ABA Stonier Graduate School of Banking

Capstone: Automation Center of Excellence

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Executive Summary

This paper is proposing Valley bank generate an Automation Center of Excellence (ACOE) with the goal of setting up an enterprise wide automation program that combines an employee upskilling campaign with a low- or zero-code automation platform. The ultimate goal is to dramatically increase the bank's operational efficiency by empowering associates to automate and optimize their workflow, resulting in a nimbler operations team able to scale and pivot as the bank grows and diversifies. The automation program will result in fewer manual tasks which, in turn, will result in faster processing of customer requests, a reduction in errors, and an overall better customer experience.

ACOE will be overseen by a group of stakeholders that include representatives from Data Governance, Operations, Commercial Lending, Retail, Human Resources, and Robotics. The team will initially be staffed by a director who will scope out and oversee the upskilling program, identify and implement an enterprise-wide low- or zero-code platform, and generate the structure for the centralization of information resulting from the program. Operational areas with high levels of manual, repetitive work will be the initial target of the upskilling initiative and training in the automation platform. As the program grows, specialists in training and automation would most likely need to be added.

The key to the success of the ACOE will be the upskilling campaign. This initial phase assumes jobs being done now will largely phase out, and new jobs will be generated as the bank upgrades its technology stack. In addition, employees are often resistant to the addition of automation if they believe it will endanger or dramatically alter their current role or career prospects. The upskilling program will be a campaign open to all employees, but specifically targeting employees working in back office operations to provide education on automation, machine learning, data analytics and related skill sets needed to operate a next generation bank. This program will help attain employee buy in for the new processes, described below, and provide ready labor pool for new jobs being generated from growth and automation. This campaign will also include training specific to managers, and include a heavy emphasis on critical thinking, problem solving, and managing teams through change.

To facilitate the automation of operational processes, Valley will invest in an enterprise-wide, low-code automation platform, wherein our upskilled workforce will have the ability to automate their workflow. These automations will be independent of Valley's Robotic Process Automation (RPA) team, but with a goal of complimenting, not replacing this team. The end result will be a federated automation model, overseen by the ACOE, but wherein ownership of the bots sits within the various teams. The RPA team which will continue to be needed for more complex robotic processes and will continue to maintain the bots they generate. However, the ACOE will help identify what projects can be automated via the platform, and what will need attention from the RPA team, helping prioritize the latter.

A consequence of a single, enterprise-wide platform will be centralized mapping of information entry points and flows, and reporting nodes. This mapping will allow for more efficient operations via the flow of information, consolidation of reporting nodes, de-duplication of efforts, and availability of self-serve reporting. This will create a clearinghouse of information, which can be used to further identify areas for automation and provide a resource for reporting on customers and transactions. This will allow the ACOE to identify deeper automations across teams, and will also facilitate new process automations as the bank grows, either organically or via acquisition. The end result of this program will be an highly efficient operating core staffed by a more content, better skilled workforce. This, in turn, will result in an efficient operation producing a better customer experience, and more able to pivot when necessitated by the growth and diversification of the bank.

Over the first three years of the project, the ACOE will require funding of approximately \$1.5 million, with an anticipated savings of \$5.4 million. These savings assume a 20% savings in labor output over the three year period by automating repetitive, manual tasks currently undertaken by persons in several key operations departments, and will begin to be realized starting in the second year of the program. The realization of these savings will be through a combination of scale and natural attrition. As the bank continues to grow, fewer persons will be needed to complete the same tasks, allowing the bank to scale to meet the needs of new customers. This will be true of growth via organic means, but will be much more apparent following acquisitions. Following the initial three year period, Valley will continue to see savings from automation, though the pace may be reduced. As the ACOE matures, and pulls in data from the enterprise-wide software, the team will be able to conduct analytics on the various processes being undertaken, so as to identify opportunities for deeper automation across teams, as well as repetitive and sclerotic processes that can be eliminated.

The success of the project will be measured in two primary ways. Internally, the ACOE will make use of the annual engagement survey to ascertain how employees feel about the increased automation, as well as how these relate to their overall career satisfaction and vision for growth. The ACOE, working in conjunction with the bank's learning and development team, will review the results of the survey to identify any areas of the program that might need improvement, and target training and messaging in that direction.

The second measurement of success for the ACOE is a reduction in the bank's efficiency ratio. Automating operational processes, and thereby reducing labor costs, will have a positive impact on the bank's non-interest expense. In addition, a more nimble, efficient and less error prone operations team will also result in a better customer experience, and allow front office staff to focus more of their time on acquiring new customers and meeting the needs of standing customers. As such, this ACOE will also improve revenue generation, resulting in a positive impact on both sides of the efficiency ratio.

In addition to a more efficient core, better customer experience, and a dedicated, upskilled workforce, the ACOE will put Valley at the vanguard of banking, leading the way to the next generation of banking. In addition to dramatically increasing the efficiency of the bank, a concerted, centralized effort to automate bank processes will change how the bank functions, how we measure success, and how employees interact with automation. Facilitated by a distributed Information Technology architecture, teams will be increasingly nimble, with mandates spanning numerous processes and crossing traditional team lines. Ongoing training and communication will be key to ensuring the success of this program, and continued growth of the bank.

Automation is not only inevitable; it is already occurring. Wanting to reduce the number of repetitive, manual processes, teams throughout Valley are looking for and implementing their own solutions to increase their efficiency. While this approach to automation may help those teams become more efficient, the fragmented nature of these solutions will necessarily limit their impact on the bank overall. A centralized team driving automations across the bank will allow Valley to better realize savings across teams, and identify opportunities for deeper automation that will not only make the bank more efficient, but fundamentally change the way the bank operates.

Hitting \$100 billion in assets has long been a strategic goal of the bank. With an hyper-efficient operations team undergirded by an enterprise-wide automation platform, and facilitated by an upskilled and loyal workforce, this goal should will become the starting point for Valley's future, not the goal.

Part I – Introduction and Background

Valley National Bank ("Valley") is headquartered in Northern New Jersey, with branches in New Jersey, New York, Florida and Alabama. Formed in 1927 as the Passaic Park Trust Company, Valley spent the majority of its ninety-six year history as a local, New Jersey based bank, largely dependent on branch

traffic for funding. Heavy in commercial real estate ("CRE"), the bank has also maintained a significant presence in the metropolitan New York area. In 2014, Valley began a foray into the Florida market by acquiring 1st United Bancorp,¹ with the purchase of two additional Florida based banks following in short order. Given the connection of the populations of NYC and NJ with Florida, as well as Valley's strong brand recognition in the former markets, this move made a great deal of sense, and turned out to be a successful move for the bank.

With the acquisitions of 1st United (2014) and CNLBank (2015) in the Miami market, Valley found itself with a substantial cohort of customers South American ("LATAM") countries. This subset of customers is large relative to Valley's peer banks, but small compared to the bank's larger customer population, comprising just under 1% of total bank customers.² While these customers have brought some unique risks to the bank, the small size of this population has minimized the impact on Valley's overall strategy, and did not dramatically change the competitive landscape for the bank. It also bears noting that the other branches outside the Miami area maintain a customer base similar to those in NJ and NYC; that is, a very local customer base, with a heavy emphasis on middle market CRE and residential mortgages.

The three primary markets in which Valley operates are rife with competition. New Jersey has 109 depository institutions licensed to operate within the state.³ NYC has 231 depository institutions,⁴ and Florida has 156 such entities.⁵ Many of the institutions included in these numbers, however, are not direct competitors of Valley. Many are smaller community banks that typically serve a very local populace, or niche group. On the other end are large national banks with a footprint that extends across

¹ https://www.valley.com/why-valley/company-information/our-history

² Numbers derived from Valley's 2021 AML Risk Assessment. Pg. 21

³ "New Jersey Financial Institutions as of 02/17/2022." State of New Jersey Department of Banking & Insurance. https://www.state.nj.us/dobi/bankwebinfo.htm

⁴ "Flying under the Radar: New York Small and Micro-Cap Banks." PNC Capital Markets. August 24, 2021. Pg. 4

⁵ "Fast Facts: 2021 Edition" Florida Office of Financial Regulation. January 2021. Pg. 4

the United States, and often overseas. Valley belongs to a cohort of banks often referred to a mid-size; that is, banks with assets ranging from \$10billion to \$100billion. According to the Federal Reserve, there are approximately 103 banks in the US with this designation.⁶

Valley does face significant competition in certain products and customer segments from a number of banks in these areas, however, many of which also have a heavy presence in residential mortgages and CRE portfolios. This includes such banks as Investors Bank (NJ), Provident Bank (NJ), New York Community Bank (NY), Sterling Bank (NY), OceanFirst Bank (NJ), and BankUnited (FL). These are all local banks that primarily service the larger communities wherein they maintain a branch network. Similar to Valley, these banks target local, mid-market customers with a presence in these communities.

The smaller community banks, such as Freedom Bank (NJ) and Blue Foundry (NJ) tend to serve smaller communities, or specialize in niche customer types. Cross River Bank (NJ), for instance, caters mostly to the technology community, heavily emphasizing the bank's FinTech partnerships. This emphasis on smaller, more targeted communities makes these lesser competitors of Valley than the banks identified above.

Valley's primary revenue source is loans made in the CRE space. Per Valley's 2021 Form 10-K, Valley's loan income for FY 2021 was just over \$1.2 billion, compared to the bank's non-interest income for the same period, which came in at just over \$155 million.⁷ These loans are highly concentrated in three markets: New York, New Jersey and Florida. These are also the markets wherein Valley has the most significant branch presence. More specifically, Valley maintains a significant branch network in and around New York City, as well as Long Island, Westchester and Northern New Jersey.

⁶ "Large Commercial Banks." Federal Reserve Statistical Release. February 18, 2022.

https://www.federalreserve.gov/releases/lbr/current/default.htm

⁷ Valley National Bankcorp Form 10-K for the Fiscal Year ended December 31, 2021. Pg. 74.

Valley has seen consistent growth over the past several years, as adjusted net income has increased each year since at least 2019.⁸ During this time frame, the bank's efficiency ratio saw a significant drop between 2019 to 2020, and came in at 48.46% on an adjusted basis for 2021. Further, Valley continues to see strong growth in lending, with a 6% increase from 2020 to 2021.⁹ In terms of assets, Valley has grown from \$33.4 billion in assets in 2019 to \$41.5 billion in 2021¹⁰. This asset growth has been the product of both organic growth and several acquisitions over the last few years, and has left Valley in a strong position to pursue additional opportunities.

While the overwhelming majority of accounts are for retail customers within Valley's footprint, the bank has been expanding into some new products and geographies over the last several years. In 2020 Valley launched a cannabis banking program, offering banking services to state-licensed entities engaged in the cultivation, processing, distribution and sale of cannabis in states that have legalized this activity.¹¹ At the time this program was launched, only one state in Valley's footprint, Florida, had a sizable cannabis industry. Both New York and New Jersey had legalized medical cannabis, but the size of the programs remained relatively small. Since the inception of Valley's cannabis banking program, both states have legalized recreational use.

Due to the resource intensive nature of cannabis banking, as well as the significant compliance burden brought by this customer cohort, growing this program to profitability necessarily meant Valley had to step out of its footprint. As such, Valley has accepted customers from several states in the mid-Atlantic region, as well as the Midwest, and all the way out to Nevada; Valley currently has cannabis customers in nineteen states across the union. This movement out of the regional sphere has brought Valley onto the national stage. While the bank is targeting a single customer type, rather than

⁸ Ibid. Pg. 44

⁹ Ibid. Pg. 62

¹⁰ Ibid. Pg. 47

¹¹ https://www.valley.com/cannabis-banking

attempting to offer services to all comers in these geographies, following these customers outside the bank's footprint has provided Valley with some infrastructure and name recognition that will be needed as the bank moves to a more national focus.

Interestingly, the foray into cannabis banking has not dramatically changed Valley's competitor landscape. Most banks Valley's size, and all national banks, have eschewed the cannabis industry, and prohibit such customers being on their books due to the federally illegal status of marijuana. As such, most entities in the cannabis space are attaining banking services through local credit unions and state chartered banks, neither of which have the ability to offer the services and reach of Valley. The only similarly sized bank to be offering services to the cannabis industry is East West Bank (CA), though it has not ventured much outside of California, and, therefore, is not competing for the same customers as Valley.

As more states begin to legalize recreational cannabis, Valley's competitors in this space will also continue to grow. However, absent regulatory guidance, and the continued illegal status of marijuana at the federal level will limit the number of entrants. While this segment is certainly the fastest growing set of customers at Valley, it remains, much like international customers, a small portion of the bank's overall population, both in number of accounts and in terms of assets.

Valley also recently expanded its product lines through the acquisition of Bank Leumi USA ("BLUSA"), the U.S. subsidiary of the Bank Leumi Le-Israel B.M. The BLUSA customer base included a significant contingent of LATAM customers, which are largely based in the same countries as Valley's legacy LATAM cohort, and did not have an appreciable impact on Valley's risk profile. BLUSA did bring with it some new, higher risk business lines, including International Private Banking, Correspondent Banking, Maritime Compliance, and an expanded Trade Finance portfolio. While BLUSA did not have

any retail branches, the acquisition did expand Valley's footprint, adding offices in Palo Alto, California and Chicago, Illinois, further expanding Valley's reach across the US.

A significant outcome of the BLUSA acquisition, and one material to the current project, is core conversion. BLUSA was using a more modern, nimble core than Valley, so the bank has decided to move Valley's customers onto the BLUSA core. This is a massive undertaking that has forced all teams involved to map out their processes and, in some case, re-imagine how they will perform their current job duties in the updated environment. While many processes will change, and several will go away altogether, there will remain a significant pool of highly manual processes that the bank will need to staff for. As such, this would prove an opportune time to explore the possibility of augmenting the bank's workforce with an enterprise-wide automation platform.

Part II – Strategy and Implementation

As Valley continues to grow, process optimization will become increasingly important, both to ensure customers' expectations are met, and to attract the right talent to continue to propel the bank forward. In order to further drive innovation at Valley, this paper is proposing the generation of an Automation Center of Excellence (ACOE), with a key emphasis on upskilling current employees and investing in an enterprise-wide low-code automation platform. The ultimate goal of the ACOE is to dramatically increase the bank's operational efficiency by empowering associates to automate and optimize their workflow, resulting in a nimbler operations team able to scale and pivot as the bank grows and diversifies. Further, by emphasizing upskilling of Valley's current workforce, rather than going to market for an entirely new cohort of skilled workers, the ACOE has the potential to keep labor costs down while increasing employee engagement and boosting retention. The ACOE will be implemented in two phases, beginning with an upskilling campaign, which will be followed by the implementation of an enterprise-wide, low-code automation platform.

Upskilling

The upskilling campaign will focus on educating Valley's current workforce to understand the concepts and basic mechanics of automation and machine learning, so as to empower employees to identify what daily tasks can be automated, and how to go about doing so. This training will also emphasize creative and critical thinking skills. Employees are often resistant to the introduction of robotics and process automation, fearing that these innovations will put their jobs in danger. However, if employees are the persons driving the change, and understand that automation will lead to further career opportunities for them, the end result will be an engaged, efficient workforce. Per Deloitte, "By Involving the workforce from the beginning in identifying, designing, or even developing automations, organizations can also accelerate development...Co-creating change is often met with less resistance than dictating how change should look."¹²

The campaign to upskill the bank's current workforce will be the key driver of this initiative. As of December 31, 2021, Valley had 3,370 employees with an average tenure of 7.9 years.¹³ This large, loyal and diverse workforce provides Valley the base from which it can begin automating the majority of its internal processes. Per a recent paper by McKinsey & Company, "the ability of the workforce to learn new skills, model new behaviors, and adopt continuously is key to sustained success."¹⁴

Upskilling internal employees has a number of advantages over bringing on new hires, not the least of which is lower cost of labor. In the current job market, hiring new talent with in-demand skills can be rather expensive. According to eFinancial Careers' Q3 Hiring Trends Report, "...the job market is stuck in an inflationary cycle, with pay increments for new joiners typically topping 20%."¹⁵ Not only would hiring for a new skill set be expensive, but there is no guarantee the new hires will remain with Valley for any extended amount of time. However, promoting and upskilling the current workforce would not only help keep labor

¹² Watson, Justin, et al. "Automation with Intelligence: Pursuing organization-wide reimagination." Deloitte Insights. Pg. 10. (https://www2.deloitte.com/ro/en/pages/dprivate/articles/deloitte-automation-with-intelligence-pursuing-organization-wide-reimagination.html)

¹³ Valley National Bankcorp Form 10-K for the Fiscal Year ended December 31, 2021. Pg. 12.

¹⁴ Nielsen, Nicolai Chen, et al. "A transformation of the learning function: Why it should learn new ways." McKinsey & Co. September 23, 2020. Pg. 1.

¹⁵ eFinancial Careers. "Hiring Trends Report, Review of Q3 2022" October 2022. Pg. 3

costs low, but would better engender employee engagement and retention. A recent study in the United Kingdom found that 32% of employees quit their jobs in the last year due to a lack of upskilling or training opportunities.¹⁶

In tandem with the upskilling campaign, Valley will implement a low-code, enterprise wide automation platform, through which the bank's upskilled workforce will have the ability to automate repetitive manual tasks. The end result will be a federated automation model, governed by the ACOE, but wherein ownership of the bots sits within the various teams. Valley does have a Robotic Process Automation (RPA) team, which will be supplemented, not supplanted by this technology. The RPA team will continue to be needed for more complex robotic processes and will continue to maintain the bots they generate. However, the ACOE will help identify what projects can be automated via the platform, and what will need attention from the RPA team, helping prioritize the latter. The ACOE will work with Valley's Learning and Development Department (L&D) to help generate and implement the upskilling campaign.

ACOE Structure and Governance

Stakeholders from Human Resources, Retail, Lending, Data Governance, and Operations will form the governance structure of the ACOE, and be responsible for ensuring that the interests and concerns of the various areas of the bank are addressed as part of the project. A governance committee consisting of representatives from each of these departments, and including the Director of the ACOE, will meet on an at least monthly basis to review the progress of the program, ensure all KPIs are being met in a timely manner, and discuss new projects and prioritizations.

The primary role of the ACOE will be the implementation of the low code platform, as well as responsibility for daily governance of the project going forward. The ACOE will be headed by a full time Director who will be primarily responsible for oversight of the project. A part time Project Manager will be

¹⁶ Aldighieri, Rachel. "Why micro-upskilling will help HR teams improve talent retention." HR Magazine. 22 July, 2022. (https://www.hrmagazine.co.uk/content/news/why-micro-upskilling-will-help-hr-teams-improve-talent-retention/)

needed to help steer the project from vendor selection through implementation. Once the platform is live, a Business Analyst will be added to the team to help keep track of automations, and to perform the data analytics required by the program. As discussed above, the RPA team will be folded into the ACOE, as this will ensure better prioritization of projects. While the goal is to empower employees to automate their own workload, there will be projects that may cross departments, or the complexity of which necessitates a higher skill set to implement and monitor, thus requiring time from the RPA team. Having the RPA team as part of the ACOE will reduce conflicts on the team's time, and allow for a better direction of effort.

As a first step, the ACOE will need to work with Valley's Enterprise Data Team (EDT) to ensure the information being fed into the platform will have a uniform structure. An enterprise-wide platform would necessitate a homogeneity in the data formatting feeding into the system. At present, Valley, like any other bank, uses a wide variety of systems to perform various functions related to customer information and transactions. These programs usually vary in the format they use to store data. By way of example, a customer's date of birth may be stored in a variety of formats through various programs (MM/DD/YY; MM/YYYY; DD/MM/YYYY, etc.), which may make it difficult to harmonize reporting around demographics. While the ACOE cannot dictate how these programs store data, it can generate data cleansing rules to ensure the information flowing from these programs into the low code platform is homogeneous.

In addition, very few processes in the bank are truly siloed. All processes are a means to ensure customer needs are met, and, as such, changes to various processes at the bank will have downstream effects. A change in the output of a standing process, speed with which the output may be received, or changes to the data itself may all alter subsequent, contingent processes. It may even come to light that many manual processes are substantially or entirely redundant. Eliminating these redundancies may result to additional changes in other processes. The ACOE will be responsible for monitoring these automations done through the platform, understanding where these changes may impact other departments, and ensuring minimal disruption to downstream processes. Having active stakeholders from around the bank, and keeping them appraised of updated automations will help to assuage potential issues that may arise.

Finally, the automations generated by the employees may be useful to other areas of the bank, or, with some improvements, may be able upgraded into full bots that greatly increase efficiency across departments. Part of the mandate of the ACOE will be to monitor automations, to identify other areas of the bank wherein these process improvements may benefit other teams, and provide them these updated tools to enhance their own workload.

Strategic Goals

The formation of an ACOE along the lines proposed above will help to facilitate several of the bank's strategic goals, including Valley's ambition to reach \$100 billion in deposits. As of June 30, 2022, Valley's total assets were just over \$54 billion,¹⁷ so reaching this goal will require a doubling of assets held by the bank. This increase in assets will necessarily bring with it an increased workload from the additional customer transactions and business lines. The ACOE will help to scale back office processes, so as to necessitate fewer additional employees to facilitate the growth of the bank. The upskilling campaign will be key to this, as the goal of the ACOE is an ongoing effort to continually optimize processes. As employees are trained on how automation works, and begin to automate repetitive, highly manual processes, it is assumed they will continue to use the platform to automate other processes, including new processes brought on by the addition of new business lines and customer segments. The ACOE will also monitor for areas that would be good candidates for automation, and help prompt teams to set up automations where warranted.

The possibilities of scale offered by the ACOE is in keeping with Valley's CEO Ira Robbins' stated goal of ensuring "...the Valley of tomorrow is a service-driven, high-performing premiere commercial bank."¹⁸ The ACOE, by allowing for process automation of the back office, will also engender a more nimble, responsive organization. As the bank brings on new products to satisfy customer needs, or

 $^{^{17}}$ Valley National Bankcorp. Form 10-Q for the period ending June 30, 2022. Pg. 2.

¹⁸ Valley National Bankcorp. 2022 Proxy Statement. Pg. iii.

follows customers into new geographies, back office personnel be better able to absorb the additional workload due to both the automation of standing processes, and possible automation of the new processes required of these additional areas. Process governance by the ACOE will also assist in this area. Because the ACOE will be monitoring automations, and working the RPA team to monitor the bots already deployed by the bank, the team will be in a key position to identify where efficiencies can be gained when brining on new customers, or engaging in the purchase of another bank. Should these acquisitive activities result in entirely new processes for which there are no current automations, the ACOE maintains the expertise to identify new ways to automate these novel processes, and will work with both RPA and the back office to identify manual tasks that can be automated one the bank has taken over the task.

Generating an ACOE is in keeping with how Valley's new core system will operate. In speaking to Jay Simmons, Director of Deposit Operations at Valley, he noted that the new core is more of a managed service platform, wherein updates and maintenance is performed primarily by the vendor, not Valley staff. This is in keeping with the message received from other Valley executives, as well as the quote from Mr. Robbins above, that the core competency of Valley is relationship banking, and the bank would prefer to spend less time on ancillary processes and maintenance, and more time facilitating customer needs. By helping to engender a more engaged, better skilled workforce that has the tools and acumen to automate many of these ancillary processes, thereby focusing more on scaling to meet customer demand, the ACOE is in line with the expectations of executive management. Further, as noted above, the ability to oversee the various automation processes, and, therefore, to better direct resources to the area wherein automation would most assist the bank, this department will help the bank make timely changes to meet customer demand.

Somewhat less tangible, but still important to the culture of the bank, the ACOE fits into Valley's plans to become a more technology forward bank. Valley has for years partnered with Plug and Play

Tech Center, which connects financial technology solutions (fintechs) with partners who can take advantage of the new technology. More recently, Valley made a substantial investment in The Garage, a venture capital firm that specializes in investing in fintech startups.¹⁹ Valley also invests a great deal in encouraging innovation from its employees, and for the last several years has run an innovation challenge, wherein employees are encouraged to propose new products or technologies to meet customer needs. The generation of an ACOE is in keeping with the bank's emphasis on forward thinking, innovative technology solutions to better meet customer needs.

The ACOE will offer a significant competitive advantage over the bank's peers. While several banks have set up something similar to the ACOE, and many offer fintech incubators, none of these competitors are concentrating on upskilling their current workers to facilitate these changes; rather, the emphasis is traditionally on hiring new talent to meet these needs. As discussed above, hiring new talent in the current market is expensive and time consuming, and doing so does not create any guarantee of longevity on the part of the new hire. Valley will, of course, have to hire new talent as the bank grows, and to meet specific ability needs. For instance, as the bots being used by the bank increases, generation of new bots and continued maintenance of those already in production may require specialized experience not already on staff, and for which the upskilling program will not be sufficient to engender. However, with the proper training and encouragement, along with the introduction of a low code automation platform, upskilling Valley's current workforce will engender engaged, committed employees that will help drive the bank forward without having to go out to the larger market to attain talent at a premium.

¹⁹ Valley National Bank. "Valley National Bancorp Invests \$25 Million in an Early-Stage Fintech-Oriented Israeli VC." August 4, 2022. https://ir.valleynationalbank.com/news/press-releases/news-details/2022/Valley-National-Bancorp-Invests-25-Million-in-an-Early-Stage-Fintech-Oriented-Israeli-VC/default.aspx

Finally, the automation of various processes will result in a significant improvement in Valley's efficiency ratio. Highly repetitive, manual tasks are prone to errors due to employee fatigue, or simple boredom and inattention. What is worse is that these errors are often go unnoticed until they affect either downstream processes or customer accounts. Rectification of such errors require additional labor, and, depending on the magnitude of the error, can incur significant costs related to lookbacks and clean ups. Automating these processes will remove the issues caused by fatigue, ensuring fewer errors and a more efficient process. It is important to note that automations may also generate errors, depending on changes to downstream and upstream processes. For instance, a robot may need to access a specific website to attain information to load into a Valley system. If the vendor makes a change to that site, the bot may be unable to pull the required information, and thus be unable to complete the process. If the data pull is one step in a series of contingent processes, the robot may continue through the workflow without the required data, causing downstream issues. While this is true, error reporting can be built into all automations to alert the process owner and the ACOE when a problem has been detected. This will make identification and rectification of any issues identified a more timely, and less expensive, process.

Information Clearinghouse

In addition to the advantages outlined above, a by-product of the governance of the bank's automation program will be the pooling of a massive amount of information on what the various processes are, how they interact with other departments and what information is being consumed in order to facilitate these processes. This information will allow the ACOE to further identify areas redundant processes, as well as identify additional processes that would be good candidates for automation. Because the automations will be running through a centralized process, the ACOE will be able to map out the various input points, participants, and the ultimate goal of the various processes. For example, assume the ultimate goal of one process is to post funds received via a peer-to-peer (P2P) transfer to a customer account. This transaction will go through a series of systems and processed from the point the bank receives the funds transfer request to the point the funds are available for the customer to use. It is possible many of these intervening processes may be either redundant, or necessitated by outdated technology or sclerotic procedures. Being able to see the journey from the entry point of the funds transfer to the point funds hit the customer account will allow the ACOE to better ascertain where improvements may be made, both in terms of better, more frictionless risk management to protect the bank from fraud, and in processing and posting speed.

As more users are added to the platform, and more processes are automated, this will give the ACOE a larger pool of data to use in analyzing possible synergies and deeper automations. In its mature state, the ACOE will be able to employ data analytics to proactively identify areas that would benefit from automation, and reach out to the teams engaged in those processes to assist them in utilizing the platform to this end. The use of data analytics should also make the bank more responsive to new products and services. At present, when a product or service is added, procedures are built around that new item to ensure it is properly processed in accordance with compliance requirements and the necessities of the other programs in use. Going forward, the ACOE will be able to analyze the characteristics of the new product or service, identify any areas wherein this may run into other processes, and potentially automate parts of the process around the new initiative. This would also hold true for additional products, services or customer segments introduced to Valley through mergers or acquisitions. The proactive use of data analytics by the ACOE would give Valley a tremendous competitive advantage in being able to convert new acquisitions more quickly and seamlessly, thereby reducing customer friction and helping to ensure customers remain with the bank after acquisition.

Implementation

Implementation of this project will occur in two concurrent streams. The first stream will focus on the upskilling campaign for operational staff. The ACOE will work with L&D to generate content and curricula specific to automation, process optimization, robotics, critical thinking and problem solving, as well as more advanced topics such as machine learning and data analytics. Valley partners with a number of sites that offer training and development content online, including Go1 Learning which allows Valley to access a wide variety of training materials on a variety of topics. In addition, Valley has recently engaged with Class.com, a Zoom-based platform that allows users to generate virtual classrooms.

Initially, ACOE and L&D will look for applicable content from current partners to begin to begin offering training on the broad concepts of automation, robotics and data analytics. During this initial phase, the ACOE will begin to interview Operations management to get a better idea of which teams engage in the most repetitive, manual processes. Fortuitously, as part of the current core conversion being undertaken by Valley, the conversion team has had several conversations with the operational staff to understand their processes. These conversations were conducted over Teams and recorded, with the recording available in the conversion shared folder. These recordings can be utilized in helping to identify areas best targeted for automation.

The training program will begin by targeting the areas which would most benefit from process automation; that is, areas that are heavy with repetitive, manual processes. Valley has a large number of employees engaged in operational activities, but the majority of personnel best suited for automation would be in back office Operations, Loan Operations and Technology. Collectively, these teams employ approximately 560 persons, divided into 38 sub-groups (See **Appendix A**). The ACOE would begin by

reviewing the various job functions within these division to identify three or four sub-groups best suited for automation, and begin the training regime with them.

Once the initial cohort has been subject to the training, the ACOE and L&D will seek feedback from the participants as to the efficacy of the training, what questions that had, and suggested areas for further training. Based on this feedback, as well as information gathered from the initial interviews regarding areas for automation, the team will review additional available content to identify what can be deployed to satisfy the needs identified. If no such content is available, L&D would reach out to consultants previously used to generate training course, and develop new content specific to the needs of the project. Once the team is satisfied that the training regime meets the needs of the project in terms of content and efficacy, the training will be rolled out bank wide.

The second concurrent stream will be the selection of the enterprise-wide platform. The search for the platform will be done by the ACOE in conjunction with all stakeholders. Valley has some approved vendors that offer low code platforms, such as UI Path, Service Now and Nintex. There are also a large number of companies that specialize specifically in providing such platforms, including Altarix, Pega, Appian and Unqork. Finally, companies such as Oracle and Microsoft also offer such platforms. The ACOE and all stakeholders will review various possible providers and identify the one that best fits Valley's needs, and which offers scalability as the program grows. The selection process is expected to take three to four months to complete.

Once a platform has been identified, the ACOE and L&D will work with the vendor to generate training content specific to the platform. The training will be designed not just to show the user how to manipulate the platform, but including the integration of key ideas contained in the previous training sessions. This will better ensure the employees are understand the larger connection between process automation in general, and actually automating their workflow using the selected platform. This

content will need to be developed by Valley, in conjunction with the platform vendor. For this section of the training, the ACOE will select one to two persons within each team to act as Automation Champions. These persons will be specifically trained to use the automation platform, so as to build bots for their team's workload, and to train other team members in how to use the platform as well.

Implementation of the platform would follow the selection and Vendor Management approval process. Actual implementation time will vary based on the vendor selected, but is expected to take three to six months. It is during the implementation phase that the upskilling campaign will begin. As noted above, the initial training will be conducted in proximity to the platform being available for use, so that the information relayed can be immediately put into action.

From the initiation of the selection process through implementation, the estimated time frame is six to nine months. From that point, scalability will be highly dependent on adoption of the platform by the various teams. The educational campaign will be integral to this effort, but the ACOE will also actively assist with the identification and automation of highly manual processes. As more employees automate their workflow, and more information flows into the ACOE, the team will be better able to proactively identify automations and reduce redundancies.

Part III – Financial Impact

Expenses and Potential Savings

The ACOE will require funding of approximately \$1.5 million over three years to realize the savings potential of the technology, which is estimated to be just over \$5.4 million. As outlined below, the cost will be largely spent on salaries to set up the ACOE, engage in the training as outlined above, and to identify, implement, and pay subscription costs for the technology itself. Utilizing resources already available for training will help to reduce the costs. A large portion of the cost, approximately \$580,000, will need to be made in the first year, with the subsequent years consisting largely of salary

and ongoing subscription costs for the platform. The costs and potential savings are discussed in more detail below. For an itemized calculation of costs and savings, see **Appendix B**.

The largest costs in the first year will be salaries of the persons setting up the ACOE. The program will be run by a single Director who will be responsible for the majority of work being done. The Director will be solely dedicated to the ACOE, so this person's full salary is included in the estimate for all three years. The salary of the ACOE Director is estimated at \$250,000 per year. In the first year, the ACOE will also need a Project Manager (PM). The PM will assist in the vendor selection and help to bring the various required parties together as part of the vendor selection process. Once a platform is selected, the PM will be instrumental in assisting the Director in bringing together all parties needed to do the implementation work, facilitate the implementation itself, and ensure that it is completed on time. However, the PM would not need to be solely dedicated to this project, so only half an FTE has been allocated for the PM role in year one.

Training will incur additional costs in year one. The ACOE will attempt to utilize the wealth of material to which Valley already has a subscription, thus keeping costs down. However, help from L&D will be needed to select training specific to the needs of the program, and assist in its dissemination. As discussed above, once the initial cohort has run through the training, the ACOE and L&D will discuss the efficacy of the training with the employees and adjust accordingly. Should the results of the interviews identify training needs not satisfied by the materials at hand, additional expense may be incurred in generating content specific to the team's needs. Also, once a platform is selected, the ACOE and L&D will work together with the vendor to generate content specific to platform usage. Demands on the time of L&D personnel should be significantly less than either the Director or the PM, so only 25% of an FTE has been allocated to the project from L&D.

Once the program is up and running, a Business Analyst (BA) will be needed to assist the Director in daily operations, as well as to perform analysis on key performance indicators (KPI) specific to the program. Because the platform is not anticipated to be functional towards the end of the first year, a BA will not need to be on staff until that time. As such, only 25% of an FTE has been allocated to this position for year one.

Additional first year costs include implementation and platform subscription costs. These costs are difficult to ascertain without going through a pricing exercise with the vendors. Implementation is estimated to cost \$150,000 in year one. This is an assumption based on previous implementations of various technologies, and conversations regarding similar platforms. The cost for ongoing subscription is a high-end estimate, assuming a per person subscription model. Low code platforms are often priced in terms of monthly users, or can be a single price for the enterprise. These costs seem to vary from just a few dollars per person per month, up to several thousand on an enterprise basis. The estimate used for this exercise is intentionally conservative, coming in much higher than what was advertised so as to not under price.²⁰ The price used is approximately \$80,000 per year.

It should be noted that this price may decrease significantly if Valley identifies a vendor who charges less per user. As discussed above, the ACOE will be targeting one to two users within each operational group to train on building automations on the platform. As such, year one will have fewer users, resulting in less cost. As more users come onboard, the subscription cost will grow through years two and three, but may still be well below the quote used for this project. It should also be noted that, as automations are put in place and mature, there will be less of a need to build new automations than to maintain standing bots. As such, number of users will be a KPI the ACOE will maintain to ensure the

²⁰ Subscription costs are difficult to attain without a formal RFP process. However, there are a number of sites that give pricing estimates for low code platforms. The estimate used here assumes 65 users approximately two from each operational sub-group. The cost estimate is based on the upper end of the numbers given in these aforementioned sites, \$1,200 per user. Some site reviewed include: <u>https://www.emizentech.com/blog/top-low-code-development-platforms.html; https://theecmconsultant.com/best-low-code-platforms/;</u> <u>https://www.trustradius.com/buyer-blog/low-code-development-pricing</u>. All accessed 01.05.23.

bank is making maximum use of the platform without spending more than necessary. In year one, because the platform will not be live until the end of the year, we have given the cost for the first year as \$20,000.

Given that the majority of the first year will be spent training, and selecting and implementing the platform, no labor savings are anticipated for this time frame.

In year two, expenses will consist of salaries for the Director and BA, as well as the ongoing subscription costs. While input from L&D will most likely still be needed, it should not take a material amount of the department's time. A PM will also not be needed after the first year.

It is in the second year that Valley should begin to see cost savings to offset the program's investment. Aggregate costs savings are difficult to predict, as much of the savings will depend on what processes are automated and the extent to which they can be automated. The 2021 RPA survey put out by Deloitte noted that "organizations already implementing or scaling their automations reported that they have achieved a cost reduction of 24 per cent."²¹ A few caveats are warranted with this number. First, it is an aggregate of survey responses, and each participant's actual realized savings may vary widely. Second, the report does not identify how long it look for the survey participants to realize these gains, or where the gains were actually made. With these caveats in mind, an estimate of 20% savings over two years beginning in the second year of the program was used for these calculations.

To ascertain actual costs savings, the total number of persons in the three operational areas identified above was multiplied by 1,920 working hours per year, which gives a total of 1,075,200 working hours across these teams. Assuming automation generates a 10% reduction in manual tasks in year two, this gives a potential of 107,520 hours saved for that year, or the equivalent of 56 FTEs. Using

²¹ "Automation with Intelligence: Pursuing Organization-wide reimagination." <u>Deloitte Insights.</u> Pg. 7. https://www2.deloitte.com/bg/en/pages/about-deloitte/articles/Intelligent-Automation-Survey-2021.html

the median salary of a Valley employee identified in Valley's Annual Report, \$66,703²², the result is an estimated total value savings of just under \$3.4 million. When the first two years' expenses are subtracted from this total, the net savings through years two is approximately \$2.86 million. It should be noted that the majority of Valley's employees are hourly personnel employed at branch locations, so the median salary bank wide may be significantly lower than the median salary across the targeted groups. As such, this savings estimate is conservative.

Continued adoption of the platform through year three will further enhance the savings. Costs will largely remain fixed, consisting of the salary of the two departmental employees as well as ongoing subscription costs. In order to calculate continued savings, the savings in terms of FTEs are subtracted from the total number of FTEs in year two, then multiplied by the total number of working hours for the remaining FTEs for year three, which gives a total of 96,768 hours. As noted above, a total cumulative reduction of 20% is expected, of which 10% is realized in year two, leaving an additional 10% to be realized in year three. A reduction of 10% of the total working hours in year three results in a potential savings of just over \$3.5 million, or an additional 50 FTEs. After subtracting total expenses through year three, the net savings from the program would be just over \$5.4 million.

Savings would continue to be realized after year three, but these are expected to be less material and more incremental. These savings would be significantly more impactful should Valley acquire a new bank, or see significant organic growth. In such cases, Valley would be in a good position to scale the workload through automation, rather than bring on new employees. By the end of year three, the ACOE should have sufficient information to begin to do cross team analysis to look for redundancies in the workload, as well as deeper automations that will result in greater efficiencies.

²² 2022 Valley Proxy Statement. Pg. 61

On caveat should be noted in regards to the savings discussed above. Headcount reduction is not the goal of the ACOE; rather, the assumption is that the workload reductions would be spread across a large portion of the team, instead of targeting any specific role, resulting in more efficient teams with fewer manual errors and a better overall customer experience. As noted by Jay Snyder, SVP of Customer Strategy and Solutions at UiPath, "People often focus on reducing staff through automation, but we've seen that the true benefit is in multiplying productivity."²³

Actual Savings will be realized through a combination of attrition and scale. As Valley continues to grow, less additional talent will be needing to be brought onboard to handle the workload. In addition, FTEs lost to attrition would not need to be replaced. The strong job market that is driving higher wages for new talent, is also resulting in an increase in employees moving between jobs within the banking sector. As identified in the 2022 Crowe bank compensation survey, the turnover rate for banks has increased to 23.4%.²⁴



More out the door Bank employees stayed put in their jobs at the height of the pandemic but have bolted for other

²³ "Tech Trends 2022." Deloitte Insights. Pg. 69. https://www2.deloitte.com/ch/en/pages/technology/articles/tech-trends.html.

²⁴ Dobbs, Jim. "Employee churn surges at banks despite pay hikes." American Banker. Sept 9, 2022.

Even with Valley's upskilling campaign, the bank should expect some natural attrition. When these employees do leave the bank for other opportunities, rather than replace them, Valley would look to see if automation can absorb their workload, or if other upskilled employees can step in to fill the role.

<u>Risks</u>

There are several significant risks that may impact the efficacy of the ACOE. This most significant risk is that is simply does not work. The plan assumes that the ACOE will be able to train existing Valley employees to the point wherein they will then proactively automate their own workload. It is possible that the training is ineffective in engendering this activity, and that the team is unable to proactively generate automations via the platform. In this situation, the ACOE can assist in generating the bots, but doing so would significantly add to the cost of the project. Because neither the Director nor the BA will have experience in the task being automated, as a first step they would need to map out various processes, then generate and test the automations with the assistance of the operational teams. Doing so would significantly increase the amount of time it would take to realize the anticipated efficiencies, and add to the up-front expenses, as more personnel may need to be hired to accomplish this goal. There are technologies and consulting companies that can also perform these tasks, so as to keep the project on time, but these would be significantly more expensive than the original plan, and may more than double the early year costs.

Another risk, somewhat related to the above, is that the training works, but that the teams do not continue to generate automations after their first pass. One assumption behind this plan is that the teams will continue to generate bots until all highly repetitive, manual tasks have been automated. It is possible that employees will begin the automation process, but then cease generating more bots once they have managed to automate one or two of their most labor-intensive tasks. This would be assuaged by monitoring on the part of the ACOE. The ACOE will continue to review automations, and meet

periodically with the various operational teams to ensure the project continues to progress and manual tasks are automated. Should the teams cease to automate, and require prompting from the ACOE, this may result in delays in realizing the gains from automation, and may limit the overall efficacy of the project. The advantage in having employees automate their own tasks is that they are intimately familiar with what tasks, or what portion of tasks, are repetitive and highly manual. A third party coming in to identify such tasks may be limited in their ability to do so.

Pricing is another risk to be noted. As discussed above, the pricing given for implementation and ongoing subscription is an estimate based on historical experience and internet research. Attaining an actual price will require going through the process of requesting a quote from a vendor and negotiating from there. Because vendors often price by asset size, it is possible that the prices used as part of the expense estimation are below what the actual vendors come back with.

A risk related to pricing is cost-overruns due to issues with implementation. Costs related to implementation can vary significantly depending on the amount of work needing to be done, and the systems that will need to be part of the implementation project. Also, these estimates are often given before the team begins to dig into the systems to hook up the platform. Once in the system, it is possible that issues may be identified that will result in the implementation piece of the project taking longer and costing significantly more than originally estimated. If this were to occur, it could both increase the expense of the project and delay the time to realize the anticipated savings.

Should implementation prove to be more difficult or expensive than anticipated, a decision may be made to only implement part of the platform or reduce the number of teams that are initially brought on to the project. This may result in additional expenses, as outlined above, and may reduce the ability to fully realize the potential savings from automation. Depending on the cause of the partial integration, this may just delay, rather than prevent, realization of the savings. If the platform is only

partially implemented due to cost or time constraints, additional modules or teams can be added later once the initial implementation begins to realize the savings from automation. In such a scenario, the ACOE may still fully realize the anticipated savings, just on a longer time frame.

An interesting risk to consider, especially in light of the conversion project, is that there are not enough repetitive, manual tasks to realize the anticipated savings. Moving to the new core may already result in updating how many of these tasks are performed, removing a lot of the processes that would have otherwise been included in the project's potential savings. While the core conversion may change how some tasks are done, there will still be tasks that remain manual and repetitive. Further, it should be noted that employees work in several systems that either feed into, or receive output from the core. Manual, repetitive tasks being performed in these systems will most likely not be affected by the core conversion, and will still be good candidates for automation. While it is certainly possible that conversion itself may help reduce what processes need to be automated, it is unlikely to have a material impact on the overall project savings.

A final concern is attrition on the part of the Valley employees. While the goal of this program is not to reduce employee headcount through automation, it is possible that employees may misunderstand or misconstrue the goals of the project and decide to resign over concerns as to their future with the bank. Should this begin to occur, it is unlikely to be widespread. However, resignations of key personnel may result in either needing to train other employees on the automation platform, or the ACOE having to step in and generate the automation for certain tasks. In either case, such resignations may result in a delay in the timing of the realized savings, but should not have a material impact on the project in the long term.

Moving Forward

In taking into consideration the risks outlined above, significant up-front costs, and uncertainty regarding potential savings, I do believe the bank should move forward with the ACOE project. As discussed further below, automation is inevitable for a number of reasons, and it would be significantly less costly for the bank to pursue this path in a coordinated, centralized manner, rather than having each department look for its own automation solution. Further, the investment in the bank staff will have a significant and lasting effect on employee morale, and will engender a more engaged, loyal workforce for the bank. Cost savings is another significant factor. While the amount and timing of the cost savings is hard to predict, that the savings will be significant over time is indisputable. As Valley grows and becomes more complex, automation will become increasingly important to ensure the efficient functioning of the bank's back office.

Automation is less a question of if than when. Repetitive, manual processes are expensive to maintain, and demoralizing to the staff. Maintaining these processes, and the expenses that come with them, will put the bank at a competitive disadvantage in the long term, and make it hard to attract talent. Employees are increasingly selective as to the jobs they want to take on, and are looking for engaging occupations that provide them with purpose and mental challenges. Spending eight or more hours a day moving information from one spreadsheet to another hardly fits the bill.

Continuing to maintain such processes is entirely unnecessary. There are a large number of technology providers offering low cost solutions to automate these tasks. Some providers sell single-purpose software that may automate a specific function, or more wide-ranging technology that allows for automation of several areas. If Valley does not move forward with a coordinated, centralized solution, various teams will seek out their own solutions to this issue, and many have already begun to do so. While teams independently bringing on their own solutions may still result in significant labor

savings, collectively these solutions would be more expensive than a single, centralized system. In addition, because these various systems will most likely not be able to communicate directly with one another, a great deal of synergistic savings and opportunities for deeper automations will be lost. The information clearinghouse that will be created from the enterprise-wide solution would also be lost in using the various automations. This would make scaling automations due to growth and acquisition more difficult, as it would be dependent on each department to take on this task independently.

Another reason to move forward with the ACOE is that it will result in further employee engagement. Attracting talent in the current market is difficult, and can be expensive. This is especially true when recruiting for technology positions. However, training our standing employees on topics that will impact how banking operates in its future state, such as machine learning and automation, then giving them the ability to engage in these technologies will ensure a more loyal and engaged workplace. Employees want jobs that keep them engaged and provide meaningful work. Upskilling the Valley workforce will help to ensure they remain engaged in their work as they learn. Further, removing low level, manual tasks will leave the employees with more engaging, higher level activity.

Finally, the potential cost savings from the ACOE is significant. The metrics used in this proposal are conservative, as actual savings will vary by the process that is automated and to what extent it can be done. Having employees who are most familiar with the processes automate them will ensure the full scope of the process, and that all such processes, are subject to automation. Even with the conservative estimated savings put forth above, the savings are significant relative to the investment in the program. In the unlikely case that the true savings turn out to be significantly less than what is estimated here, the savings will most likely still exceed the expenses of the program.

Part IV – Non-Financial Impact

Customer Impact, Scalability and Efficiency

The ACOE impact on customers should manifest fairly quickly once the platform has been implemented. The first year of the project is primarily focused on training and implementation, with automation coming really beginning in the second year. In year two, automations should begin to make current processes less manual and more efficient, resulting in a reduction in processing errors, processes being completed more quickly, and, through error reporting embedded in the automations, faster identification and resolution of issues when they do arise. These automations will also reduce the amount of time front office and sales personnel spend engaging in routine tasks to meet back office requests. If Operations is functioning in a more efficient, automated manner, much of the intake needed to engender back office processes will, by necessity, need to be electronic. Paper documents will largely, if not entirely, disappear from all customer facing processes. Front office personnel will be able to communicate customer requests in a more streamlined manner, and, due to process automation, will see the time to completion for these requests reduce significantly. These process improvements will not only allow for a better customer experience, but will free up the time of front office personnel to focus more on the needs of current customers, and acquisition of new ones. As such, automation will not only increase customer satisfaction, but should assist in the potential growth of Valley's customer base.

Expansion of the customer base will demonstrate the true impact of the ACOE. As the bank expands, whether through organic growth, or, more impactfully, through acquisition, the process automations facilitated by the ACOE will allow immediate realization of scale. In its current state, expansion of the bank's customer base or product lines usually required the addition of staff to process the additional transactions or service the new customers or products. For instance, as the customer

base grows within the branch footprint, the bank can expect more cash transactions necessitating more Currency Transaction Report (CTR) filings. As more CTR filings are needed, more staff will be required, both in the branches and in the back office, to process the filings and ensure they are completed and accurate. However, if the CTR process is largely automated, then the expansion of customer activity, though resulting in additional filings, should not necessarily require additional staff; rather, the automations should be able to absorb the workload without issue. Whereas before the bank needed to hire one CTR Admin for every 600 filings per month, automation may reduce that ratio to one CTR Admin for every 2,000 filings per month. Put another way, the cost of onboarding and attaining customers will be significantly reduced by centralized process automation.

Cultural Changes

Moving forward with an ACOE would be a significant cultural change for Valley. While Valley, like any bank, makes extensive use of technology, and has begun to use automation in some areas, a bank-wide automation program overseen by a centralized group would is something entirely new. The ACOE would, by necessity, be intrusive, as it would have full visibility into the processes of each department, a visibility that would be available to various stakeholders and upper management. High visibility into back office processes may make some employees uncomfortable, as they may fear this will put their jobs in danger, making them reluctant to share information.

In addition to empowering the bank's employees, upskilling campaign should work to assuage this fear. Workers often continue to engage in manual, sclerotic processes because they fear that changing these processes will result in the loss of their jobs. By upskilling these employees, Valley will be providing them with the confidence and skill set they will need to identify a viable career path should large part of their jobs be automated. It is for this reason that the upskilling campaign will begin prior to

the implementation of the enterprise platform, so as to mitigate the fear of job loss with the introduction of automation, and make employees more willing to participate in the program.

An interesting impact of the ACOE, is that many roles may change entirely. In fact, how Valley thinks of the nature and distribution of work may be altered by the pervasive use of automation. As noted by Deloitte,

"To capture significant productivity gains, technologies need to work in concert with one another to deliver new work outcomes. Work must be reimagined, by business leaders pushing outside the boundaries of process maps, looking beyond the limitations of currently used technology and using automation to fundamentally transform the way work gets done."²⁵

At present, clear lines exist between various departments, separating customer facing from operations from technology. With enterprise wide automation, and the upskilling campaign, the boundaries of these silos will become blurry; this is especially true for information technology and bank operations. These boundaries will increasingly fade as the initial three year period passes, and the ACOE team begins to look for deeper automations across teams.

Such a change in the nature of work will have a significant knock on effect for people managers. The skills needed to manage these teams and processes will change. It will no longer be sufficient to be an experienced subject matter expert in a given area to lead a team; leaders will need a new skill set to manage more nebulous teams with mixed skill sets across larger mandates. This will require changing how managers are trained. Training will need to be less focused on administrative duties, much of which could be automated, and emphasize communication and interpersonal skills, as well as creative problem solving and critical thinking.

²⁵ "Automation with Intelligence: Pursuing Organization-wide reimagination." <u>Deloitte Insights.</u> Pg. 19.

Tone from the top, and strategic direction will also be important in ensuring these changes have a positive impact on the future of the bank. The pace and significance of the change that may be engendered by embarking on a centralized effort to automation bank processes will most likely generate some anxiety on the part of the bank's employees. Even those employees who are fully on board with the changes and are helping to automation the bank's processes will want assurances that the vision and strategic direction of the bank aligns with the changing nature of their roles and responsibilities. As such, upper management's support is integral to the success of the ACOE. In addition to ensuring proper resources and autonomy of the project, upper management should ensure that the progress of the project, as well as how it aligns with the bank's strategic vision, is widely communicated across the bank.

Another area of cultural change will be in the nature of information technology (IT) itself. Like the other operational areas of the bank, much of what IT does can be automated. Many of the traditional areas of IT, such as network operations, access management, application support, are excellent candidates for automation. As noted above, the relationship between IT and the rest of the bank will change, with newly upskilled and empowered employees beginning to identify and implement technological solutions on their own, rather than turn to the various departments in IT for assistance. This change will ultimately benefit the bank, as it will result in quicker fixes to minor issues, adding to the overall increase in efficiency. The way the bank understands the role of IT may itself need to be rethought as the bank moves into deeper automations. Rather than a stand along department for IT, Valley may want to consider a distributed architecture, wherein certain IT functions are embedded within the various operational departments, rather than reporting up to a single head of IT. Such an architecture will better support the ACOE, providing more proximate access for persons using the platform to generate automations to IT expertise when needed. This would reduce the reliance on the ACOE governance body, and further empower employees to engage in automation. The IT departments

will still be an integral part of bank operations on its own, as some functions, such as Access Management and Information Security, are better centralized, even if some of their functions are distributed amongst the various operational team. It should be notes that, like change in any other department, this cultural change may result in some consternation amongst the staff, and may lead to some unwanted attrition.

These cultural issues can be assuaged through a combination of training and messaging from upper Management. At the inception of the ACOE, Management should clearly communicate the goals of the program, emphasizing that the overall objective is to better train current staff for the jobs of the future, while adding the technology needed to realize those jobs. As the program matures, this messaging should continue, ensuring all employees are aware of the progress being made, how this fits into the strategic direction of the bank, and further encouraging employee participation in the project. Ensuring that this training is available to all comers will also be an important consideration, as will training of managers. While the initial upskilling campaign will be targeted at areas deemed to be better candidates for automation, the training itself should be available to all employees who are interested in advancing their personal skills.

Training of managers will be the key to the success of the overall automation program, whether those persons manage three people or three hundred, managers are the ones employees look to first for guidance and tone. If a line manager believes the ACOE program will endanger the job of their employees, they may react to protect those persons by intentionally placing roadblocks in front of the project. A manager may claim, for instance, that they are overwhelmed with work, and cannot spare any personnel to engage in the training. Ensuring that managers understand the goal and vision, and are properly cooperating with the ACOE will be immensely important to the program's success.

As noted above, as the program matures and automation becomes more pervasive in daily workloads, it may change how we think about work, including expected outputs and reporting lines. Managers will need to be able to lead teams through change, to possibly entirely new career paths. Someone who spent the majority of their career with Valley posting and processing wires may find themselves building robots or engaging in data analytics to understand where errors in wire activity are likely to occur. This kind of change will require strong leaders who are willing to take on new mandates and rethink job descriptions. Managers will need the right training to handle this transition, one focused largely on critical thinking, problem solving and innovation.

Managers may also be somewhat fearful of their own positions. As discussed above, one of the long term effects of the ACOE may be a change in how Valley manages teams and measures success. Lines between teams may become blurry, and managers will then need to oversee larger teams with more varied skill sets and nebulous mandates. This change could lead to concern on the part of managers, who may doubt their own ability to lead such teams, or who may question how success will be measured with such teams, and, in turn, how that criteria will be applied to their own advancement. Put another way, in current state, each team has a specific, often singular, mandate, and their success is measured against how well they complete that mandate. The Wire Department, for instance, is currently measured against how quickly and accurately they are able to process and post wires. However, if the department is able to automate much of what they do using the low-code software, the team's mandate may expand and change. The bank's training regime for managers will need to be updated to take into account these changes, emphasizing critical thinking and problem solving, and managing diverse teams through change.

Measuring Success

Success of the ACOE will be measured via both internal and external factors. Internally, we will measure the program's success using the annual Employee Engagement Survey. This survey is done annually by Valley's HR team, and looks to gauge employees' satisfaction with various aspects of working at the bank. Done across the bank, this survey generally has a high response rate, and serves to provide a comprehensive snapshot of what the employees are thinking. Attempting to do a survey outside of this one would is certainly a possibility, but may have a much smaller response rate.

To set a baseline, as the ACOE begins to set up, we would insert questions regarding the current state of the bank's training program and automation. The survey already asks several questions regarding career paths, which can be pulled into the analysis for the ACOE. On an annual basis thereafter, we would ask the same, or similar questions, to understand how well the program is functioning and if it is having a meaningful impact on identification of new career paths and employee satisfaction. This information would be analyzed by the ACOE in conjunction with the L&D department to identify trends in both career viability and comfort with the automation process. Should we identify trends indicating that employees are becoming more anxious regarding the use of automation, viability of career paths, or the changing nature of the bank, training and messaging can be adjusted accordingly.

The second measure of the project's success will be a reduction in the bank's efficiency ratio. The efficiency ratio is, put simply, how much the bank spends to earn a dollar, and is measured by dividing total non-interest expense by gross operating income (net interest income plus total noninterest income). Over the past several years, Valley has made reduction of the efficiency ratio a strategic goal by reducing non-interest expense through a campaign of process optimization and outsourcing of non-critical functions. As a result of this campaign Valley's Efficiency Ratio dropped significantly from 2018 to 2024, going from 60.73 in Q4 2018 to 54.68 in Q3 2022, at one point going all

the way down to 48.73 in Q4 2022.²⁶ A successful ACOE should accelerate the reduction in the Efficiency Ratio. Because the efficiency ratio may fluctuate from quarter to quarter, measuring the success of the ACOE from a single point in time may artificially inflate, or deflate, the savings realized from the program. As such, the average of the ratio for the last four quarters inclusive of the the point the platform is live will be used as the base line to measure the efficacy of the project.

It may take some time for the ratio to show the effects of the program, as the primary impact to the efficiency ratio will be in terms of non-interest expense. The ultimate goal of the ACOE is to make the bank more efficient by automating processes, therefore reducing labor costs, which is a significant part of the non-interest expense. As noted above, headcount reduction is not the goal of the program; rather, the bank should realize labor efficiency gains through a combination of not needing to hire as the bank expands and as natural attrition occurs. Should Valley continue to acquire other financial institutions, the impact on the efficiency ration will be much more pronounced.

While a reduction in non-interest expense is the primary expected result of the ACOE, it should also assist with revenue generation. A more efficient bank, producing fewer errors, will be better able to meet customer needs, resulting in a more satisfied customer base. Many back office processes directly affect the front office's ability to meet customer needs, whether Reconciliations is opening a tenant account for a landlord customer, Loan Operations is processing an application for a new commercial mortgage, or any of the other myriad processes that directly touch customer accounts. If the back office is automated, these processes should occur more quickly. In addition, because these processes will be done in a timelier manner, and with fewer errors, branch and sales personnel will spend less time following up and more time engaging with current and potential customers. As such, a successful ACOE should both increase income and reduce expense.

²⁶ FFIEC. Uniform Bank Performance Report through 09.30.22

Conclusion

Automation is not only inevitable, it is already occurring. Various departments within Valley have begun to seek out and implement their own automation solutions to reduce the amount of manual, repetitive work they are doing. This piecemeal approach may solve issues for those various teams, but will only result in additional process fragmentation and inefficiency for the bank as a whole. A better approach, as outlined in this proposal, is to build a centralized team dedicated to enterprise wide automation, an ACOE. This will allow for better synergies across teams, not just efficiencies within teams, and result in a more efficient, productive organization. Further, as this program matures, and the team is able to identify deeper automations across teams and processes, the bank's overall efficiency and productivity will be without peer.

Automation itself is only part of the solution. Valley will need people to generate and maintain those automations. While hiring new, skilled staff on the open market is certainly an option, it is an expensive one, and there is no guarantee those persons will stick around long enough for the investment to be worth it. Instead, Valley should look to upskill its own workforce to create and maintain the bank's core automations, resulting in an engaged, loyal workforce. This will require ensuring the team has the tools needed to engage in the jobs of the future by training Valley's current employees on automation, data analytics, critical thinking, and problem solving. The end result of this upskilling campaign will be a loyal, nimble workforce able to complete the bank's expanding workload at scale while keeping overall expenses down.

There are a number of changes that the ACOE would engender with the introduction of enterprise-wide automation. As robotics and process automations become ever more ingrained in daily work routines, those routines themselves, and the teams that house them, will change. How we view

work, expected output, and career growth will change. Teams will be less siloed and more nebulous, including persons of mixed skill sets and more nebulous mandates. This will require a strong leadership culture, with a heavy emphasis on continued learning. This will would make Valley a vanguard of culture in the banking world, leading the way to a new, more efficient, more customer-centric model of banking.

The \$100 billion assets threshold has long been a strategic ambition of Valley. The addition of an ACOE will be integral to hitting that mark, as an upskilled, engaged workforce utilizing advanced technology to ensure efficient bank operations will provide the bank with a significant competitive advantage over its peers. Powered by a highly efficient operational framework, undergirded by a loyal, technology-enhanced workforce, \$100 billion would just be the starting point.

Appendix A – Operational Teams and Groupings

Appendix	B – P&L	Work Sheet	

	Year 1					
P e o p I	Position	Salary	Allocation	Cost		
	Director	\$250,000.00	1.0	\$250,000.00		
	Project Manager	\$100,000.00	0.5	\$50,000.00		
	L&D	\$90,000.00	0.25	\$22,500.00		
	Business Analyst	\$115,000.00	0.25	\$28,750.00		
	Total			\$351,250.00		
т	Platform Costs			\$20,000.00		
e	Implementation			\$150,000.00		
c h	Total			\$170,000.00		
	Total			\$521,250.00		
Income						
	Savings					
		# Employees		560		
		Hours per year		1920		
		Hours worked		1,075,200		
		Est Savings %		0		
		Total Savings		0		
		FTE Equivalent		0		
		Median Pay		\$66,703.00		
		Total \$ Savings		\$0.00		
Net P(L)	\$5,433,317.26			-\$521,250.00		

Year 2			Year 3				
Position	Salary	Allocation	Cost	Position	Salary	Allocation	Cost
Director	\$257,500.00	1.0	\$257,500.00	Director	\$265,225.00	1.0	\$265,225.00
Business Analyst	\$118,450.00	1.0	\$118,450.00	Business Analyst	\$122,003.50	1.0	\$122,003.50
Tabal			6375 050 00	Tabal			4207 222 F0
Total			\$375,950.00	Iotai			\$387,228.50
Platform Costs			\$85,000.00	Platform Costs			\$90,000.00
			\$85,000.00				\$90,000.00
			\$460,950.00				\$477,228.50
			560				504
			1920				1920
			1,075,200				967,680
			0.1				0.1
			107,520				96,768
			56				50
			\$68,704.09				\$70,765.21
			\$3,847,429.04				\$3,566,566.72
			\$2,865,229.04				\$3,089,338.22

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