

DATA QUALITY

IT'S YOUR DATA: HAVE SOME INTEGRITY!

A CASE STUDY ON SOFTWARE DATA AND INTEGRITY



For over 30 years, Emphasys HFA has been providing the affordable housing industry with innovative business management software. Our products and services include operational support for housing program management, financial tools to assist in managing multiple funding sources, and executive reporting systems that keep key managers focused on overall agency performance. By providing superior functionality and forward-thinking technology, we help organizations streamline daily business processes and improve productivity.

The HFA division has three offices to serve its clients: Miami, Florida; Charlotte, North Carolina; and Emeryville, California. With locations on both coasts, Emphasys offers its clients the convenience of extended software support hours.

As a full-service technology vendor, Emphasys Software assists clients with modernizing their business systems, maintaining mission-critical applications and data, and planning for future growth.

“Poor data quality is a primary reason for 40% of all business initiatives failing to achieve their targeted benefits.”

Ted Friedman, Gartner¹

- APPROACH -

Leverage capabilities from Emphasys Software Multifamily Suite to increase data entry productivity, data integrity, process automation.

- UTAH HOUSING CORPORATION BACKGROUND -

Utah Housing Corporation (UHC) was created in 1975 by the Utah legislation to serve a public purpose in creating an adequate supply of money with which mortgage loans at reasonable interest rates could be made to help provide affordable housing for low and moderate income persons.

- UTAH HOUSING CORP. PROGRAMS AND RESOURCES -

- Housing Credit Allocation
- Compliance/Asset Management
- FHA Risk Share

- SNAPSHOT OF UHC LIHTC PROPERTIES -

- 434 Projects; 21,969 LIHTC units; 24,096 Total Units
- 159 Small Projects (25 or fewer units) or 37% of all projects
- 63 Senior Projects or 15% of all projects
- 109 Acquisition/rehabilitation projects or 25% of all projects
- 21 Chronically homeless projects for a total of 948 units
- Approximately 602 additional set-aside units for homeless
- Approximately 7,000 units set aside for other special needs

- SOLUTIONS & SERVICES -

- Emphasys Software® Multifamily Compliance
- Emphasys Software® Multifamily Certification Portal
- Emphasys Software® Multifamily UPCS
- Emphasys Software® Multifamily eDocs
- Customer and Technical Support

THE CHALLENGE

Data and reporting are integral parts of the Affordable Housing Industry. Amidst Federal and Agency requirements and regulations, data integrity and timely reporting are crucial components to an agency's success.

Not unlike many other agencies, Utah Housing Corporation (UHC) faced challenges with the data integrity and validation framework their existing software solution provided. As a result of the improper validation structures, the agency found itself continuously correcting the data entered. This became a growing concern and UHC found itself under pressure to solve their greatest data challenges – inconsistency, redundancy, and inaccuracy.

The inconsistencies and lack of confidence in the data caused increasing frustration. This led to errors in tenant and project reports and annual LIHTC data submissions to HUD. As a result of the compromised data integrity, an otherwise straightforward process became strenuous and required constant correction of data (data re-entry), ultimately impacting accurate and timely reporting.

Additionally, when issues arose, UHC also found itself experiencing extended turnaround times and slow-moving system corrections, further slowing down an already delayed process. UHC realized that it had a growing need to create greater efficiencies and identify time-saving ways of maintaining data integrity while performing essential reporting functions.

The integrity of the data used to operate and make decisions about an agency affects the relative efficiency of operations. Protecting the integrity of the data becomes increasingly difficult as the size and complexity of the agency and its systems increase.

Poor data quality affects operational efficiency, risk mitigation and agility by compromising the decisions made in each of these areas. The ultimate goals were to (a) enhance productivity and ensure user confidence; and (b) empower business units to manage their own data—both the quality and the timing of its availability, which was crucial for non-compliance reporting.

THE OPERATIONS CYCLE

Planning and Requirements Gathering: Emphasys and UHC collaboratively defined the scope of the migration and data conversion to the new Emphasys Multifamily platform. Emphasys began by identifying the points of weakness and making sure that the adequate level of support and service was provided to UHC.

Emphasys staff worked closely with UHC to identify key business operations unique to the agency, appropriate system validations and an overall roadmap on how the system would function in relation to the specific needs of UHC. Through several requirement-gathering sessions, Emphasys developed a detailed and well-documented plan of all of UHC's software application needs.

¹ Gartner, "Measuring the Business Value of Data Quality", Ted Friedman, Michael Smith, January 2013

DATA CONVERSION

During a typical data conversion, the data on hand is migrated from the existing system to a new data repository (a/k/a database). The UHC data conversion process, however, was unique due to the lack of data quality and integrity. A specialized Emphasys team was assigned to the data conversion task. Data files were presented in an Excel format and contained a large amount of excess information, including inaccuracies, and lacked basic data integrity – adding an additional level of complexity to the conversion. To ensure accuracy in the conversion process, Emphasys worked closely with UHC and the project liaison to identify relevant information and assess the validations that would be cross-referenced to each of the captured data fields.

Data entry was not the only barrier in obtaining quality data; inefficient system validations tainted otherwise useful data. In the case of UHC, manual data validation was required. Existing data was missing critical dates, as well, dates overlapped in the system due to data integrity issues. Emphasys' specialists performed manual validations, comparing datasets, ultimately resulting in undetected data errors and omissions. Some of the issues corrected included:

- Overlapping dates showing two different households occupying the same unit, during the same timeframe
- Missing critical dates such as Move-In or Move-Out dates
- Re-certification dates that were more recent than Move-Out dates
- Unit Transfer-Out data in old unit available, but, missing unit Transfer-In data for the new unit
- Unit Transfer-In data in new unit was available, but, missing unit Transfer-Out data for the old unit

TRAINING AND IMPLEMENTATION

The scope of project for the Multifamily Suite implementation defined an expected 5-Phase/1 Year completion mark.

- The initial product installation and configuration was completed in January 2014
- All data conversion was completed by end of April 2014
- On-site UHC staff training completed in May 2014
- First wave of property introduction (100 projects/11 management companies) completed in June 2014
- Last wave of property introductions (63 projects/38 management companies) completed in January 2015

EXPERT TIP



Establish and put in place clear roles and responsibilities to ensure accountability for data quality. There should be “data owners” for the different data segments. Data owners are the ones who know the agency’s data the best, such as system users. Also, develop and implement best practice policies and procedures to consistently check data. *Emphasys can help establish data control practices, ensuring data integrity.*

The Multifamily Compliance module went live on June 2014 with an additional subset scope for introducing properties. The first wave included management companies who had previous experience with the Emphasys Certification Portal (“CP”), larger portfolio sizes and XML capabilities. With each property wave, Emphasys and UHC worked closely by providing property managers with the necessary training on CP. The success of each phase is credited largely to the phased training. Also included in the implementation and training phase was the addition of Financial Templates (December 2014).

Accurate Federal and Agency requirements testing, tracking and monitoring was essential, as system migration did produce a gap in data entry as of January 2014. Emphasys again assigned a specialized team to work with the agency in expediting the process and the required templates for the reporting of tenant data for 2014, making any necessary corrections due to the “bad” data in the old system.

RIGHT SOLUTION/RIGHT STRATEGY

During the initial discovery phase, our focus is heavily concentrated on various dimensions of quality to include Completeness, Consistency, Duplication, Integrity and Accuracy. A critical part of our organization, **Emphasys Consulting Services**, consists of a diligent team of developers and business analysts, who determine the underlying root cause of deficiencies in the agency’s existing systems and further develop a viable plan for the tools that will be used to address the findings- in the case of UHC, data quality and integrity.

TAKE CONTROL OF YOUR DATA WITH EMPHASYS

So, how do you mitigate the risks involved and solve your greatest data challenges?

Each agency should follow the basic data governance principles. Coupled with a reliable operations plan, the *right* software can ensure that all data related activities result in **Complete, Accurate and Consistent** data — validated by a robust system of integrated rules.

Emphasys Software has the solutions—and expertise—to help you establish truly end-to-end data governance.



Visit www.emphasysdfa.com for more information on Emphasys Software Enterprise Solutions.