FLARE
Information Management

M&A Activity - Integrating datasets into a cohesive and usable system

Background

In August 2017, Total SE acquired the Exploration & Production assets of Maersk Oil and became the second-largest operator in the North Sea. The data and information from Maersk included over 320 million files, amounting to 4 Petabyte of disk space. From an early stage, Total Upstream Denmark (TUDK) engaged Flare Solutions to help with the integration effort.

Key Benefits

Flare Solutions' approach estimated to save Total Upstream Denmark several millions of euros in the first eighteen months of acquisition.

Ongoing benefits of a semantic search system, integrating many heterogenous stores, including SharePoint, eSearch, network drives and legacy systems.

Key Challenges

- Deal with the influx of huge data sets; understand what exists and what to do with it.
- Maintain daily operations; minimise disruption and maintain minimised risk
- Understand what vendor and seismic spec data Total were entitled to
- Simplify the management of the information.

Flare Solutions used its Folio application to scan the entire 320 million file dataset into a graph database and build a representation of the Maersk disks. This provided an understanding of the data landscape prior to integration. Folio presented a clear picture of the data: over 12,000 Petrel projects, more than 200,000 DLIS and LAS files, millions of reports and a huge quantity of application data.

The Way Forward

The Folio application was critical in deciding what should happen to the Maersk datasets. Several workflows were used to identify and categorise data.

Folio was used to perform searches across the entire dataset to identify vendor and seismic spec data where the data entitlements were in question. Once found, the data was grouped together, and a decision made on what should happen to that data; should it be migrated to the Total side or deleted?

- Folio's 'baskets' were used to partition data into 'Migrate', 'Archive' or 'Delete' categories according to its perceived value. Any critical data were migrated to the Total disks. Data that had value to Total but not in the immediate future were archived and data that had no value were deleted.
- Data from other data sources (including Livelink and eSearch) were linked to Folio to create a federated search environment.
- Personal or sensitive datasets were located by running focussed searches in Folio and the appropriate action taken.

Folio was also used to record a permanent audit trail of what happened to each item.

For around 1.3 million reports and datasets deemed to be of high value, Flare Solutions enriched these items with context tags (type of report or dataset) and geographical tags (well name, field, quad/block, country, basin) to ensure that future searches would successfully retrieve them.

Outcomes

Flare Solutions enabled several key outcomes for TUDK, including:

- Improved Understanding – categorised 320 million files and process them appropriately, whilst maintaining ongoing operations for subsurface users.
- TUDK has a dedicated search engine that can search over 320 million items in seconds. The enhanced tagging of key reports and data types has meant that search is also much more targeted.
- Using the Folio application proved to be a cost-effective way to understand and manage the incoming data from this large acquisition.
- There is a framework in place for building an effective information management system that will support current and future information needs.

Olivier Mairal, Head of Data Integration at Total, said

"The scope in terms of the data we had to deal with, from the Maersk OG acquisition, was huge. The time constraint to digest and expose the full content in parallel of the running operations was not compatible with a standard data management approach so we had to find an innovative and efficient approach. Using Folio from Flare allowed us to not only index more than 320 million records in a few months but at the same time expose them to full user community that needed this information to maintain operations. The indexation, sorting and exposure was very efficient, and we managed to 'connect' various sources such as Livelink, eSearch, and many disks from various regions into one single interface and search tool. The tool was also used to help data management activities during the clean-up exercise. In comparison and from parallel experience, a standard approach on a similar scope would have taken about 20 years to do this manually with one-person EFT and a significant saving in term of budget. The transition project was a success and delivered on time. My team did a great job, and Flare Solutions consultants and tools were also solid contributors to this success."

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Glenn Mansfield, Director at Flare, added,

"We are delighted to have worked as part of the Total team to deliver this project, and we're very pleased with the successful outcome. This illustrates the value of a knowledge-based semantic search system, enabling understanding of the content through automation, and delivering a solid foundation to support future integration and search developments."

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