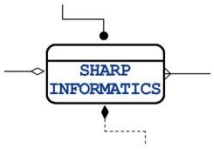

Sharp Informatics:

10 years National Institutes of Health consulting for Office of Enterprise Architecture

Sharp Informatics' proprietary algorithm, Natural Language Modeling, was utilized to interview over 100 Subject Matter Experts to establish the data architecture for NIH ($30+ billion annual research budget). The interviews resulted in data standards based upon existing national and international standards, including those for Research Grants and Contracts, which comprise the vast majority (90%+) of the NIH annual research budget.

Additionally, Natural Language Modeling was utilized in creating data models for new projects including External Person and Digital Identity (see below), Enterprise Architecture Repository, Grant Coding, and Population Tracking (demographics). NLM was indispensible in reviewing and validating data models for the various Institutes at NIH. These projects included high-level project and process, data warehousing, payment processing, biological material transfers, and service protocol improvement. Finally, NLM was taught to NIH, Department of Homeland Security, and Health and Human Services analysts in weeklong courses throughout Sharp Informatics' tenure.

2010-2011 NIH project work benefitted by Sharp Informatics' Natural Language Modeling:

The Enrollment of Vendors and Grantees (EVG) project identified a number of opportunities to share and automate common processes used by different programs to enroll vendor and grantee organizations. The project provided a complete architectural analysis of the processes, the information used currently and desired, and then developed the target architecture and a transition plan.

For one program alone, the team's findings will avoid more than $3.2 million per year in invoice processing costs, which is $1.7 million per year more than the savings originally forecast by the team. The EVG project team has designed these services to serve other NIH business processes and systems as well, further increasing the already significant project value.

As an additional value-added offshoot to the EVG project work, Sharp Informatics also established new rules that allow NIH to give permissions to a person's "digital identity" instead of giving permissions only to an actual human person. The result is that, in the future, organizations that interact with NIH will be able to assign specific NIH roles to their own employees.

Furthermore, this concept is currently being expanded to include the assignment of roles to NIH staff. The PIV cards that are required for access to designated spaces are a type of "digital identity" because a person may have more than one and each card requires assignment of specific permissions. Natural Language rules are being evaluated for automatic access to buildings depending upon such things as office location, manager's office location, projects' physical access requirements, etc. The use of a "digital identity" for physical access control and eventually for all computer access control will reduce staff time devoted to managing a "person".