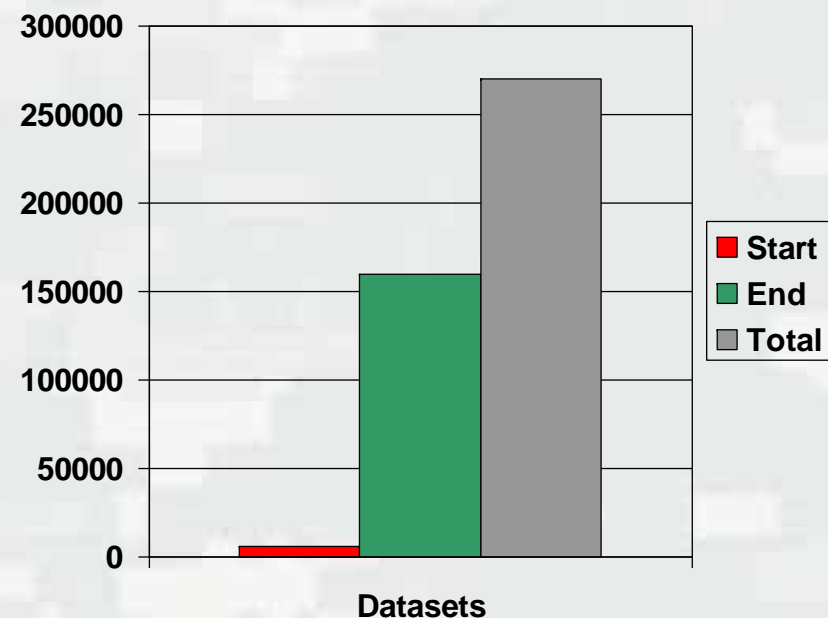- What is the outcome?

What was the problem?

- Large amounts of incomplete GIS data
  - ▶ 270,000+ current and historic datasets
  - ▶ GIS data was missing basic items:
    - Metadata
    - Projections
    - Pyramids
    - Statistics
    - Spatial index

What was the problem?

- Data characteristics
  - ► Raster 75%
  - ► Vector 25%
- Data size
  - ► 3.1 TB = 4,500+ CDs = 1 stack CDs 4 stories tall
- Metric tracked
  - ► FGDC Metadata Compliance
    - • Start 2%
    - • End 65%

How did we fix the problem?

- Costs
  - ► Manual versus development
    - Manual (every time)
      - ▷ **$450k**
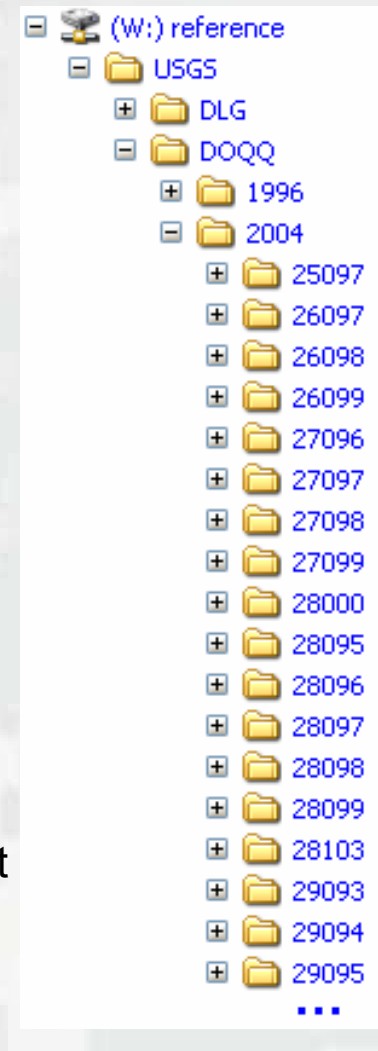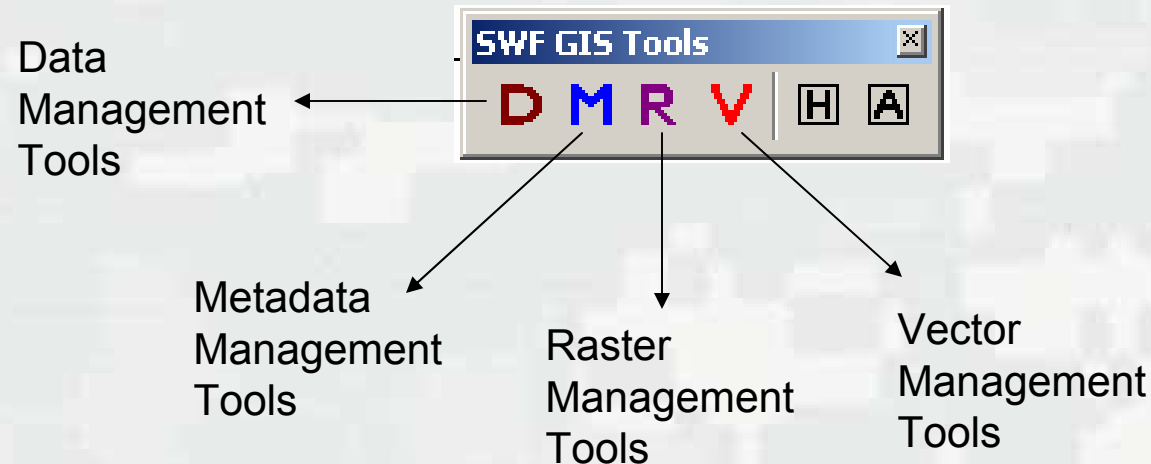   - Development (one time)
      - ▷ **$50k**
  - ► Future benefits
    - Save money now and in future

How did we fix the problem?

- Developed automated tools
  - ►Recursive

Data
Management
Tools

SWF GIS Tools

D M R V H A

Metadata
Management
Tools

Raster
Management
Tools

Vector
Management
Tools

(W:) reference
USGS
DLG
DOQQ
1996
2004
25097
26097
26098
26099
27096
27097
27098
27099
28000
28095
28096
28097
28098
28099
28103
29093
29094
29095
. . .

What is the outcome?

- Better data
  - ► Metadata
    - 68% of GIS datasets have metadata
  - ► Projections
    - 92% of GIS datasets have projections
  - ► Pyramids
    - 97% of rasters have pyramids
  - ► Statistics
    - 97% of rasters have statistics
  - ► Spatial index
    - 99% of shapefiles have spatial index

What is the outcome?

- **Better data**
  - ► Compliance with federal regulations and standards
    - Federal Geographic Data Committee (FGDC)
    - Department of Defense (DoD)
    - US Army
    - US Army Corps of Engineers (USACE)

What is the outcome?

- Suite of tools in ArcCatalog

  ▶ Inventory

  ▶ Projection

  ▶ Pyramids

  ▶ Statistics

  ▶ Image Catalogs

  ▶ Image Catalogs to Polygons

  ▶ Metadata

  - Update
  - Import
  - Export to File
  - Export to Table
  - Sync

Available to EVERYONE!!

Demo

Questions?

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► Visit Fort Worth District GIS at:
  http://geospatial.swf.usace.army.mil/
► ftp://ftp.usace.army.mil/pub/swf/swf_gis_tools/