



Modernization and Industry Adoption

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Executive Summary

Our industry is changing. New technologies develop, new ideas evolve, and new standards emerge. The cause, of course, varies. Sometimes, change occurs as a disruptive technology that turns the industry upside-down. Sometimes, change occurs as the result of new regulations. Sometimes, business processes and architectures need to be brought up to current standards. Several recent changes that have occurred in the industry include the Uniform Closing Dataset (UCD), the Uniform Loan Application Dataset (ULAD), and the Uniform Appraisal Dataset (UAD). In modern times, we absolutely operate in an ever-changing environment, and keeping up with those changes is vital to ensure both regulatory compliance as well as to persist business continuity. Those that adapt well to change will rise to the top and, conversely, those that are unable to adapt will sink to the bottom.

Adopting required system enhancements and improved standardized architectures is not a thought that organizations relish but is necessary. The penalties for regulatory non-compliance can be costly both in terms of dollars paid in fines as well as reputational risk in a highly competitive industry. Industry-wide system enhancements must be adopted by the internal systems sending and receiving data so that direct integration is continued. The risk of not adopting the changes would mean that the impacted systems would no longer be able to make use of a direct integration with key industry stakeholders. Even though adopting required systems enhancements can be difficult, it is a vital part of continued business relationships and business practice within the industry.

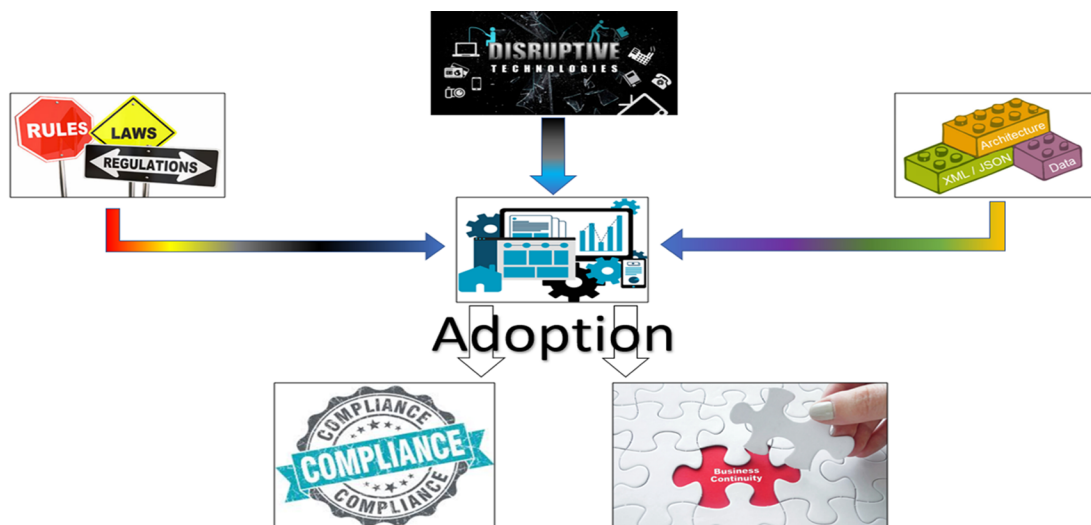
There are only a few available options to complete the work required to enhance impacted systems. An organization can either make use of internal employees, external contractors, or a combination of the two. Making use of both internal and external resources is usually the best option. External contractors can complete requirements gathering and coding enhancements more completely and in a timelier fashion than internal resources. With these steps completed, internal resources can absorb the testing and deployment effort as a part of their standard operations. Working together, internal employees and external contractors can adopt industry changes through system enhancements more effective than either party could do alone.

Industry Modernization

Modernization requires that new technologies develop, new ideas evolve, and new standards emerge. The cause can range from disruptive technology to a new regulation to simply bringing business processes and architectures up to current standards. Several recent changes that have occurred in the industry include the Uniform Closing Dataset (UCD), the Uniform Loan Application Dataset (ULAD), and the Uniform Appraisal Dataset (UAD). The one thing that is certain, regardless of why and what is driving the change, is that we operate in an ever-changing environment.

UNIFORM CLOSING DATASET

On October 3rd, 2015, federal regulation changed the mortgage industry. The TILA RESPA Integrated Disclosure (TRID) was made effective. In 2013, the Consumer Financial Protection Bureau (CFPB) had issued a new rule for industry adoption aimed at improving the loan settlement process for consumers. It was addressed the information and knowledge borrowers should possess before they get a mortgage and start making monthly payments. In effect, TRID combined two laws that managed the mortgage process: the Truth-in-Lending Act (TILA) and the Real Estate Settlement Procedures Act (RESPA). In doing so, the CFPB added transparency to the mortgage process. TRID also reduced the required disclosure documents. The Good Faith Estimate, Truth-in-Lending Statements, and the HUD-1 Statement would now be replaced by the Loan Estimate and the Closing Disclosure. Additionally, Freddie Mac and Fannie Mae (the GSEs) developed a joint UCD with identical technical specifications to facilitate the collection of closing data. As the investor, collection of the UCD is required on every loan purchased by the GSEs (with limited exclusions) in order to provide a more thorough analysis of a loan's credit risk. UCD is a recent example of how regulation and business processes can drive industry-wide changes.



UNIFORM LOAN APPLICATION DATASET

At the direction of the Federal Housing Finance Agency (FHFA), and in collaboration with industry partners and government agencies, the GSEs have updated the Uniform Residential Loan Application (URLA) and created a corresponding standardized data mapping – the Uniform Loan Application Dataset (ULAD). The redesigned URLA provides an easier, more consumer-friendly loan application. Unlike UCD, ULAD contains disparate technical specifications because each GSE uses URLA data to assess loan file submissions against their individual credit policies. As such, the GSEs will continue to maintain separate automated underwriting system (AUS) data specifications. Incorporation of the GSEs' automated underwriting systems requires the industry adoption of the GSE-specific updated technical specifications. The updated URLA and the corresponding ULAD provides examples of federal oversight directives that led to cascading impacts throughout the industry.

UNIFORM APPRAISAL DATASET

The GSEs, operating under instruction from FHFA, have undertaken the UAD & Forms Redesign initiative, which is a multi-year effort to update the appraisal dataset by aligning it with the current industry standard. Additionally, the venture will overhaul the appraisal forms to establish a more flexible, dynamic structure for appraisal reporting. The undertaking will not be localized to the appraiser community and will have rippling impacts throughout the industry. A few of the action items requiring industry completion to accommodate the enhanced UAD are:

1. An update from the 2.6 version of the Mortgage Industry Standards Maintenance Organization (MISMO®) reference model to a more current 3.x version will be needed.
2. The updated UAD technical specifications will need to be adopted by those industry participants wanting to deliver the updated XML.
3. Technology will need to be developed, which accurately creates the newly enhanced (and highly dynamic) Uniform Residential Appraisal Report from the 3.x XML.

Though these tasks are easy to write, they are not so easy of an undertaking to realize. They require in-depth knowledge of the UAD, a keen understanding of MISMO® data structures, and the ability to comprehend the GSE technical specifications. Couple these with the ability to programmatically edit the appraisal system, and you have the minimum skill set required to fully adopt a portion of the changes the UAD & Forms Redesign initiative will require.

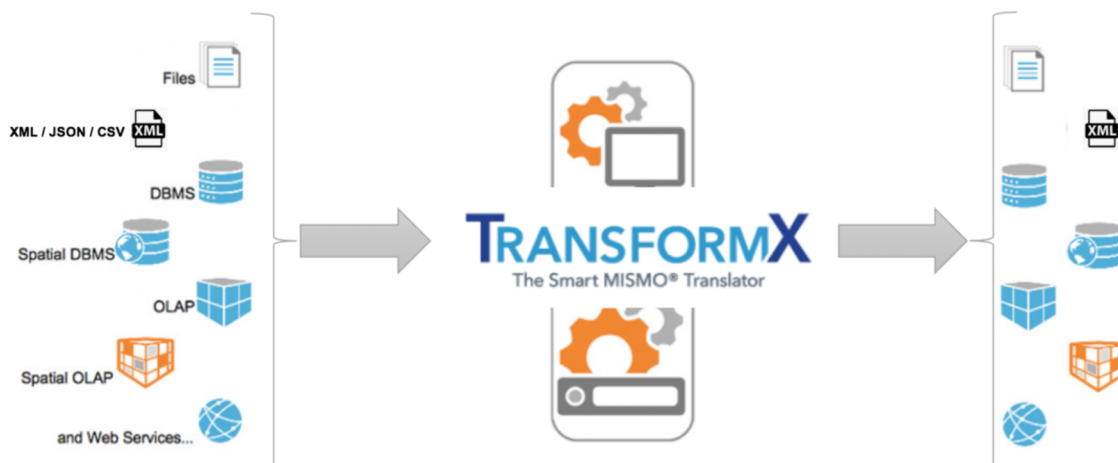
Data Modernization

EXTENSIBLE MARKUP LANGUAGE (XML)

As time progresses, even standardized architectures will adapt to become more effective and to keep up with an ever-changing business environment. For example, when comparing the business reference model maintained by the MISMO® to older versions, quite a lot has changed. The earlier versions use a Document Type Definition (DTD) to define the tagging structure of an XML document. The newer versions make use of an XML Schema Definition (XSD) to define the complex types of that same XML document. Neither approach is wrong. Both architecture models make use of technology, knowledge and business need that existed at the time the models were created. To continue to meet the needs of the business, even standardized data models can (and should) change with the times.

JAVASCRIPT OBJECT NOTATION (JSON)

In addition to the enhancements made to the MISMO® model, new data serialization formats are being made available and have become more prevalent in today's industry. In recent years, more and more industry participants are starting to make use of JSON for their data delivery needs. JSON files are similar to XML in that they are hierarchical, can be self-describing, and can be parsed by many programming languages. Conversely, a few of the key differences are that JSON is generally shorter, can make use of arrays, and is quicker to read and write. Depending on the business need, JSON might be a better data transmission medium than XML. JSON usage has grown rapidly throughout the mortgage industry as more industry players leverage APIs to share data. To accommodate the changing industry needs, MISMO® has formed the JSON Development Workgroup, which will create guidelines for implementing JSON in both business-to-business and business-to-consumer environments. JSON is newer than XML and appears to be here to stay. Because of its lightweight characteristics, JSON has been experiencing increasing popularity for delivering data throughout the industry.



Industry Adoption

ADOPTION PROCESS

With each macro-level systems change within the GSEs, the federal government or within MISMO®, the industry must go through the exercise of:

1. Understanding the new requirements
2. Assigning resources to develop the solution
3. Testing the results to make sure it solves for the new requirement
4. Incorporating the changes into an already busy deployment schedule



This process model has been relatively standard for decades. There are an infinite number of steps associated with each and there are numerous project management methodologies to achieve the end result, but, at a fundamental level, this is what every organization goes through in order to realize each required change. Each of these changes have an inherent, associated prioritization cost but it is a necessary price to enable the impacted party to continue to operate in their field.

ADOPTION REQUIREMENTS

Adopting required system enhancements and improved standardized architectures is not a thought that organizations relish but is necessary. When new regulations are implemented, there is usually a substantial amount of time for the impacted systems to be updated to ensure continued compliance with the new legal requirements. The penalties for non-compliance can be costly both in terms of dollars paid in fines as well as reputational risk in a highly competitive industry. GSE system enhancements often have upstream and downstream impacts. The enhancements, often incorporating global changes to both request and response files, must be adopted by the systems sending and receiving the data so that direct system to system integration can be continued. The GSEs also give a significant amount of time and numerous notifications so that industry organizations have ample time to integrate the necessary updates with their internal systems. The risk of not adopting the changes would mean that the impacted systems would no longer be able to make use of direct integration with the GSEs. Even though adopting required systems enhancements can be difficult, it is a vital part of continued business relationships and business practice within the industry.

An Alternate Approach

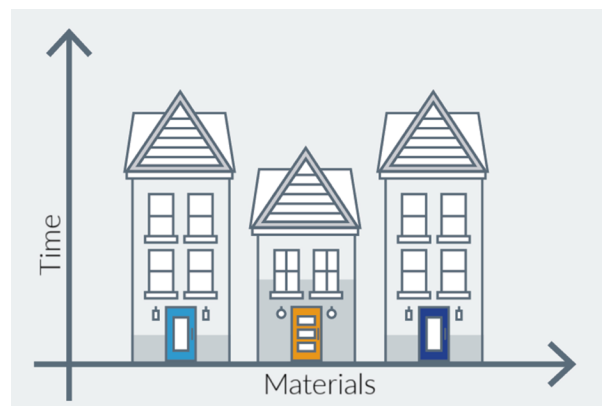
As with many things that occur, there’s always an alternate approach to achieving a business need. Usually, the alternate plan is just as costly and time consuming as the original; but what if it wasn’t? What if there was a way to implement enhanced system architectures, update to changing GSE requirements, or making regulatory updates quicker and cheaper than is done today? What if there were a way to upgrade to new versions of MISMO® without having to read and understand all the supporting engineering guidelines? What if software could be developed that could support any version or design of XML or JSON as inputs or outputs? What if resources were standing by waiting for you? Sounds too good to be true, right? Let me be the first to tell you; it’s not!

SPECIALIZED CONSULTANTS

Specialized consultants are often hired by organizations to assist with achieving specific, short-term business objectives. Be warned that not all consulting firms are created equal, so do your research. One in particular that has historical success with being able to come in, quickly assess an organization’s need, and produce quality results is **Actualize Consulting**. They are truly an industry leader in the management and automation of financial functions and corporate financial events. So, what makes Actualize different than other consulting firms? They are already engrained in the mortgage industry. Their mortgage consultants often already know the impacts of systematic and regulatory changes well in advance. Their software solution, **TransformX**, can solve any data movement, control or translation need. It is scalable yet light-weight enough that it can be deployed as a local or cloud-based service used by other, larger software packages. This methodology allows for white label deployment of TransformX, so it becomes completely transparent to an organization’s existing clients. From an existing Actualize customer, *“We’ve really enjoyed working with the Actualize team and appreciate that they are a nimble team, able to move quickly, and communicate effectively. We would definitely recommend the team to others in the future.”*

COSTING

Hiring specialized consultants is not free; however, with the right consulting firm, it can cost less than it would to do the work in-house. Recognizing that this is counter-intuitive, a bit of explanation is in order. As an overarching tenant, overall cost is a function of time and material. If a car needs a repair or the garage needs to be painted, it is often cheaper to take on the effort yourself rather than hire a professional. The trade-off is time.



A professional can get the job done quickly, but there is a premium charge for their time. Handling these jobs in-house can be cost effective because labor charges are negligible, so the final charged amount is just the cost of materials. In contrast, in the professional working environment, the vast majority of costs are going to be in labor as opposed to materials.

That is where **Actualize Consulting** can help. Their experienced MISMO® certified professionals are already aware of industry changes and what, exactly, needs to be done to achieve those changes. Commercial off the shelf software already exists that can be embedded transparently within an existing system. So how, exactly, does this help? Time spent gathering requirements and time spent coding is kept to a minimum. The remaining functions to be completed are testing and deployment. Both of the remaining functions require staff that will have to do work, but it should not be anything outside of their normal business process; therefore, the cost associated with each should not increase over normal operating costs for those same teams.



Though it may seem counter-intuitive, do not discount hiring specialized consultants to assist with a short-term need, as their expertise can prove to make the overall project extremely cost effective.

ACTUALIZE CONSULTING

Actualize Consulting's Mortgage and Fixed Income

practice is an industry leader focusing on loan origination through securitization and ongoing servicing across multiple asset classes including mortgage, auto, consumer and commercial loans. Other offerings include compliance with Integrated Mortgage Disclosure Rules, MERS audits and MISMO® software certification. Expertise in all aspects of mortgages, systems, data governance and regulatory requirements enable the delivery of cutting-edge solutions. **TransformX** is Actualize Consulting's MISMO® certified software package. It streamlines data and transformation needs to ensure compliance with CFPB rules as well as GSE delivery requirements.

