Introduction & Background

Peter Micera

- **Eastern Software**
  - Mortgage and Consumer Lending Desktop Calculators
  - MS DOS based Mortgage and Consumer Lending LOS
  - MS DOS based LO Laptops
  - The first iteration of Empower

- **Dynatek Systems –**MorVision Mortgage LOS

- **Harland Financial Solutions -** The E3 LOS

- **Dark Matter Technologies as SVP Sales**
  - Successfully Selling Empower to Credit Unions, Banks, and Independent Mortgage Bankers
  - For Mortgage, Home Equity , Wholesale, Correspondent and Assumptions Channels

Today's Topics

- **Reviewing your current tech stack**

- **Key Factors in Evaluating New Technology**

- **Critical Vendor Attributes**

- **System Features to Compare**

- **AI & Automation Goals**

- **Process Changes to Maximize New Technology**

- **Successful Implementation Strategies**

- **Gaining User Buy-In**

- **Maximize ROI Post-Implementation**

Reviewing Your Current Tech Stack: Primary Systems

The two key components of a mortgage technology stack, are your digital Point of Sale and your Loan Origination System

Your Digital Point Of Sale

In a Retail Channel, this is your Borrower Experience

Does your Borrower Portal Provide:

- Modern, User-Friendly Interface
- Seamless LOS Integration
  - No Rekeying of Data
  - No Manual Upload of Docs
  - Single PPE & Fee Management
- Ability to Upload & **View** Borrower Docs
- Display Borrower-Facing Loan Conditions
- eSign Docs Directly in the Portal
- Real-Time Loan Pricing Updates
- Automated Text/Email Borrower Alerts

Your Loan Origination System

Are you using one LOS to support Mortgage, HE, or TPO?

Does your Loan Origination System Provide:

- Support for All Loan Channels and Products
- Flexible, Configurable Task-Based Workflow
- Seamless Integrations With **All** of your Service Providers
- Automated Service Orders Based On Your Business Logic
- Simplified Workflow Automation to Assign Work When Needed
- Advanced Business Intelligence, Analytics & Reporting to Monitor and Improve the Process
- Robust Document Image Management Platform
- AI-Powered Document Classification & Data Extraction

Reviewing Your Current Tech Stack: Ancillary Systems

What Technology do you use in the loan manufacturing process that resides outside your LOS?

Are You Using...

- **Third-Party Software such as:**
  - Doc Classification/OCR?
  - Image Storage/Management?
  - Third-Party Workflow Tool?

- **Third-Party add-Ons, Integrations, Rules, etc.?**

- **External Checklists, Notes, Word Docs, Spreadsheets?**

- **External Pricing Engine (OB, POLLY, etc.)?**

- **A Compliance Service?**

- **Any Websites or Apps Outside of the LOS?**

- **A Third-Party Document Vendor?**
  - Are All Edits Made in the LOS?
  - Or Must Some Edits be in Vendor's System?

- **A Manual Process to Create Any :**
  - Documents?
  - Texts or Emails to a Party on the Loan?

Any of these items are effectively part of your tech stack and you should look to consolidate as many as possible into your next LOS

Reviewing Your Current Tech Stack: Cost

Understanding your current Technology cost to compare to possible new systems?

Individual Cost Item:

- **LOS**
- **POS**
- **LOS/POS Integrations**
- **PPE**
- **Compliance Service/Report**
- **Document Providers:**
  - **Disclosures**
  - **Closing Docs**

Varying Fee Structures

Transaction Fee + Ancillary Fees

Typically per Application

Estimate your Annual Spend

Number of LO's or per app

Per Use/App

Per Disclosure Package

Per Closing package

Reviewing Your Current Tech Stack: Cost (Cont'd)

Understanding your current Technology cost to compare to possible new systems?

Individual Cost Item:	Varying Fee Structures
• Business Intelligence Tool	Normally a Monthly Fee (seats?)
• Document Image Management	Monthly Usage Fee
• Image Classification Service	Could be Based on Apps or Pages
• Third-party Built Interfaces, Add-ons, Workflow Automation, etc.	One-time Fees to Create + Ongoing Cost to Support/Update
• Is There a Cost to Access Your Data?	Could be a Monthly or Per Use Fee
• Data and Image storage	Typically, a Monthly Fee Based on Size

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Sample worksheet

Per Closed Loan Cost Conversion Worksheet						
Description	Cost per Aplication	Cost per month	Cost per year	Monthly per seat cost	Number of Seats	cost per Closed loan
POS Cost						
POS Integration/Update Support Cost Est						
LOS cost						
Pricing and Elligibiliity Engine (OB)						
Documents: Diclosures						
Documents: Closing						
Image Management Solution						
Automated Image Classification Service						
Est Spend Consultant/Third-party Featues						
Data access cost						
Data/Image storage cost						
Total Cost Per Closed Loan						
Clculations to arive at cost per closed Loan if presented with a pricing mdel that:						
Charges Per applicaion	(# apps per year x Per App Cost)/closed loans per year = cost per closed loan					
Charges Per Month	Monthly cost / average monthly closed loans = Cost per Closed loan					
Charges Per Year	Annual cost / annual closed loan volume = Cost Per Closed Loans					
Charges Per monthly seat license	(# of Seats x Monthly Per Seat Cost) / average monthly closed loans = Cost per Closed loan					

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Key Factors in Evaluating New Technology
Timing

- **When does your current LOS contract renew?**

- **Is your current LOS sunsetting?**

- **Does your LOS have an upcoming system conversion mandate?**

  - Will the effort involved be similar to an implementation?

  - What happens on the "drop-dead" date?

    - Option for Extension?

    - Fees Associated?

    - Is Access Denied – Can You Close Out Your Pipeline - But No loans?

- **Any plans to expand into products or channels your LOS does not support**

  - Timing for Go-Live

  - Interim solution/work around - for the short term

  - Is a proof of concept needed before committing?

Key Factors in Evaluating New Technology

Timing – Budget?

- **What is your budget process and what are the deadlines?**
  - What materials do you need to prepare your business case to get budget approval
  - Who needs to sign off/support your project
  - What are the different levels of approval required based on cost
- **If your budget request is approved, how long do you have to get the contract executed?**
  - If your budget expires at year end, consider that holidays have an impact on contract negotiation timing
  - If there are budgeted funds that need to be spent in a specific calendar year, include that in your strategy

Key Factors in Evaluating New Technology

Timing – when to start your search?

- **Work backwards to establish timelines**

  - How long to you need to close out your pipeline? Is 60 or 90 days enough time?

  - Depending on size and complexity, your new LOS might have a pilot period – build in pilot time (30/60/90 days)

  - Unless you are a larger lender with multiple channels or have need for significant customization, most LOS systems should take 6 to12 months to get to pilot

  - How long for your evaluation, system demos, due diligence and contracts? 60/90/120 days?

  - What Internal processes will affect timing – Board approval/meeting times, ISO vetting, Vendor Management/Onboarding, management sign-off, etc.? *What steps don't you know about?*

Key Factors in Evaluating New Technology
Timing – when to start your search? (Cont')

- **If your full live production deadline is 8/31/26** (Including time to run off pipeline)
  - If you plan on a 60-day pilot and 10 months to get to pilot, then you need to sign a contract by 8/31/25
  - If you plan a 90-day evaluation to get a decision and 60 days for due diligence and contracts, then your **evaluation start date is in March of this year**

Like with Home Construction it is always wise to plan for unexpected delays, staff changes, market conditions, Holidays, PTO, other IT projects, etc.

Key Factors in Evaluating New Technology

All - in - One vs. Best – of - Breed

All – in – One Pros

- One Contract to Negotiate & Sign
- One implementation project
- One contract renewal
- One Vendor to onboard
- No finger pointing when issues arise
- Typically, a very strong integration
- Lower cost with bundled pricing

All - in - One Cons

- Services may not be as robust as the Best - of - breed

Best - of – Breed Pros

- Each service is likely robust, as it is the vendor's primary focus

Best - of – Breed Cons

- Multiple contracts to negotiate/sign
- Multiple projects to coordinate
- Various contract terms & renewals
- Multiple vendors to onboard
- Issue resolution can be complicated
- Integration quality can vary
- Higher overall cost

Key Factors in Evaluating New Technology
Native Point-of-Sale vs. Third-Party

Features to Consider - Native

- Is loan data stored in the LOS database "only"?
- Do the POS & LOS use a single fee set-up?
- Do POS & LOS disclosures match 100%?
- Do both LOS & POS use a single Product & Pricing Engine?
- Can the POS leverage LOS interfaces for Credit, AUS, etc.?
- Are borrower docs auto-indexed in the LOS?
- Cost – are you charged per closed loan?
- Do loan conditions automatically show?
- Can the borrower see docs they uploaded?
- Can the borrower eSign from the POS?
- How complete is the POS/LOS integration?

Features to Consider – Third Party

- POS/LOS use separate DBs - require integration?
- Are Fees maintained separately for LOS/POS?
- Do variations in fees and calcs result in cures?
- Does Product & Pricing need to be maintained separately for each?
- How are results of POS interfaces transferred to the LO – What are the manual steps?
- Is there a manual process to index docs?
- Cost – are you charged per application?
- Do loan conditions automatically show?
- Can the borrower see docs they uploaded?
- Can the borrower eSign from the POS?
- How complete is the POS/LOS integration?

Key Factors in Evaluating New Technology
Should you use a Consultant

- **An experienced consultant will likely:**

  - Review your current state to identify areas to focus for evaluation

  - Help to set realistic goals and expectations for:
    - The evaluation process
    - Implementation
    - Ongoing use of your new technology

  - Do preliminary vetting of various systems

  - Organize and guide evaluation and selection

  - Be a useful tool in communicating that change is positive and often needed

  - Provide an extra level of due diligence to satisfy senior management

Key Factors in Evaluating New Technology

Should you use a Consultant (Cont'd)

- **Things to consider when deciding to use a consultant:**

  - **Cost** – Good consultants are an investment...
    - What do they charge
    - What do you get for that fee

  - **Time** – They may delay the start of your evaluation as they get up to speed on your needs and future vision.

  - That said, once a timeline is established, a consultant may be able to keep your team on task and on time.

Key Factors in Evaluating New Technology

Should you use a Consultant (Cont'd)

- You should consider how familiar a consultant is with:

  - The mortgage industry

  - Your market(s)

  - The vendors and their product offerings

  - Mortgage LOSs - Just because a consultant did a great job in helping build a custom website for opening IRA accounts does not mean they will be a good LOS consultant

- You should consider how many other lenders – like you – they have helped

Key Factors in Evaluating New Technology

To RFP or not to RFP? That is the question: Basics

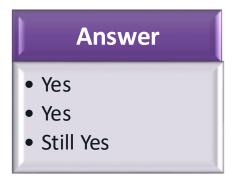## RFPs Take Considerable Time, Effort, and Thought to Create

- You need to coordinate input form various internal stakeholders
- Questions need to be well thought out to ensure that you get a meaningful response

For example, if all you ask is:

"Do you support construction loans? Yes or No"

You Need
• Construction to Perm
• Single Close
• Track Draws and Inspections

Vendor supports
• Standalone Construction Only
• Dual Close Only
• No Tracking

Answer
• Yes
• Yes
• Still Yes

So what did the "Yes" answer really tell you??

Key Factors in Evaluating New Technology
To RFP or not to RFP? That is the question: Basics (Cont'd)

- How are you going to use the RFP results
  - If you ask broad Y/N questions to get a score, what is the level of accuracy given the example on the last slide?
  - If you ask more detailed, multi-part questions with limited response options, how does a vendor respond when they only support part of the requirement?
  - If you ask more detailed open-ended questions, is your team going to read the answer? And how are those scored consistently?

Key Factors in Evaluating New Technology

To RFP or not to RFP? That is the question: Beware the checklist

- Many RFPs leverage checklists like - does your system have an integration to Flood, (and a list of other services) where the respondent can either check the box or not

Vendor A Checks Yes – their system:	Vendor B Checks Yes. Their system:

• Automatically orders flood without a human touch
• The order returns all the response data to the LOS
• The flood cert is uploaded and auto-classified
• If the property is in a flood zone, the LOS:
   • Auto-conditions for flood
   • Automatically creates the flood package and sends out the 10-day letter
   • Assigns a task to a user to contact the borrower.
	• A user must manually navigate to a flood screen enter some data and click submit
	• User waits for the response - a few fields populate the LOS – user keys in the rest
	• The cert needs to be imported to the image system and manually classified
	• If the property is in a flood zone some user(s) must:
	   • Add a condition for flood,
	   • Remember to prepare & send the 10-day letter
	   • Know to contact the borrower

Should both responses really get the same score?

Key Factors in Evaluating New Technology

To RFP or not to RFP? That is the question: Compromise

- You might consider creating a high-level questionnaire (RFP)
  - This might be between 25 to 100 questions
  - The questions should focus on your "Must Haves"
  - Ideally, asking for an explanation of how things are supported, encouraging the vendor to highlight differentiators

Key Factors in Evaluating New Technology

To RFP or not to RFP? That is the question: Compromise (Cont'd)

- Use the questionnaire to eliminate those systems that clearly fall short. Then, invite the remaining vendors to provide a 2 to 4 hour demo.

  - Provide a list of those areas that you want to focus on

  - Ask to "see" those things that are of critical components to your strategy and suggest the level of detail that you are looking for.

- Follow with "deeper-dive" demos as needed

Key Factors in Evaluating New Technology

Your Appetite for Administration vs. Automation: Low

Technology is an investment and there is typically a correlation between the level of automation and the need for system administration. You should know this going in.

You can't have the technology of a Top 10 Lender without the **support staff** to maintain it

Entry level systems - can be setup in hours/days/weeks as you have relatively few decisions to make and fewer features you need to "set up".

- These system are typically reliable but what you see is what you get.

- As there are few things you can configure, administration can be done by a responsible user with minimal training

- There will clearly be manual steps in your process

- If the system does not support what you need, you may create workarounds outside the system, however, if your team is small and your loan volumes are low, this type of platform may be the right fit for you

- As you grow and your needs expand, you may outgrow your system.

Key Factors in Evaluating New Technology

Your Appetite for Administration vs. Automation: Medium

Moderately Automated Systems –may take 4 to 6 months to implement as you will have more decisions to make, and ongoing maintenance will require a dedicated & trained resource

- This level of system can have varying needs, from a user dedicating a few hours a week to system administration or to a full-time system administrator.

- Some of that need will depend on the system and some will depend on how much you want to fully utilize the system and tweak things to continuously improve your process

- These systems will generally give you more options and ideally require less work outside the LOS, however, these systems also have limits requiring workarounds or building external functionality

- As you grow and your needs expand, you may outgrow your system.

- With a mid-size staff and moderate volume, the type of system should provide enough efficiency gains to justify the cost of and offset the cost of administration

Remember - You can't have the **technology of a Top 10 Lender** without the **support staff** to maintain it

Key Factors in Evaluating New Technology

Your Appetite for Administration vs. Automation: High

Highly Automated Systems - will be much more robust, scalable, & flexible. With that flexibility comes more decisions to make and you can reasonably expect a 6 to 12 month implementation

- While this will get you closer to the capabilities of a Top 10 Lender, you will need to staff appropriately

- If your plan is to support a single channel and use the system as close to OOB as possible, then a full-time admin and a back-up can typically succeed

- If you plan to support multiple channels (retail, wholesale, correspondent, home, equity, etc.) and/or continuously look to improve your processes and gain new efficiencies, then a staff of two or more makes sense

- The big advantage is that, as you grow and your needs evolve, you will be able to scale and tailor your system to meet your needs without increasing head count.

- Over time, a highly automated system delivers far more Return on Investment (ROI), because the automation reduces your overall cost of origination, improves efficiency, reduces cycle times and increases customer satisfaction. Additionally, being able to expand your system as your needs evolve rather than replacing it is a huge savings

Important Vendor Attributes

1 **Strategic**

- How much do they invest in market-leading innovations & acquisitions?
- Are they using modern technology?
- How are they leveraging AI?

2 **Financial Stability**

- How well financed are they?
- How well can they survive a market downturn?
- Are they a possible target for merger or acquisition?

3 **Experience**

- How long have they been in business?
- How long have they been in the mortgage space?
- What is their target market or majority of their customers?

4 **Reputation**

- What are they known for?
- Are their customers satisfied with their partnership?
- Are they seen a leader in their market?

5 **Size**

- What is their Market Cap?
- How many Employees support the product?
- How many clients do they have and how large are they?

6 **Roadmap**

- What are they working on?
- What did they release in the last 12 months?
- How do they decide what to add?

System Features to Compare

1 Functionality

- Does the system do what you need?
- Does it appear easy to use?
- Is it an upgrade from your current system?

2 Channels/Products

- Does the system support all your channels with centralize, PPE, Fees and administration?
- Does it support all your products?

3 Automation`

- What level of automation does it provide?
- Is that automation configurable by you?
- Does the automation require custom code, SDK, a consultant or third-party?

4 Implementation

- What is included in Implementation?
- Who configures your system?
- What non vendor costs should you plan for?

5 Support

- How is support handled?
- How are updates handled?
- How frequent are releases?
- Is there a cost for enhancements?

6 Upgrade?

- Can you clearly see that the new system is an upgrade?
- Is there any functionality that you are losing?
- Can you see a clear ROI?

AI & Automation Appetite

What is AI?

Artificial intelligence is commonly defined as computer systems that simulate human thinking and capacities such as learning

- ## History

  - While you can trace the concepts of AI back to the 1700s or even the ancient Greeks, it is generally agreed the modern AI started with Alan Turing who developed a machine to crack the German Enigma code

  - Today AI is generally associated with machine learning where a system is exposed to a large amount of data and "learns" to recognize patterns and eventually draw conclusions and provide feedback

  - Generative AI is currently the big buzzword, but is only one type of AI. It uses data to create new content. This could be text, images, videos audio, and computer code

  - The caution and regulatory concern is around privacy, and that exposing NPI or borrower data to a Gen AI can allow that data to be used by others

The big question - Is your vendor's AI really machine learning or just a set of business rules

AI & Automation Appetite

What is a Reasonable Use Case for a LOS?

- Leveraging AI to replace repetitive and time-consuming tasks

  - Using machine learning to recognize & classify/Index documents vs. OCR based on X/Y coordinates

  - Extracting data from documents like bank statements, W2s Paystubs, Tax Returns, etc.

- There are systems that take this data and make decisions like approve or deny loans, however:

  - This has the potential to cause regulatory issues if the logic used is not transparent

  - There is also the opportunity for the system to learn things that are not accurate, which can impact these decisions. Basically, it is important to ask how the AI is trained and audited.

AI & Automation Appetite

What is a Reasonable Use Case for an LOS (Cont'd)

- A use case that minimizes risk and leverages the technology would use AI to collect and present data (the time-consuming leg-work) to facilitate faster and more informed "Human" decisions

  - Calculate income from paystubs, W2s, tax returns and compare that to the URLA, saving the underwriter time

  - Identifying large deposits, recurring payments (like a Tesla lease) and other data from bank statements

  - Basically, remove the time-consuming stare & compare, to allow the UW to focus on key data

AI & Automation Appetite

What is Automation

- Just like systems tout AI capabilities that might not fit your definition, you should validate their automation claims as well

- Automation can mean different things to different people

  - To some, generating a report that tells a user what to do next is task-based automation

  - To others task-based automation serves up the actual task for the user to do

- An exception-based task workflow takes that a step further, using automation to complete any task that is "automatable", and then delivering any remaining tasks to the appropriate human users at the right time

All the examples above are legitimately considered "automation" but, like many things, there are levels of automation

Process Changes to Maximize New Technology

You would be surprised by how may lenders invest in technology to improve their process, but when it comes time to implement. They want the vendor to replicate what they do now.

- Why?
  - The decision makers who chose the new LOS may not be as involved in the implementation process, and the implementation team likely includes others who were less involved in the evaluation process
  - Users are often very resistant to change
  - There may be fear that automation will eliminate their job
  - There may be concern about how to handle exceptions and issues

Process Changes to Maximize New Technology

How do you avoid the pitfall of replicating your legacy/inefficient processes

- It starts from the top
  - Senior management needs to clearly articulate the change they are expecting and be involved in any decisions that vary from that plan.

- Get Buy-in
  - Share the vision with users – emphasizing the benefits of change
  - Discuss the plans for each role/position - taking care address job security concerns
  - Get user input on how to best tailor the process "not to replicate" but to make it more efficient.
    - If users feel they have input, they are more likely to adopt the new process
    - If they are involved the are more likely to understand the new process and expectation

Process Changes to Maximize New Technology

How do you avoid the pitfall of replicating your legacy/inefficient processes

- Set Goals
  - Identify how long it currently takes to do a number of process steps/cycle time
  - Pull through fallout – or what ever you are looking to improve
- Provide incentives for exceeding goals
  - Incentives could include:
    - Recognition at a company meeting
    - Team celebration event
    - Gift card, company swag or other prize

Provide incentives for suggesting ongoing process improvements
  - Encourage your users to think of how they can make better use of your tools

Improving your processes should not be a one-time erceise!

Successful Implementation Strategies: Time

How set your team up for success

- Give your team the time they need to properly implement a test your system
  - The vendor should know how long your implementation should take
  - What they won't know are your specific time impacts
- Look ahead to see what events can possibly impact your timeline
  - What vacation, PTO or holidays can impact your resources?
  - Company events like off site meetings, conferences, year end code freezes, etc.
  - Does your area have weather issues likely at certain times of the year
  - Does your organization mandate specific testing requirements or security reviews

Successful Implementation Strategies: Time

How set your team up for success

- Once you have a solid project plan and timeline established build in a buffer
  - You might not share the amount buffer with the team - but having one is key

There is a saying in the manufacturing world:

There is never enough time to do it right

But always enough time to do it over again!

Give your team the time they need to "do it right"

Successful Implementation Strategies: Prep

Preparing for your implementation

- Have a clear understanding of what is expected from your team
  - Identify who on your team will participate and what is expected of them
  - Plan to cover for them so that they can devote the necessary focus
- Agree on all the things that the vendor and third-parties will do
  - This includes where the task(s) fall in the timeline and how long they should take
  - As well as any dependencies or things that need to be in place to avid delay

Successful Implementation Strategies: Prep

Preparing for your implementation (Cont'd)

- Have and share a well-defined Project Plan with your team to set expectations

  - Hold the vendor, and third-parties and your resources accountable to the timeline

  - If there are impacts to the time-line communicate them and get sign-off

- Have all contracts signed and vendor onboarding and due diligence completed

  - New LOS systems often come with new service providers to contract with

Taking time to prepare will help you stay on track

Gaining User Buy-In

Strategies for getting Buy-In

- Enthusiasm starts from the top down

  - Senior management should be excited about the new technology and clearly communicate what they expect to gain from the investment and how that benefits the company and the staff

- Get key users and manager to participate in the evaluation

  - Participation does not mean everyone should attend demos and have a voice

    - But have managers get input from user when gathering requirements then share how the system will improve and "change" the process

    - Invite key users to demos who you think are – open to change – like technology - have a positive attitude

Gaining User Buy-In

Strategies for getting Buy-In (cont'd)

- Provide incentives for suggesting ongoing process improvements

  - Encourage your users to think of how they can make better use of your tools

  - Incentives can be for a person or a team

  - Incentive can be monetary, simple recognition, an event, party, lunch or breakfast or other reward

Improving your processes should not be a one-time exercise!

Maximize ROI Post-Implementation

Strategies for the Long term

- Releases
  - Have your admin "read" release notes & provide an executive summary
  - Be aware of new functionality so you can "Decide" to use it or not

- Attend vendor events
  - If your vender has a user conference send one or more people:
    - Have them summarize the conference
    - Present the roadmap to management so you can plan
    - Take any relevant training and bring back training materials to share
  - Have someone attend all vendor sponsored conference calls

Maximize ROI Post-Implementation

Strategies for the Long term

Once each year do a review of how you are utilizing your system

- Get input from user on process improvements, work arounds, short cuts, etc.
- Consider a contest or hackathon to identify bottlenecks and solve for them

Once each year take a lock in the marketplace

- See what other are doing and how you compare

2 yrs before contract renewal get competing demos