RE-ENGINEERING THE ORIGINATION WORKFLOW

July 9, 2019
## CONTENT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE DIGITAL CLIMATE</td>
<td>3</td>
</tr>
<tr>
<td>THE CLOUDVIRGA SOLUTION: LET THE ORIGINATOR FOCUS ON THE RELATIONSHIP</td>
<td>4</td>
</tr>
<tr>
<td>POINT-OF-SALE TODAY: CONSUMER PORTAL</td>
<td>6</td>
</tr>
<tr>
<td>WHAT A POINT-OF-SALE REALLY NEEDS: BACK OFFICE AND ORIGINATOR AUTOMATION</td>
<td>8</td>
</tr>
<tr>
<td>“The Art of the Deal” – Deal Structuring</td>
<td>9</td>
</tr>
<tr>
<td>Automated Initial Disclosure Generation</td>
<td>12</td>
</tr>
<tr>
<td>Appraisal Management</td>
<td>14</td>
</tr>
<tr>
<td>One-Click Dual AUS</td>
<td>15</td>
</tr>
<tr>
<td>Eliminating Distractions</td>
<td>16</td>
</tr>
<tr>
<td>One Call Commit</td>
<td>18</td>
</tr>
<tr>
<td>BOTTOM LINE</td>
<td>19</td>
</tr>
<tr>
<td>NEXT STEPS IN BRINGING UNDERWRITING TO THE FRONT</td>
<td>20</td>
</tr>
</tbody>
</table>
THE DIGITAL CLIMATE

Now more than ever, businesses across all industries are focusing on customer satisfaction. Why? The digital age we live in has created a world where consumers hold more power, with more choices, and have forged a global referral network for just about everything. Whether one’s looking for a new home or a new pair of shoes, “shopping around” these days’ takes little to no effort at all. Amazon, Netflix, Uber, and many others have set a standard for ease of consumption that is shaping customer expectations across every aspect of life, including home buying.

A challenge faced by many lenders today is aligning volume projections to resource capacity. Interest rate fluctuations directly impacting loan volume and long-term cycle projections both weigh heavily on resource management. Volume decreases due to a higher level of competition, and smaller spreads have resulted in compressed margins. Lenders today are seeking ways to deploy technology to create leaner processes with increased automation in order to mitigate this macroeconomic risk.

Average mortgage production profits fell almost 50% year-over-year (YoY) to $367 per loan, in 2018. The combination of net marketing income1 and origination fees average dropped from 354 bps in 2017 to 332 bps in 20182. Future projections made by S&P Global Market Intelligence, based upon economists’ consensus expectations for interest rates, unemployment, and economic growth, suggest that margin compression will continue to be a factor as financial institutions brace for impact of a possible downturn on the horizon. This banking report suggests the key levers in driving noninterest expense lower over the next five years to mitigate this risk will be scale and technology3.

Everyone can agree, there’s plenty of room for improvement in the industry. Companies are going to great lengths to invest in technology in order to maintain market share. In 2018, technology spending alone was close to 10% of total expenses4 across the industry, according to the Mortgage Bankers Association (MBA).

So how do lenders combat margin compression while maintaining or growing market share? And why are lenders not seeing a return on their Point-of-Sale investment? One conclusion is that while digital applications save time for the consumer, they do not necessarily make the lender more efficient. In fact, an increase in application intake without process efficiencies could increase the cost per loan, which the market currently reflects. As reported by the 2018 Mortgage Bankers Performance Report, the average per loan production expenses have increased over $1,000 (14.8%) since 2016.

1 Includes the gain or loss on the sale of loans in the secondary market, pricing subsidies, and overages, as well as capitalized servicing and servicing released premiums


THE CLOUDVIRGA SOLUTION
Let the Originator Focus on the Relationship

Cloudvirga allows nothing to get in the way of client success. It has one goal: solve problems for the lender. In doing so, problems are solved for the borrower, originator, processor, underwriter, and closer. How does Cloudvirga solve problems? By reimagining the mortgage process for borrowers and originators with a single system to do what takes hours or days, in minutes. And when it’s all said and done, the lender is given the tools to make sure the borrower gets to the closing table on time and in the right product.

What do borrowers want? At the end of the day… trust. Trust that the originator is acting in their best interest.

How do originators build trust with a borrower they just met? The ability to aggregate information quickly and effortlessly, provide precise answers up-front, and keep promises along the way.

To do so, originators need more than just the ability to take an application or allow the consumer to complete one on their own. A digital platform that empowers consumers to fill out online applications, e-verify assets, and upload documents is a good start, but it doesn’t create the complete borrower story. The full story includes third-party services, direct source pricing and fees, in-depth deal-structuring calculations, and intelligent workflows to piece it all together into one harmonious experience so the originator can effortlessly do everything in one system regardless of the application intake method.

The Problem: Borrowers want a painless application process with limited touchpoints, and originators want to give them the best experience possible. Originators spend time collecting the borrower’s information and building a relationship only to toss the file down the assembly line to the next associate. This business model has made sense for years because the pipeline generator shouldn’t be bogged down by administrative tasks. However, as technology emerges to automate these administrative tasks, why pass the file down the assembly line at all? Why not just give the originator the tools necessary to close the deal?
The Cloudvirga Solution: Bring the back office to the front by equipping the originator and/or borrower to do the following:

- Complete Loan Application
- Run Credit
- Create Consumer Portal Account
- View/Manage Needs List
- eVerify Assets, Income, and Employment
- Structure the Deal (i.e., FHA, VA, MI, Conv, Gift Funds, Seller Credits, etc.)
- Compare and Deliver Deal Scenarios via Loan Detailed Report
- Generate Pre-Approval and Pre-Qualification Letters and eDeliver to Borrower
- Run One-Click Dual AUS
- Lock the Rate/Request a Concession
- Check for Compliance
- Borrower eConsent
- Generate Initial Disclosures and eDeliver to Borrower
- Order Appraisal Report and eDeliver to Borrower

Implementing Cloudvirga’s Point-of-Sale has enabled us to improve the user experience for both our clients and loan officers by moving them into a functional online platform. We have also been able to lower our cost per loan by having the portal handle the tasks that are normally done by a loan officer assistant and achieve new efficiencies in several other positions.

— John Sherman
American Financial Network, Inc., President
There is no question the mortgage industry is adapting rapidly to consumer demands. In the market today, the Point-of-Sale system is considered to be the piece of technology that interfaces with the consumer to create a better overall experience. Cloudvirga’s Consumer Portal begins with the consumer creating a secure account branded by the lender. The consumer then completes the highly dynamic digital application in minutes. The Consumer Portal acts as the communication channel between the lender and borrower. The portal allows the consumer a line of sight into the lifecycle of the loan by displaying status updates and task lists to inform the consumer of outstanding items required. Cloudvirga builds rules specific to lender requirements that automatically populate specific tasks to the Borrower’s Needs List keeping the consumer informed with no effort at all for the originator. The Point-of-Sale seamlessly integrates to the Loan Origination System (LOS) without any manual file upload, and data from the LOS feeds back into the Consumer Portal so that the borrower can view real-time updates.

The reality is LOS’s were not built for speed, agility, or visibility, but consumers need all of the above. Cloudvirga’s consumer experience focus is to create a system that simplifies the application process so that consumers complete the application with minimal effort and virtually begin processing their loan. The digital application dynamically adapts to consumer data, asking only for relevant information. The consumer can consent to eVerify their assets, income, and employment directly in the application reducing the hassle of tracking down documents. The consumer can order their credit report during the application at the discretion of the lender. The portal also contains a DocVault where the borrower can upload and view documents in one secure location. Due to One-Click Dual AUS integration, the consumer can receive a pre-approval before the originator even touches the LOS. Immediately after signing initial disclosures within the portal, the consumer is directed to purchase their appraisal.

So what?

Cloudvirga’s Point-of-Sale system puts the consumer in the driver’s seat, while simultaneously freeing up the origination team to manage their pipeline more efficiently. The reduction, or even elimination, of bottlenecks, allows originators to focus on higher value activities that generate top line growth.
How Does Cloudvirga Compare to the Market?

In a highly competitive mortgage market, a user-friendly consumer portal and application are paramount to a lender’s success. Many competitors in this space have developed exceptional functionality that allow the borrower to complete an online application. Previous online mortgage application could consume 60+ minutes of a borrower’s time, often leaving them confused and frustrated.

Cloudvirga compares pretty evenly with the market across Point-of-Sale functionality and believes this portion to be critical to growth; however, best utilized when paired with downstream efficiencies.

Cloudvirga believes true cost savings is realized by effectively managing the minutia. In other words, it requires building a system that intuitively and dynamically reacts to even the smallest details of the transaction to make loan structuring as simple as possible for the originator so they can focus most on building the relationship. With this vision, Cloudvirga has designed a system that serves as not only the traditional Consumer Point-of-Sale but also the Originator Point-of-Sale. The Originator Point-of-Sale handles Product, Pricing and Fees leveraging direct-source data, One-Click Dual Automated Underwriting System (AUS), Rate Locks and Concession Requests, Disclosure Generation and Sending, and Appraisal Ordering all in under 10 minutes.
WHAT A POINT-OF-SALE REALLY NEEDS

Back Office and Originator Automation

Cloudvirga’s extensive Consumer Portal capabilities are coupled with unique features available to the originator that truly differentiates itself from other Point-of-Sale systems. The thesis is automating the minutia in order to compress as many activities toward the front to provide the originator the best opportunity to accurately structure a loan quickly and effortlessly. Cloudvirga believes this will help lenders decrease their cycle times while increasing their pull-through.

Cloudvirga is by far the most advanced POS on the market today, leveraging simple navigation, ease of use and automation to provide a thoroughly modern consumer experience as well as the most efficient originator experience available. We have already seeing tremendous benefit from consumers no longer abandoning applications, increased capacity for our field as a result of reduced times to complete front-end tasks. More than that, we are enjoying significant operational pickup and accelerated decisioning due to the quality and completeness of files created in Cloudvirga.

– Dan Mulberry
Envoy Mortgage, CIO
Cloudvirga provides an extensive Deal Structuring platform that separates itself from the Point-of-Sale market. Cloudvirga has the unique ability to build a complete deal in seconds, eliminating the need for originators to make manual calculations while on the phone with the borrower. Once the borrower completes the application, the following data points are at the originator’s fingertips with the click of a single button:

- Maximum VA/FHA Loan Amount by County
- Direct Source Up-Front Mortgage Insurance Premium (UFMIP)
- VA Funding Fee
- FHA/VA Eligibility
- Verification of Assets (eVOA) Eligibility per Product
- Pricing Eligibility
- Direct Source Mortgage Insurance Pricing and Fees
- Internal Lender Fees
- State Specific Fees
- Product Specific Fees
- Branch Specific Fees
- Direct Source Appraisal Fee Matrix by Loan Product
- Direct Source Third-Party Fees
- Direct Source Taxes, Insurance, and Per Diem
- APR Calculations
- Full Savings Analysis
- Proposed Front- and Back-end DTI per Product Type
- Reserve Calculations
- Auto-calculated Net Cost to the Borrower
- Details of Transaction Summary
- Cash To or From Borrower

In seconds, the originator received all applicable external pricing and third-party metrics directly from the source resulting in accurate and compliant deal creation as opposed to best estimates. Cloudvirga is equipped to support every permutation of unique borrower scenarios for a first and second mortgage. Providing this assurance for the borrower increases customer satisfaction and ultimately trust in the lender.

“Our product was designed to give the originator the power to deal structure, present program and rate options to the consumer, lock, disclose, order the appraisal all in one platform alongside their customer. It eliminates the need to go in various systems and multiple touch points to complete the sale.”

– Tim von Kaenel
Cloudvirga, CPO
For the visual learners, Cloudvirga provides a Detailed Loan Comparison Report that can be sent to the borrower prior to any disclosures being sent. Each report can contain up to five different products and includes the following details for each product:

1. Rate Type and Term
2. Principal and Interest Payment
3. Interest Rate
4. Annual Percentage Rate (APR)
5. Points as Dollars and Percentage
6. Total Estimated Monthly Payment
7. Total Estimated Closing Cost paid by Borrower
8. Estimated Lender Costs
9. Estimated Third Party Costs
10. Pre-Paid Interest
11. Homeowners Insurance
12. Property Taxes
13. Total Credits

The report also contains loan level information such as:

1. Loan Type
2. Purchase Price
3. Down Payment
4. Loan Amount
5. Loan Amount/Property Value (LTV)
6. Property State
7. Property Type
8. Number of Units
9. Credit Range
10. Occupancy Type

This tool allows the borrower to follow along with the originator through various loan scenarios as if the two parties were sitting right next to each other. In addition to the loan level data is a Glossary of Terms, Originator Credentials, links to the online application and originator website, and proper disclosures to ensure regulatory compliance.
An application is part of the origination process, but only a small part. Originators need much more in order to truly seal the deal than just having a borrower complete an application. For example: What are the terms? Does the borrower qualify under these terms? What programs are best for the combined specifics of that borrower? There are so many questions that go beyond the application that need to be answered to truly get a borrower into the right and perfect loan. The ability to do so up-front reduces the likelihood of a counteroffer weeks into the loan process.

For Cloudvirga, “The Art of the Deal” lies in the fact that there’s no “art” to it at all. Priding themselves as “fool-proof,” Cloudvirga derives every calculation directly from the source – no assumptions required. In addition, guardrails are in place from the first data entry to the LOS export to ensure Product, Pricing, and Fees update each time a loan parameter changes. All in all, Cloudvirga believes deal structuring is the crux of the application process, and they set out to make it as easy as possible so the originator can focus solely on the borrower.

“I am convinced Cloudvirga is the piece of the origination puzzle that’s been missing for all loan officers. The smart consumer portal provides a simple, user-friendly, 10-minute application process for our borrowers, and our loan officers now have an origination environment they can efficiently navigate through with speed and confidence... Cloudvirga is a game-changer for us.”

Carolyn Blondin
Fairway Independent Mortgage Corporation, Branch Training Director
Automated Initial Disclosure Generation

Cloudvirga believes the single most important function of a Point-of-Sale system is the ability to truly capture the consumer. In interviewing multiple originators from two of the Top 25 Lenders, a major factor in capturing the consumer is delivering the disclosures to the consumer as quickly as possible. The thought process: the faster they receive disclosures, the less time they spend shopping with other lenders. Cloudvirga eliminates the need for an Initial Disclosure Desk by allowing the originator to confidently generate and send disclosures. This is possible due to the enhanced deal structuring capabilities and the ability to lock the loan directly from the Point-of-Sale.

Understanding the hesitation lenders might have in allowing originators to send initial disclosures, Cloudvirga’s goal is to minimize or even eliminate the risk in order to enable this ability for the originator. In doing so, the originator automatically generates the complete initial disclosure document package custom to borrower-specific loan attributes. While the initial disclosure package is generating, a pop-up appears to the originator for one-touch access to the Borrower Need’s List so that the originator can walk through the consumer’s outstanding items. In doing so, the borrower follows along with the originator in the Consumer Portal, which the borrower must eConsent in order to view allowing an opportunity for the originator to discuss the benefits of eDisclosure. The seamless, up-front capturing of eConsent saves time and money in two ways:

- **Encourages borrowers to eSign, reducing cycle time and cost per funded loan**
- **Reduces the number of incomplete applications requiring paper disclosure fulfillment**

It is these microscopic, yet critical, details that are woven into the fabric of the Cloudvirga experience that impact the bottom line.
Before the initial disclosure document package is generated, the system runs a full validation of fees (including missing required fees), Section 32 (HOEPA) & 35 (HPML) compliance, and government loan compliance in the background. Automating quality assurance reviews allows lenders to feel comfortable empowering their originators to generate and send initial disclosures. The result of this is fivefold:

- Mitigated risk of outdated pricing and fees, minimizing tolerance cures
- Reduced time borrower waits after initial contact to review disclosures
- Increased personal experience via direct emails from the originator, rather than standard bank-wide email
- Reduced risk of the borrower not seeing email due to delay or spam folder resulting in less paper mail
- Enhanced communication channels as originator walks-through the disclosures with the borrower over the phone at first contact

Beyond this, the borrower receives a cohesive end-to-end experience with someone he or she is familiar with, resulting in increased customer satisfaction and pull-through. Not to mention, most of the information on the Loan Estimate has already been explained and discussed via the Detailed Loan Comparison Report. The borrower can then eSign his or her documents and move forward to officially lock in the loan terms.

Cloudvirga reduces the need for a Disclosure Desk by allowing the originator to send initial disclosures to the borrower on the first phone call if they so choose. This methodology is paramount in the building the relationship between borrower and originator. The borrower is not left alone to decipher anything for themselves; rather, the originator is able to answer any questions in real-time all the while developing trust with the borrower by delivering on their word from the very beginning.

- Mitigated risk of outdated pricing and fees, minimizing tolerance cures
- Reduced time borrower waits after initial contact to review disclosures
- Increased personal experience via direct emails from the originator, rather than standard bank-wide email
- Reduced risk of the borrower not seeing email due to delay or spam folder resulting in less paper mail
- Enhanced communication channels as originator walks-through the disclosures with the borrower over the phone at first contact

We have guardrails automated by loan product types to make sure that, even though we’ve automated certain functions, our lenders still have protection by satisfying compliance, product and guideline requirements.

– Kyle Kamrooz
Co-Founder

Section 32 is part of Bank regulation Z and is part of the Truth in Lending requirements for Home Ownership and Equity Protection Act (HOEPA)

Section 35 is part of Bank regulation Z and is part of the Truth in Lending requirements for High-Priced Mortgage Loans (HPML).
The natural progression after the borrower signs the initial disclosure is for the processor to order the appraisal. Cloudvirga has built-in technology that not only enables the originator to order the appraisal, but also the borrower. Cloudvirga’s appraisal matrix retrieves accurate fees by property and product type directly from the source allowing this to be possible. As soon as the borrower completes signing his or her documents, they are directly taken to the appraisal ordering screen to input their payment information and submit the order. Not only can the borrower order their appraisal, but he or she can view the status of the appraisal and receive delivery of the appraisal in order to initiate the Equal Credit Opportunity Act (ECOA) clock on the loan.

This is a paradigm shift for many lenders, however, Cloudvirga sees enormous value in this methodology. Allowing the originator, or even the borrower, to order an appraisal the same day he or she submitted the loan application reduces the per-loan cost for many reasons. Most importantly, it demonstrates the lender’s sense of urgency that often influences the borrower to match, creating a complete loan file earlier in the process, minimizing cycle time to close. Secondly, inviting the borrower to spend money to complete an action increases the commitment that much more. The likelihood of retaining that borrower is much higher than a borrower who has only signed disclosures. Thirdly, the automatic appraisal delivery to

the borrower, initiates the ECOA clock eliminating potential barriers to close later in the process. Lastly, the time savings alone and redeployment of energy for the processors will reduce costs and increase productivity.

A secondary advantage when allowing the borrower to order their appraisal is that most borrowers feel more comfortable inputting their own payment information online than sharing it with a person over the phone. Origination systems are required to retain all loan file information in accordance with the Government Sponsored Entities (GSE’s) Seller’s Guide, however, conflicting payment processing regulations require credit card information not be stored in such systems. As such, a common practice for originators is to record the information on sticky notes, potentially mishandling the borrower’s information. Regardless of whether the borrower orders their appraisal or the originator on behalf of the borrower, Cloudvirga is set up to reduce this risk by processing third-party payments through a secure integrated channel. As a result, the borrower and lender can rest assured their information is protected.

Cloudvirga uses technology in two ways: 1) to empower the borrower and originator, and 2) to reduce compliance risk. In a sense, there can’t be one without the other. Technology has evolved over the years that, in many ways, provides quality control without human oversight. Cloudvirga recognized this and reimagined the way mortgage lending should flow as if we lived in a perfect world. The thesis is the activity compression on the front end creates a more efficient back office. Understanding that our world is not perfect, Cloudvirga’s technology protects the borrower, lender, and investor by creating guardrails throughout the entire process, while still empowering the borrower and originator to drive the deal.

---

8 Not currently in production environments
9 Part 1002, EQUAL CREDIT OPPORTUNITY ACT (REGULATION B) Section 1002.14. Rules on providing appraisals and other valuations.
10 Payment Card Industry (PCI) Data Security Standard, v3.2.1
Cloudvirga seeks to maximize outcomes while minimizing effort. The ability to run One-Click Dual AUS submissions for Fannie Mae and Freddie Mac simultaneously not only shaves off time for the originator, but it also increases the odds of identifying the best fit product for the borrower. Put yourself in the shoes of an originator on the phone with the borrower trying to avoid awkward pauses and build rapport. More likely than not, the originator has a “favorite” GSE that he or she will run their loan through to find a product that fits. Cloudvirga’s technology eliminates the hassle of logging in to separate, external websites and going through the motions for both Desktop Underwriter and Loan Product Advisor. Not only does it run both GSE’s concurrently, but once clicked the originator can continue navigating the loan center while discussing options with the borrower and will receive a pop-up message when the results have returned providing an effortless AUS experience.

When coupled with verification of assets, income, and employment, one-click dual AUS provides the quickest way to receive Day 1 Certainty (D1C) and/or Loan Advisor Suite (LAS). Running both AUS’s simultaneously increases the chances the borrower will receive GSE validation and property inspection waivers while minimizing the originator’s clicks in the system and saving time. According to a Freddie Mac Technology Account Manager in a panel discussion at the NEXT Women’s Mortgage Tech conference, “the one-click dual AUS system doubles the chances of appraisal waivers”11. In the same panel, it was noted that around 16% of homes qualify for property inspection waivers after being run through both systems resulting in potential days to closes savings, and appraisal cost savings to the borrower on average of $450.

In addition, Cloudvirga’s technology automates the review of both Desktop Underwriter and Loan Product Advisor findings reports and applies business logic and predictive analytics to determine the best product for each specific loan without manual intervention. Not only does this save time and resources, but in determining the best path and product for the loan up-front, it realizes potential cost savings for both the borrower and lender.

Cloudvirga’s intuitive platform eliminates distractions by way of automation. Built by originators, for originators, Cloudvirga has “mortgage DNA.” The primary focus is on making the sales role easier so the originator can concentrate on building trust with the borrower. By obsessing over the minutia, Cloudvirga removes dozens of activities that add up to take a massive load off the originator’s and back office’s shoulders that other systems don’t even come close to addressing but are key in the overall loan process.

- Maximum FHA/VA Loan Amount vs. Loan Limit Auto-Comparison by County
- Direct Source UFMIP Auto-Calculation
- One-Click Dual AUS
- eVOA Flag Indicated for Eligible Products
- One-Click Mortgage Insurance Pricing Quote Cascade
- Direct Source Third-Party Fees (Title, Settlement, Transfer Tax, etc.)
- Government Eligibility Auto-Analysis
- One Screen Dashboard Display
- Loan Detail Comparison Report Auto-Generator
- Dynamic Borrower Needs List Creation
- Active Re-Price and Recalculate Fees at Loan Lock and Payoff Change
- Dynamic Repricing & Fee Calculations as Key Loan Parameters Change
- Automatic Compliance Review
- Auto-Generate and Send Initial Disclosures
- Direct Source Appraisal Fee Auto-Calculation Specific to Appraisal Type
Below is the general path for what it takes to create an underwriter-ready FHA loan. Cloudvirga’s intelligent platform consolidates and automates dozens of individual tasks that collectively save a substantial amount of time for the back office, originator and borrower. This time study shows that a Cloudvirga originator could complete 27 underwriter-ready loans in the time it takes to complete one with a traditional workflow.
The R&D was collaborative. Cloudvirga asked top-performing originators from various companies to walk through their role and detail every single distraction no matter how small. Cloudvirga understands that time is precious across all roles, but even more so when the borrower is on the other end of the phone. There is a level of continuity that the Cloudvirga platform provides that is a direct result of focusing on the details, while at the same time understanding that one cannot satisfy every possible wish list item. In this sense, Cloudvirga kept to their core, which is not only automation but also the elimination of back-office costs by way of empowering both the originator and consumer. The extensive back-end intelligence paired with the user-friendly interface can best be described as “simply sophisticated.” In other words, Cloudvirga thinks, so originators don’t have to.

Cloudvirga has conducted time studies and determined that the automation and simplicity of Cloudvirga can save an originator close to four hours in originating an FHA loan. Less time clicking and calculating allows originators to be more attentive to the borrower and focus more on the client relationship, which translates to higher pull-through and better consumer experience.

One Call Commit

So what? This may all seem nice, but is it that much better than the current circumstance?

Let’s recap.

Cloudvirga provides the originator the ability to structure a deal with direct source data—no assumptions necessary. In addition, the platform automatically derives every calculation necessary to ensure the borrower is placed in the best possible loan product. The originator can generate a pricing comparison and send directly to the borrower to walk through various options. The originator can lock the rate. He or she can generate and send initial disclosures to the borrower. The borrower can sign the disclosures online, and immediately after order the appraisal. All the while, the originator never touched a calculator, a spreadsheet, or the LOS, and all in a fraction of the time it would take otherwise. This is reimagining loan origination.

Cloudvirga believes that each piece adds value on its own, but altogether, the value is compounded. Cloudvirga makes it possible to go from application to appraisal in less than 30 minutes on a single phone call. There’s no question Cloudvirga technology will drive cost savings for the lender, but what should not be overlooked is the top line growth opportunity. The One Call Commit capability gives the borrower the opportunity to put skin in the game after one touchpoint by ordering the appraisal, which reduces the chances of borrower shopping.
Cloudvirga performed an analysis on a representative client to understand KPIs from functionality derived from Cloudvirga’s platform. This analysis yielded results showing when Cloudvirga’s features were deployed into the client’s current process:

**ROI Analysis**

Cloudvirga is more than a traditional Point-of-Sale system. We believe to truly move the needle requires a full suite of capabilities not only for the borrower, but also originator. Leveraging the power of technology, Cloudvirga empowers originators to accomplish more in less time and with less effort. With features that truly move the back-end processing to the front, Cloudvirga has differentiated themselves from the market.

- Bi-directional Consumer Portal
- Advanced Deal-Structuring
- Direct Source Pricing and Fees
- Automated Initial Disclosure Generation
- Robust Appraisal Management
- One-Click Dual AUS
- In-Depth Auto-Processing and Decisioning
- One Call Application to Appraisal Capability
- Appraisal Management: Secure Payment Processing

Cloudvirga has mastered the minutia from application to appraisal. By streamlining this process, lenders can improve their overall efficiency, saving both time and money, while providing a better experience for the borrower.

**Decreased Application to Approval Time**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Reduced Touch Time**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**3 Year Cash Flow - Discounted**

<table>
<thead>
<tr>
<th>Discount Rate</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurable Benefit</td>
<td>$ 4,995,767</td>
</tr>
<tr>
<td>Expense</td>
<td>$ (3,759,143)</td>
</tr>
<tr>
<td>Net Measurable P&amp;L Impact</td>
<td>$ 8,364,923</td>
</tr>
<tr>
<td>ROI</td>
<td></td>
</tr>
</tbody>
</table>

Based on 12,000 Applications Per Month
Based on 6,000 Funded Loans Per Month
Industry and Client Based assumptions were used for the following:
Loan Cost, Loan Review, FTE Count, Overhead Cost, Pull-Through Rates, Application Rates, and Days to close, days to approval.
In Bringing Back-Office to the Front

As you begin strategizing for future growth, Cloudvirga urges you to consider the following...

1. **Know Your Workflow from Lead to Closing and Measure**
   Understand Your Strengths and Weaknesses on a Detailed Level

2. **Determine Your KPI’s**
   Identify Target Operating Model and Prioritize Gaps

3. **Be Tough on the Vendors**
   Require the Vendor to Learn Your Process to Ensure the Right Partner

4. **Look Underneath the Hood**
   Check Vendor References, Ask About Specific Cost Savings

5. **Beware of Shiny Objects**
   Look and Feel Matter, Functionality Matters More

6. **Don’t Solely Focus on the Consumer, Focus Also on Your Employees**
   Creating sustainable solutions that integrate downstream is just as important as providing a sleek, digital front-end for the consumer.

7. **People, Process, & Technology… It takes all three**
   An over-emphasis of one, and neglect of the others will lead to a misapplication of all three.
The Cloudvirga Intelligent Mortgage Engine uniquely combines a world-class borrower experience with an automated lender workflow that radically cuts overall loan costs, increases transparency and reduces the time to close a loan. Led by top fintech veterans with a proven track record of building successful mortgage technologies, Cloudvirga is committed to delivering software that reinvents the mortgage process for lenders and borrowers. The Cloudvirga customer base includes 9 of the nation’s top 40 non-bank mortgage originators, and to date, Cloudvirga has raised over $77 million from some of the country’s top lenders and private-equity firms.

For more information, visit www.cloudvirga.com or contact us at innovate@cloudvirga.com