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# Moving Lending Operations to Cloud? Selecting the Right Approach

**Video Transcript**





PRATEEK RAJPUT: Hi everyone my name is Prateek and on behalf of Microsoft Pennant and Value Prospect, I welcome you all for this exclusive virtual workshop on

### “Moving Lending Operations to the Cloud ? Selecting the Right Approach”.

Thank you very much for sparing your time and joining this workshop. Before we start, I would like to make you aware of a few guidelines. I would request all of you to please be on mute. The webinar is happening on the Microsoft Teams platform, so your names would be visible on the attendee list and the session would be recorded. Hope this is fine with you all. We would be taking your questions during the Q&A session meanwhile if you have any questions, you can post the same into the chat box or you can use the ‘hand-raise’ option.

Next. We would like to welcome our keynote speakers for the day, Mr. Sireesh Patnaik, Vice President at Pennant Technologies, and Mr. Bala Somasundaram, Senior Industry Executive at Microsoft.

Over to you, SIREESH and BALA.



SIREESH: Thank you so much, Prateek over there and good afternoon everyone. Prateek, if you can very quickly confirm that I’m audible?

PRATEEK RAJPUT: You are.

SIREESH: Thank you so much. Good afternoon, Bala. And good afternoon, everyone. And it’s wonderful to have you along alongside us to discuss on this very exclusive topic how the cloud is enabling a lot of things in the industry and then we can specifically take views on the lending industries. And with that, I would just like to quickly cover what we have as part of our agenda. So we’ll start with an overview of the lending industry as such and then as I was mentioning we would talk about how the cloud is acting as a great enabler in this particular industry.

Will take your views Bala in terms of the various cloud adoption challenges that are there. And from a financial perspective, we would like to give a view on the current industry there as well. The cloud migration approach that we have been actively doing for a lot of our clients today

and what we have been indulging in various discussions. I think that’s going to be a very key agenda over here where we’ll spend some time. And, I would also want to, run through a case study which would connect a few dots in terms of how we are covering the various topics. And we can have some time for the Q&A sessions where we’ll be happy to take any questions on this particular topic. Right, so with that, Let’s dive straight away onto the first slide over here where we will take a view of the lending industry. So, what fundamentally we are witnessing today is banks and financial organizations, especially within the lending space, are having a paradigm shift in terms of how their operating model around the business is there, vis-à-vis what it was like less than a decade ago, say five years back or seven years back.

Banks and financial organizations had a very well-defined scope of their business model and operating models.

However, I think in the recent past, especially the last five years or so, they have brought in a variety of new dimensions to this particular

industry, right? And I would not miss mentioning that the pandemic has also played a critical role in this particular change in dimension. So, with the overall perspective of transformation that is happening where things are becoming more and more digital with the underlying denominator of being able to have a faster reach, a faster penetration, and to have a faster kind of connectivity across the various systems involved within the banking industry.

I think there's been a lot of changes that have come in place, especially in the last five-odd years, right?

And the reason I mentioned that pandemic has also played a critical role in this is, you know the business and the industry will always bring in various creative and revolutionary kinds of technologies and ideas to kind of uplift the overall operating model.

But the same kind of reciprocation was not fundamentally there from the customer base. So the customers also need to kind of adapt to those technologies they need to understand the various risks that are there, the various practices that are there. What the pandemic fundamentally did is - it kind of left the customer base with no other option than to embrace this, this digital revolution, and the transformation that has happened.

And that created various opportunities to come up with different kinds of instruments and the different ways with which banks can connect with the entire day-to-day life of the customer. So, originally where the bank was connecting with primarily the wallet of the customer, the bank has now, you know has been able to connect to the various events and the customer's life with a lot of value-added services that are coming in. And those, in turn, have also created various new instruments that, we are talking about now, especially in the lending industry, if we look at the real-time payments, the volumes of the real-time.

Payments have tremendously increased with all

the omnichannel experiences that are available today. Instruments like Buy Now, and Pay Later are creating a buzz around the market where it is not only targeting the existing customer base, but it is also going and touching base with the Gen Z customer segment as well. And the concepts of syndication and co-lending are also becoming stronger.

If I just talk about the omnichannel experience and the number of payments that are happening today and if we look at what has happened in the last two years, that's greater than the entire decade of the transactions that we saw earlier. So there's been a huge, huge kind of paradigm shift that has happened in digital transactions, right? And the most important factor that we need to note over here is all these transactions have to be complemented by a platform.

They have to be complemented by an ecosystem and they have to be complemented by regulatory governance that is on top of this. And that is where I think the cloud has played a very critical role where it has enabled businesses and helped in this transformation to some of the digital kind of applications and toolsets that the cloud is offering today. It has just made the path easier for the industry players to embrace and adopt and it is now being seen as the various kind of benefits that both banks and customers are reaping.

So with that Bala, I would want to take your views as well. So you know from an industry perspective, how are you seeing this?

BALA: Sure. Thank you so much, Sireesh, a very good afternoon all of you. It is a wonderful opportunity to meet all of you in this lending industry workshop organized jointly by Microsoft and Pennant. So I concur with Sireesh. One point which I would like to add is basically that there is a fundamental change that is happening in the lending industry, right? So one key trend which I would like to highlight is that you take the existing brick and mortar non-banking financial entities, or the public sector banks, or the private sector banks, one key approach which is changing



is that they are taking a digital-first approach to their products. It is a digital-first, it's not "digital only" per se, right? So at least a decade ago the loan origination was happening in physical branches and then from the post-origination phase, then the servicing phase, the management was happening predominantly during digital channels. I mean cross-sell was happening in digital channels. Then later on the origination started to happen in digital channels as well, but now with the huge credit market out there, it is hungry for experimenting with new-age business models like flow-based lending or invoice-based lending, or cluster-based lending. What exactly is the approach that is being followed by the non-banking finance companies and banks is basically to try out an omnichannel approach. So saying that it is not just a digital-only, but it is a digital-first, approach where the acquisition can also happen through digital channels and post that the servicing can seamlessly happen through physical and digital channels.

This means that digital becomes the fundamental platform and technology is going to cut across the entire value chain of lending operations right from loan origination to loan management systems. And that is where technology can play a key role there. Sireesh would be happy to add more perspectives as we go along.

SIREESH: And with that, we move on to some of the things that we briefly covered in our previous slide the whole journey of the digital transformation and what the value add it is in bringing into the perspective of both business and operations, and how the cloud is kind of acting as a catalyst over here. So let's look at some of the things that the cloud is enabling. In terms of the overall business agility, like some of the points that Bala mentioned previously, it's more of a digital-first kind of strategy that is coming in, which is again creating a lot of business agility in terms of the options that are available from a loan origination perspective, from a sales perspective, from a lead generation perspective. And in terms of gathering all that

particular data, consolidating it, doing analytics over it, and then creating the right kind of algorithms to fuel these strategies of converting leads into the actual books, I think the cloud is playing a critical kind of a role and then we will cover how exactly it's being done.

And again, in terms of the amount of data that we are having because of these omnichannel, the number of applications that are coming in, and the analytics that needs to be done on top of it, there's a huge kind of a challenge that the banks face today in terms of scaling their infrastructure. And the various flavours that especially come within the lending industry there, then there are different seasons in which the businesses go up in terms of the volumes and with this background, the entire on-demand scaling becomes a very, critical kind of a tool in the CTO's armoury that can benefit the overall CAPEX of the operations. That's exactly what we are mentioning in terms of the entire capital expenditure that can be very well regulated as part of the on-demand scaling or the various other scaling options that are available on a cloud platform today.

Cloud is also enhancing the capability to integrate into a lot of native technologies in terms of the data analytics models that are available, the available AI/ML models, and the monitoring models that are available from a platform perspective. A cloud platform is out-of-the-box as it provides a lot of toolsets that can become very, very handy and can reduce the entire effort and the CAPEX that is required to build such a thing in a non-cloud environment. With all these things, what's happening is the entire digital ecosystem including the API connectivity is enabling the handshakes that are happening with the other systems that are there. So there's a great kind of benefit in terms of a cloud platform is the ease with which it can actually provide some of those technical capabilities and all these are very, very critical for a lending operating model and the lending stack.

Over to you Bala, for your views.



BALA: Thanks. Sireesh, I think you know one of the recent industry analyst reports which were released by FICCI states that 75% of the NBFC stated that operational excellence and cost optimization is going to be the number one priority right, going forward. So this means that the lending industry is hyper-competitive, and there are different types of players operating; you have on one side Fintech players who are operating with new products and new business models, and on the other side, you have established huge large banks and financial institutions including private and public sector banks and non-banking finance companies. If you observed as we spoke, they are setting up only digital-only companies as we speak. So this means that at one end we do have a requirement to optimize the cost across the entire lending value chain, right from origination to the management to recovery and collections post the disbursement process.

That's #1. The second one is at the same time customer experience is going to be the highest priority because there is a new class and segment of customers emerging as Sireesh spoke about the millennials who are looking for a new-age experience, value-added services, integration with ecosystem partners who can provide connections to services, for example, lending plus insurance or lending plus other utility services. So how do we differentiate the product and services that call for innovation as well as insights, customer insights plus analytics, and those capabilities? In this context, the cloud is well-positioned to offer these two fundamental paradigms which are required for the lending industry. On one end, it's basically about cost optimization across the value chain using technology, and the second one is basically about enabling product innovation in collaboration with the other partners, both financial and non-financial services partners through technologies and APIs. I think the cloud is well-positioned to address these two fundamental requirements of the lending industry. Sireesh?

SIREESH: Great views over there, I just want to add another point very briefly that the cloud is kind of enabling a lot of technology shifts, for example, we have brought in a lot of changes in our solution such as containerization to complement the on-demand scaling, needs of banks and financial institutions? So some of these things are greatly helping our clients. Today, they do not have to scale the entire platform for high benchmarking computes. And it's only for specific kinds of processes where the computes would be high, for example, the end of the daily batches, etc. where an on-demand scaling can be done. This helps the entire CAPEX and the performance benchmarking of the application. So with that, I'll quickly move to the next slide and one of the very interesting slides over here where we're going to kind of talk about the challenges that are there, like migrating to the cloud has always been a question mark, in fact, a double question mark for CTOs and CIOs, it hasn't been an easy decision. And the reason it's not an easy decision is that it's just not IT. It's just not an IT strategy or an IT requirement. The entire cloud migration has to be a decision between the IT and the business. It has to be a combined kind of strategy where you know we have to be very clear in terms of how the entire migration has to happen. A lot of people do ask me even otherwise that is it just a 'lift and shift' operation where we can just push whatever we have on-premises to the cloud. And everything would work the way it is? Trust me, you know a lot of solution providers would say 'yes' to that - that it is as simple as a lift and shift. But if we look at only the technological aspects that might be true to a certain extent. But if we combine the business strategies with that, it is not. So I think, when an organization is looking to migrate to a cloud platform, there has to be a buy-in there.

They need to have a clear strategy as to what those business functions are well kind of optimized from a cloud perspective and which also have value-added kind of tools that are available on the cloud. And there is a little bit of a regulatory aspect around it as well. Considering the existing IT investments and the



overall legacy sprawl of the infrastructure that is already in place, I think there's going to be an overlap of the cost there which can significantly impact the budget. So it has to be in conjunction with the entire IT policies, and strategies that we have to categorically look at what are the businesses that would move. And when I say businesses, the businesses' tech stack would not be just one component. It could be spread across multiple, disparate kinds of components that could be there. Some of them sit on a very legacy platform, very tightly coupled both from an EOL perspective and from a skill set perspective. So identification of the replacement for that has to happen along with this particular strategy. The customization challenges that could be there in terms of replicating some of the customisations that are available on a cloud version security have always been a very big question. Like is my data secure in the cloud? I'm putting all my customer data in the cloud, so what controls do I have? Will there be another window where someone can peep in and look at my data? But trust me, all these security aspects have been well understood by the cloud. Platform providers today have teams and departments who are just sitting to understand the regulatory requirements from a central bank perspective in each country. And then they are ensuring that all those security aspects are well integrated into a cloud solution from a platform perspective. And there are various options of how you know what kind of a platform we are looking in and then banks can make the right kind of a choice in terms of choosing that particular kind of a platform or they're offering in cloud and another kind of fear is like what would be my downtime, what would be my uptime? Will I be completely dependent on that?

But believe me, I think the cloud has kind of shown that it has the best uptime that is available in terms of any of the platforms that are existing today. And another critical factor that a lot of organizations I see today do not work on, is working on the cloud computing skill set itself. I think it is very important that when there is a cloud migration on the cards from a strategy

perspective, it cannot be just made a problem for the cloud platform provider to manage everything. It's not a past debug kind of game that can be played while having a cloud migration. I think the entire IT strategy has to be very strong.

Because what is very critical after migrating is being able to optimize the entire platform, primarily to keep in mind the various business kind of functionalities that come up in a solution. There must be a cloud architect who is available in the team, who understands what is there in the pipeline, what is coming in, what kind of models the bank is operating in and it is a continuous optimization on the cloud that needs to be done. Otherwise, seeing the cloud only as a warehouse that is outside my data centre is not the best lens to see through. Cloud needs to be seen as a technology rather than a warehouse and every technology has got various kinds of options to keep it optimized. Would like to take your views on this, Bala.

BALA: I think all these are very important points. So, one of the key observations that we have from the lending companies is how you free up both the technology as well as the business teams from the core infrastructure requirements. We can talk about business continuity and disaster recovery or our storage replication in terms of some of the aspects that Sireesh spoke about in terms of on-demand scalability when the business grows, and the customer segment.

Because, how do we scale up the infrastructure without having to invest a huge amount of effort in terms of actually building their own data centre? And at the same time, in terms of complying with various regulations which are in the country, be it, you know the GST including reporting, customer data security, and privacy. So all of that even from the infrastructure perspective, how do we take care of the scaling of both the development test environment and the production environment seamlessly? If you have to fundamentally address these, you know release the in-house team from the core operational



requirements of managing both the development and deployment infrastructure. I think the cloud can fundamentally help that.

That is #1. The second one is I think the very important part of customisation.

The customisation, part of it is basically about infusing organizational-related business tools as well as logic into the whole lending solution. It could be about collections, it could be about how origination happens, customer touchpoints, or underwriting rules. With all of these, how can we seamlessly create an organizational-specific layer on top of the core lending solution? I think one of the fundamental things which have happened in the last couple of years is that - what the cloud brings in is basically a modular architecture. It allows us to reimagine the lending solution in terms of microservices, and APIs. So that you know the system can seamlessly be orchestrated, be integrated with both in-house legacy systems, and enables the 'Brownfield integration', as well as it can seamlessly get integrated with the external partner system. With this, the data can come in, and then evaluated solutions can be built on top of it. I think those two points - in terms of relieving the core group from taking care of the operational and infrastructure needs, that's one side. And the second one is how we enable customisation in a very seamless manner with a new microservice and API architecture is going to be very important going forward when it comes to migrating.

SIREESH: Excellent point over there in terms of the microservices, containerization, and the API kind of support, the umbrella that the cloud enables and we are seeing a huge benefit in terms of the platform adopting such kinds of solutions.

SIREESH: Moving on and in continuation to what we were discussing in the previous slide, right and in continuation to help the strategy of migrating the overall lending operations to the cloud. This is in terms of what we have done

previously and how we understand this entire strategy. It's a small kind of blueprint that can help the organization to lay out a clear kind of strategy for the entire cloud migration. So point number one or the first kind of step over here is to ensure that we assess the right application and processes for migration. And this is in conjunction with the previous point that I was mentioning. Cloud migration cannot be just an IT strategy, it has to be a business plus IT strategy. So we have to very clearly identify the various components of businesses that are being run in the current tech stack on the current ecosystem, the dependencies of that upstream, and downstream, and the various kind of handshakes that are there. It could be either API based, it could be database links, could be just bad jobs, it could be various other protocols that are connecting these systems.

Today, there has to be a very clear segregation of these particular systems in terms of both their businesses and in terms of their technology stack, and has to be identified in a phase-wise manner what can go to the cloud and what cannot go to the cloud at this point of time. And that is where the entire hybrid model of the cloud helps. We'll talk about that in a bit more detail. The next step is to understand the capabilities and limits. In the cloud from a technology and security aspect, nothing is infinite when we go to the cloud. So everything has got its limitations and everything has got its governance as well. So there has to be a clear understanding of the limitations that are there from a cloud platform perspective. It totally depends on the choice of the platform that we are choosing, right, and the capabilities could be there either in terms of benchmarking or the capabilities could be there in terms of handshakes. It is very important that we understand this very clearly and have a kind of elaborate checklist around it. Adapting and meeting the ever-changing regulatory compliance requirement has been a constant kind of challenge that all financial organizations face and lending is no exception. Especially the lens around the regulatory aspects from its focal length is becoming deeper and

deeper in the lending space that we are seeing in the last few months and the last year or so. There has to be a very clear perspective about the regulatory requirements, the compliance requirements within the organization, and the regulatory requirements overall. It has to be ensured, that the solution that is being adopted from a cloud perspective is meeting some of those requirements and defining the scaling and benchmarking strategies. Establishing the underlying concludes, it's a fundamental thing to be done. It becomes very tricky because, with auto-scaling, on-demand scaling, and vertical and horizontal scaling that a cloud platform provides, it is a very flexible kind of scaling model that is available.

But that doesn't mean that everything can be done the way it is required. There are repercussions of scaling as well, and there have to be clear strategies that have to be put across in terms of what type of scaling is required and what kind of scenarios; the combination of the application servers, database servers, and the API component components. And, like Bala was mentioning these have become more, more modular, and more containerized today. So there are a lot of things that can be done. There's a lot of flexibility that the cloud can provide today, but that's just an armoury. And then we have to be very sure as to what type of scaling strategy that needs to be adopted, focusing on reducing the technical debt, by replacing and retiring the legacy processes or applications that we have is a parallel kind of strategy. And a very critical kind of strategy that needs to be planned as well because this is one of the key areas where a lot of organizations are stuck because they are so tightly coupled to the legacy systems from either a skillset point of view or dependencies from other upstream, downstream applications. It becomes challenging to replace these systems where, I think, the cloud can play a critical role and some of the solutions can play a critical role. Identifying the hybrid strategy to manage existing integrations is what I was mentioning right in the beginning as well. So a hybrid model can still keep some of your applications in your data

centre and can migrate the other applications to the cloud. We can still have an integrated ecosystem. However, it is again very important to understand the cost dynamics around it and the operational dynamics around it, because anything that is moving into the cloud and coming out of the cloud from a data perspective has got cost efficiency associated with it. So organizations must understand that and then budget accordingly. Implementing security, governance, and risk management practices to eliminate any blind spots is again a very critical strategy to have as part of this particular blueprint. So it's important that we onboard the entire compliance team into the migration strategy. And last but not least, the entire monitoring aspects of the application and the business stability need to have a clear kind of strategy as well. There are a lot of features that the cloud provides today, be it application monitoring or be it the various API monitoring, API gateways, and different kinds of cloud watch kind of toolkits that have come in. So there are various capabilities that the cloud provides but again it is important to freeze those strategies before the migration itself so that the entire migration is a smoother and non-confused kind of migration that would happen. Would love to take your views on this as well, Bala.

BALA: Thanks, Sireesh. I think one of the key things is how the cloud brings a modern approach to these steps. So, for example, accessing the right applications and processes for migration. One of the trends that we have seen is that the clients challenge our thought process in how we migrate our existing data to the new lending solution so that we can seamlessly continue the operation. So, where the cloud can bring in value is while doing a traditional data migration in terms of extracting data from the existing databases, doing the analysis, normalizing it, and then uploading it to the new data sources. The whole process in that data migration value chain itself can be accelerated or expedited using these new age modern cloud-based tools that can apply the machine learning models as to sort of intelligence to the data



migration itself, which was not possible at least a couple of years before. That could fundamentally change the process in which we must switch over or cut over to the new system that's #1. The second one is from our defining or designing the target architecture itself. I think that's what we call capacity planning. So what's the kind of server infrastructure, how many VMs (Virtual Machines) that we need, what's the kind of sizing (VM sizing) we need and how do we provision in a deep dynamic basis which is aligned to the business growth, which and also possesses a dynamic capability that cloud brings to the table.

And the next one, which is a very important point is that technical debt right in terms of it could be about the existing lending solution could have been written with some customisations which required some specialized legacy technology. So our legacy expertise was adding our contribution to the maintenance cost of the existing lending solution. Now by moving that to modern cloud-based architecture for lending solutions, we can write off or we are able to save the kind of costs that were incurred using the technical debt in the existing lending solution. So that's very, very important. Just one example in terms of legacy technologies could be about link systems or infrastructure or some of the methods and techniques that have applied only to the existing lending solutions which will not apply to this as we migrate to the new solution. The next very important one is basically about how we monitor the servers, networks, databases, and applications.

What kind of modern monitoring tools that we can use to real-time monitor these events so that you know we can guarantee the business performance both from a business standpoint as well as from a customer service standpoint is also very important and the cloud can add great value there in the overall process. Want Sireesh to articulate.

SIREESH: Thank you, Bala. Great views over there, especially I think focusing on reducing the technical debt over there is one of the key things because there's no point taking all that debt onto a cloud platform. It's not going to help. It's a great opportunity to look for alternatives. So with that, I would want to move on to the next slide where this blueprint is something that we executed with one of our clients, a leading financial institution in India and an NBFC (Non-Banking Finance Company), which was looking to digitize most of its strategies. So, the entire problem statement was again there were emerging conditions in the industry where you know the opportunities that were existing from a market point of view were huge this financial institution was seeing however in terms of an IT strategy. It was not a modern strategy that could scale to that kind of an opportunity and the business challenge of having a streamlined processing cycle, delivering the right kind of business values, and having a modern, state-of-the-art technology implementation to ensure customer satisfaction is enabled across all its strategies. So, we collaborated with this financial institution. Our product was kind of chosen as the entire lending solution for their business and as part of that, we debated around the platform that it needs to be operated on. So the product can obviously go and sit on any kind of existing ecosystem. It could be – an on-prem data centre or it could be an existing cloud model or a hybrid model.

We looked into various aspects and then drew the blueprint we just talked about and collaborated with Microsoft Azure as the platform that was kind of addressing and answering most of the questions and most of the problem statements that we came up with were right. So the lending solution that we put on Azure can leverage various functionalities including VPN, right-sizing of the workloads, using the load balancer, and using the entire DR strategy. In terms of disaster recovery, again something that is mandated but mandated by the regulators, various tools are available in terms of monitoring: Application monitoring, the infrastructure, the scaling strategies that we talked about, being able to

scale vertically horizontally, and on demand. The entire performance benchmarking that was required for the existing business and the forecast that the entire business was coming up from two years to five years perspective and what would be the clear strategy of measuring the entire platform and the application from that point of view. So I think that some great discussions over there and some of the numbers that we are seeing in terms of this, this NBFC which was having a loan portfolio of USD 6.5 billion then and which is increased fundamentally or rather exponentially. Now, the lending solution could bring in savings of about 35% and it also brought in optimization in the operational cost by about 40%. So these are not clear-cut numbers that can be achieved by migrating to the cloud. I think what is very clear, I wanted to communicate over here is the blueprint that we talked about, the current industry trends that we've talked about, and the challenges that we talked about. We need to have that consolidated kind of a view and a strategy to achieve these and probably better kinds of savings and optimizations towards the entire business. So what it has done right now from a benefits perspective has accelerated speed to market for some of the strategies which were put down for one year, two years, they, kind of came down to less than a one year in terms of offerings, delivered distinctive customer experiences across the different loan portfolios and loan lifecycles, the entire API repository. So we were able to enable more than 150 APIs in the entire platform that could talk to the various partner systems, talk to the core banking, talk to various other value-added services, and ensure that there is end-to-end digitization that is available for executing faster decisions, are driven by improved analytics and the capabilities of making sure that some of those decisions are well-informed and intelligent. So that's a wonderful kind of case study that we had and which I thought would be useful to present to this audience. And I think it's, it's testimony to what we have done and some of the things that we just spoke about.

SIREESH: That brings us to the end of this particular presentation and I believe myself and Bala will be more than happy to take any questions that we may have from our audience today.

PRATEEK: So Sireesh, we do have a question here. Is there any specific approach concerning individual lending modules to be taken on the cloud?

SIREESH: A great question over there. See from the module's perspective, if we look at the entire lending lifecycle we have a digital kind of an existing model that connects the customers and you know the online portal kind of a thing. But if we talk about marketing the lending modules as such we have the loan origination, we have the loan management then we have the collections.

So, from a strategy point of view, it is very important to understand the current kind of migration that is required. So, if there are lots of loans that are already in the existing system and that have to be migrated, then a very clear strategy has to be brought in terms of that data migration in itself. However, from a module perspective, the LOS and LMS have to be kind of a combined strategy.

If we keep them on different kinds of levels, there is always a chance that one would get an accelerated kind of growth from our technology or technology perspective and performance perspective, while the other might still depend on the existing ecosystem. So my suggestion would be always to look at LOS and LMS as a combined strategy for cloud migration.

Collections, you know both from volumes and the transactions, etc. are slightly different and the entire operating model around collections is slightly different than it was in LMS. So that can be seen as another strategy in itself.

Bala, if you have any views on that you know, please do.

BALA: Yeah, agreed. I think, Sireesh, I think the same trend that we have also been seeing is either LOS separately basically to address these customer experience requirements on the origination front or it could be integrating with an existing CRM. I think that's one part of the story. The second one is LMS, post disbursement. How do we digitize the whole process? So it's the same thing that we are also seeing LOS and LMS together and collections if at all if there is a separate requirement in terms of applying technology to expedite collections in terms of predicting some of the patterns, etcetera. So that can be complementary to the whole solution.

SIREESH: Sure. Any questions Prateek, we have?

PRATEEK: Yes, here's the question. You mentioned customization challenges in the previous slides. Could you please elaborate?

SIREESH: Customization challenges, I believe we are mentioning some of the legacy kinds of applications that might be already existing as customised solutions.

If I'm not wrong that's what we are mentioning over here, which is what I was like mentioning as one of the key kinds of handicaps that most organizations are having today. And some of these customisations have to be dealt with in terms of the right kind of replacement strategy or an alternate strategy to ensure that moving these into a cloud is not taking this handicap forward and rather addressing them with some of the native cloud technologies that are available today and the solution that is being looked into from lending perspective can complement, solve and address this handicap. So that's what was primarily mentioned.

BALA: Yeah, so if I can add Sireesh there, I think from a customisation standpoint, you know one of the key factors is that you know there could have been certain organization-specific business rules that would have been specifically encoded as part of the existing lending solutions, right? It could be about every step in the loan

origination process, for example, the maker-checker workflows which are very unique to the organization or it could be about underwriting business rules or product-specific configurations which are being coded specifically in that such as a legacy programming language and it works in tandem with the existing lending solution and that is what we meant by customization per se. So when it comes to the modern cloud-based version, one of the best practices that we follow and advocate is there to make these customisations more declarative and modular so that it is not hardcoded into the lending solution, become an inhibitor when we upgrade or migrate to a newer version. It becomes a lot easier because it becomes configurable and it becomes declarative so that you know it is all managed externally without actually writing/programming code for that organization-specific customization. So the answer is following a modular architecture in that particular case.

PRATEEK: So we do have one more question here there are a lot of legacy processes in lending. How do we create the right balance and approach for migration?

SIREESH: I think partly answered the previous questions, so see some of these legacy processes and some of these legacy solutions that are there, they do have alternatives, right? They do have an alternative and it just needs to be worked upon. One of the strategies that we usually recommend to our clients is especially with our product, the lending solution that we offer is very rich in all the API handshakes having more than 200 APIs around there and it can go and sit on the legacy ecosystem as well, right? So moving to the cloud may not be a Big Bang approach to move to the cloud.

It could be to find the right lending solution first, which can help the entire transformation of the existing tech stack in itself, right? And that is where we have kind of played a key role where the solution can come and sit on your existing legacy infrastructure or ecosystem and it can

slowly connect all these dependent systems with APIs. It can transform some of those into the modular components that we have while we are in the existing infrastructure itself and then it can do a lift and shift of this particular ecosystem into a cloud platform enabling further transformation and there is no change in the entire application suite etc. that is required. It is a simple lift and shifts then and we have identified it as part of our blueprint. We have identified that this is what I can move now. So I move this to phase one.

In phase two, there is a hybrid model that I adopt where some of these legacy applications are still sitting, and then I have a strategy to kind of retire them over some time. These are the alternate solutions that my new lending solution is providing and then we take it over and then move that to the cloud in various phases itself. So that's a strategy that has been a win-win situation or a winning equation for a lot of organizations today.

PRATEEK: Thank you, sir. So we do have the next question which is, for large operations that we work with, how do we look into the scaling and benchmarking strategies?

SIREESH: Great question, Bala. Not sure if you want to go first.

BALA: Yeah. So I think some of the best practices that we have, see which is you know, paid off in terms of results is one, is capacity planning in terms of what is the kind of infrastructure, the VM size, the number of computing and storage requirements which are upfront so that, you know, we designed this deployment architecture for these large scale operations during the design phase itself. That's #1. The second phase is basically about performance and stress testing even before moving to production. How do we ensure the kind of traffic that we can expect to see? Because we are talking about an omnichannel digital-first approach to this lending, the kind of several users who are accessing these lending services from multiple different channels is also expected to increase and grow

tremendously. So how do we serve that kind of traffic? Can we simulate that particular kind of traffic and do a stress test? Commence testing? So these two strategies, both capacity planning and stress in performance testing before moving to production, will ensure that we follow the right scaling and benchmarking operation for large-scale operations and lending.

SIREESH: Precisely what we are doing right now. So this is exactly what we are doing with a lot of our customers today who are migrating to the cloud where we complete the entire performance benchmarking testing in terms of the volumes that are currently there and are projected. We achieve those benchmark things with the fine-tuning that might be required from an architectural point of view and the fine-tuning that could be required in terms of the various parameters that are available in the cloud today,

One of the key things that I would want to highlight over here is selecting the right kind of RDBMS strategy is also critical because you know the RDBMS on cloud is a very careful strategy that needs to be adopted. And then basis that particular strategy, the benchmarking needs to be done and ensured that we are achieving those particular benchmarking. The scaling strategies have again to be tested both on-demand and horizontal scaling, the containerized model, and the architecture is very critical as Bala mentioned over here, I'll just give a view of it. The APIs could be sitting in a separate container, the services, the web services can be sitting in a separate container, and the jobs could be sitting in a different container. So it's very important to have very key criteria in terms of when to scale and what to scale and the entire architecture as to how many VMS I need for my APIs, and how many VMS I need for my application servers. So this kind of discussion with these solution providers and the cloud architects has to be done in advance, has to be certified, benchmarked, and then implemented.

PRATEEK: Everyone, in case you want to get connected to the Pennant technologies team

there, feel free to reach out to the e-mail address [sireesh.p@pennanttech.com](mailto:sireesh.p@pennanttech.com) and you would if you would like to get connected to Bala, then you can reach out to [soma@microsoft.com](mailto:soma@microsoft.com). Thank you.

SIREESH: Thank you, Prateek. I think it's been a very useful session and great views from Bala.

Thank you, Bala, for your insightful use over there. And I hope that this was a productive and informative session for all our audience who participated as well.

BALA: Thank you so much Sireesh. Thank you so much, Prateek, a great session today. Thank you so much for the audience.

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PRATEEK: Thank you, Sireesh and Bala for your valuable time and presentation as well as thank you, everyone. I hope that you all had a productive session. Thank you. Have a great evening ahead.

Thanks.