Data: The Invisible Asset

Just managing physical assets is no longer enough today. Data management has become one of the most valuable and critical components of asset integrity management and regulatory compliance. Corporations allocate significant budgets to data collection, storage, and maintenance.

Data Overload

Establishing your data systems is a significant investment; now what do you do with the data? As with physical assets, the goal is to extract the maximum value and return on your investment. AVH Engineering can help you meet this goal.

Solutions

From small to large applications, your tedious, repetitive tasks or big dreams of "nice to haves" all need solutions. Following are some samples of services offered and solutions implemented by AVH staff:

1) *Data Migration:*

- Moving your data from an existing database management system to a new platform requires much care and diligence to ensure that data is transferred correctly. AVH has database experience with various asset registry systems and can help ensure a smooth migration.

2) *Data Collection / Database Population:*

- AVH has extensive experience with data collection, both in the field and from documents. AVH staff also have experience with database population, either manually, through load sheets, or using automated processes.
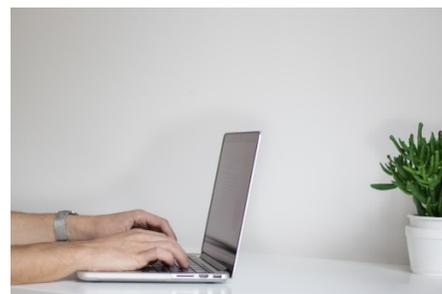
3) *Spreadsheet Wizardry:*

- AVH has helped clients with complicated Excel formulas, formatting, and has written custom macros to perform feats of spreadsheet magic. If you can imagine it, chances are AVH can do it.

4) *Data Consolidation:*

- Client had upwards of a billion data records, in thousands of individual files
- All data was consolidated into a single searchable, queryable database
- Information is now easily found and extracted from the data repository
- Data comparisons and analyses are now performed
- Unusable data has been turned into useful information
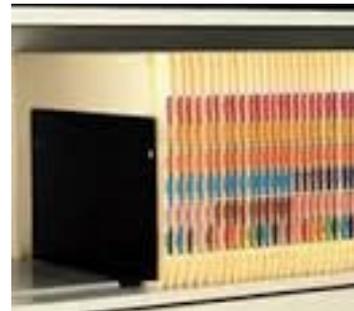
5) *Push-Button Easy:*

- Client had a time-consuming, repetitive task involving manually generating a monthly report

- Data was first extracted from the company's asset management database system

- Corporate-wide metrics were then quantified and categorized by facility in a spreadsheet

- This task took a senior analyst one full day every month to complete, and was prone to errors if the process was not replicated exactly

- We created a solution that generated the performance summary table with one easy click of a button – done in seconds, with consistent results

Area	Pressure Equipment in Service	Pressure Equipment Exceeding 6 Months Past Due	Pressure Equipment NCRs	% Pressure Equipment NCRs	PSVs in Service	PSVs Exceeding 6 Months Past Due	PSV NCRs	% PSV NCRs
ABC	95	0	0	0%	72	0	1	1%
DEF	243	0	0	0%	144	4	0	0%
GHI	375	46	46	12%	532	12	24	5%
JKL	421	52	133	32%	408	58	33	8%
MNO & PQR	167	0	0	0%	176	0	0	0%
STU	458	101	6	1%	477	23	5	1%
VWX	435	98	105	24%	385	47	62	16%
YZ	122	7	2	2%	55	0	0	0%
BDK	659	1	0	0%	794	8	9	1%
Totals	2975	318	292	10%	3043	152	134	4%

6) *No More Month-End Headaches:*

- Client had a manual procedure for entering monthly income and expense data into spreadsheets

- Amounts had to be posted to the appropriate accounts

- All monthly amounts were being tallied manually to create an annual summary

- Tailor-made tools to automate such tasks as postings based on payee, calculating GST/HST split amounts, and balancing individual and aggregate cheque and deposit amounts were created

- Annual deposit and disbursement summaries were updated automatically

- Client now breezes through month-end and year-end tasks

7) *Who Did What, When?*

- Client was responsible for maintaining an in-house software system

- They had no structured way of tracking enhancements and maintenance modifications that were made to the software by various developers

- A database system to track all changes was created

- It is now a simple matter to query what changes were made, when, by whom, and which system tables and fields were affected

8) *Key Performance Indicators:*

- Client had a massive database of accounting data, but no way of analyzing what it all meant

- A reporting system that gave them a variety of key performance indicator reports was created for them

- Client can now see monthly, yearly, and multi-year comparisons and trends for such metrics as revenue, profit, and inspector utilization and efficiency

- Client now has at their fingertips access to real-time data to determine whether they are on track to meet monthly and annual targets

9) *Ad Hoc Toolbox:*

- In-house, ad hoc tools to perform labour-intensive, repetitive tasks efficiently can be developed quickly

- Activities can involve a variety of file manipulation, document automation, and spreadsheet "magic"

- Some examples of one-off, tactical tools that we have developed are:

  - An integrity engineer with a list of equipment to inspect wanted to create a spreadsheet with separate tabs for each equipment item, and have certain cells pre-populated with data. He also wanted a directory created with individual folders for each equipment item. With our solution, these tedious tasks were accomplished with the push of a button.

  - The creation of a legal report required assembling hundreds of photos from various folders into a document. The photos needed sorting and resizing, which required manually processing them one by one. A one-click solution was developed to accomplish the photo sorting, insertion, and formatting.

  - A client had a list of past equipment inspections, with a variable number of inspections and inspection types per equipment item, and wanted to identify those with fewer than three completed full inspections. Scanning thousands of entries in a spreadsheet and flagging items based on a given set of criteria can now be accomplished in an instant.

  - An inspection company manually transferred data collected in the field into Word-document inspection reports. AVH developed an automated solution to populate and format the complete set of inspection reports, including photos and other associated documents, with the click of a button.

- Custom tools can be created to address most information technology needs, large or small.