

Modernize Applications, Your Way

Realize the Power of Cloud and Modernization

HITACHI VANTARA PERSPECTIVE

Build the Foundation To Be a Resilient, Adaptable Data-Driven Business

The truly data-driven enterprise is resilient, future-ready and able to empower smarter, sounder business decisions. But how do you achieve this status? Application modernization lays the foundation you need to modernize your application portfolio, harness cloud-based development and construct an end-to-end application ecosystem that is cloud ready and agile. From governance to customer engagement, to self-services and more, application modernization brings efficiencies to the way you work with data in all aspects of your business.

Applications are the engine driving every modern business. Just as organizations must evolve, so must applications. Modernization is a continuous process in which the business is persistently building new applications and refining its existing ones based on new computing approaches and technical innovations.

Many confuse application modernization with cloud hosting and microservices architecture. We believe it goes beyond that; it is about ultimately modernizing your enterprise across **Work, Workplace, and Workforce**. This is accomplished by modernizing your Applications, Infrastructure, and Data and extending these efforts beyond development into operations to become a true DevOps enterprise. Thinking about modernization comprehensively while executing in an iterative/agile build-measure-learn model will provide greater agility and deliver more advantageous business outcomes.

Do you know what your current application performance levels are? You'll want to take stock before creating your new application modernization road map aimed at data-driven success.

Hitachi's Approach to Application Modernization: Envision, Evaluate, Execute and Evolve

Start by taking a look at your organization. What applications are going to drive your IT team forward and build business agility in the process? Assess the quality of your current applications, including legacy applications. Consider what is working well and what will bring you better business outcomes in the future.

Hitachi Vantara's proven methodology helps you do precisely that, and more. We believe there are essentially three steps that can be applied to each facet of application modernization: You'll envision, evaluate and execute as you evolve (see Figure 1).

Envision: Invest time in value-based assessment and mapping your portfolio to your business, keeping your people and processes in mind. Think about the outcomes you want to achieve as you do this.

Evaluate: Identify your gaps and your level of maturity in terms of DevOps, agile and modern engineering principles. Build a road map and identify the applications that will benefit more from a container-based architecture – or a more modern architecture, such as microservices and serverless functions. Be strategic in your choices.

Execute: As you begin to execute, measure. Measure the pace at which you work and scale your modernization for a pace that works for you. With each iteration you'll start to mature and begin to execute your application modernization journey at scale.

Evolve: As you work your way through the envision, evaluate and execute processes, you'll find you can continuously adapt to change and deliver results faster. You are setting the digital foundation that will allow you to speed your evolution towards data-driven innovation and growth.

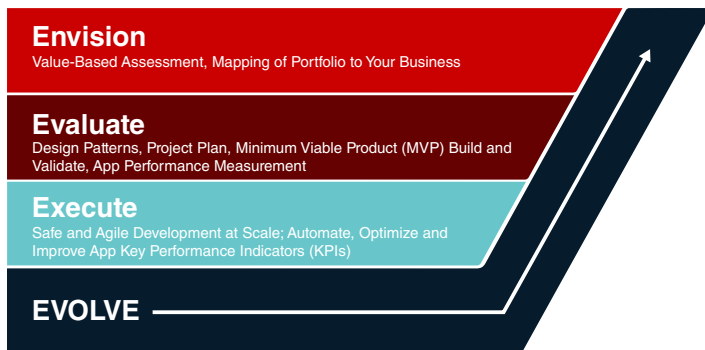


Figure 1. Hitachi Vantara's proven methodology leads to positive change in your organization.

Realize the Power and Agility of Application Modernization

Hitachi supports your efforts to envision evaluate, and execute as you evolve towards application modernization. Apply this approach, Hitachi's proven methodology, to these three essential aspects of application modernization:

1. Application portfolio rationalization
2. Application disposition strategy
3. Application treatment plan

From portfolio rationalization to ongoing maintenance, fully and continuously assessing your applications will open your eyes to the value, risk and cost inherent in your application modernization strategy. The road map you build with this information will help you reduce redundancies, improve your portfolio's overall quality, and guide your evolution to cloud and business agility.

Application Portfolio Rationalization

To strengthen your application modernization approach, start with portfolio rationalization. This process retires aging applications of low value and modernizes those with high value. It improves efficiency while reducing complexity and total cost of ownership (TCO).

Any successful modernization strategy needs to start with baselining the goals and objectives to be achieved at the end of the transformation. Consider where you have made updates or plan to update older software for evolving computing methods and evaluate application usage. Then map technology goals to key performance indicators (KPIs) for tracking progress. Once you have agreement among stakeholders, the next step is to understand each application in your portfolio. Take an inventory of your applications, resources and the underlying technology currently in use. Typically, you will find, like most businesses, that your organization has randomly added applications to its systems over time to keep up with the competition. This activity results in many applications that no longer meet the users' needs or leverage resources wisely.

Where can you eliminate these ineffective applications and streamline your application portfolio? Consider where complexity can be reduced, efficiencies gained and TCO lowered. What are the value, time, risk and cost tradeoffs against the business requirement that you are willing to make? (See Figure 2.) Portfolio rationalization will help "clean up" your systems, reduce your costs, improve resource utilization and increase the overall return on investment (ROI). It will

"If the legacy application is not meeting the new requirements imposed by digital business, it needs to be modernized to fit properly, and should be upgraded to provide greater business value. Applications that lack the agility to keep pace with the demands of digital business may be a cost or risk liability."

— Smarter With Gartner, "7 Options To Modernize Legacy Systems," Susan Moore, December 14, 2020

CLOUD MODERNIZATION CONTINUUM

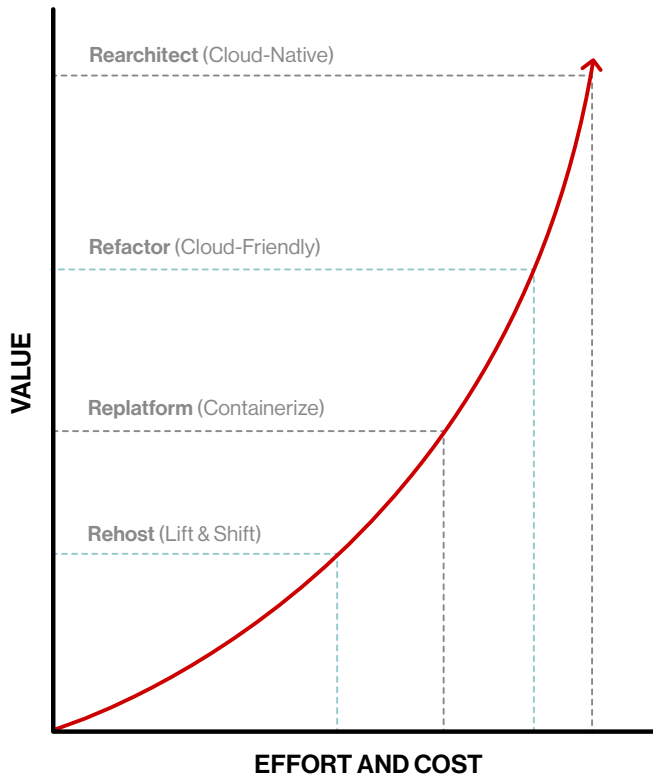


Figure 2. Modernization is a continuum. Different modernization approaches can be applied to different projects. Cloud-native is well suited for projects focused on driving continuous innovation.

help you answer the question: Where will application modernization bring me the most value in terms of time, risk and cost in the short and long term?

Application Disposition Strategy

Examination of your application portfolio through the lens of your desired business outcomes, helps you identify what you expect from each application. You are now ready to assess the cost, time and effort trade-offs you are willing to make for the value you hope to drive from each application.

There are four main disposition methods or treatment strategies for moving applications to the cloud, which you may already be aware of. As you form your cloud migration strategy, evaluate each on what they require (time, risk, cost) and what they deliver (value). Take a holistic look at where your organization stands and what each strategy can accomplish for the lifetime of each application, and choose the best path forward:

- **Rehost** (lift and shift). This cloud migration strategy moves current applications into the cloud quickly and cost-effectively. The downside is that it does not leverage elasticity or many other

native advantages of the cloud. As a result, you may not gain the operational savings you expect. Rehosting requires proper configuration to ensure that data center applications continue to communicate once placed within the cloud. Without proper configuration, updates may be lost, applications may not be optimized completely, and cloud migration and modernization issues may arise both in the short and long term.

- **Replatform** (lift, tinker and shift or containerize). Replatforming is about moving applications to the cloud without major changes to take advantage of the cloud environment. It involves some up-versioning, such as adopting a managed database or leveraging a dynamic autoscaling functionality. The containerization aspect effectively captures an application and its environment in a “container.” The container makes it easy to move the application to another environment. Although this cloud migration strategy will take longer than “lift and shift,” replatforming provides a degree of cost-effectiveness, functionality and time-savings, without the significant resource requirements of refactoring.
- **Refactor** (cloud-friendly). Leverage the cloud environment in this approach by modifying existing code and moving applications to suit new infrastructure better. Proper DevOps skills are critical to take advantage of this process. Although refactoring is more complex and possibly more time-consuming than the other approaches, the positive value far outweighs the negative. Businesses typically see a higher ROI once they have completed the process of refactoring.
- **Rearchitect** (cloud-native). Using methodologies of the above-listed strategies, such as DevOps and containers, this approach builds from scratch. This cloud-native strategy may also incorporate continuous delivery and microservices. The result is resilient, agile apps that are portable across cloud environments. They exploit the continuous innovation model of the cloud, which provides improvements in functionality, operations, security, resilience and responsiveness. Rearchitecting allows you to speed go-to-market efforts that build business success.

Application Treatment Plan

After assessing, rationalizing and streamlining your application portfolio and determining your best method for migrating applications, you’ll need to consider costs to complete your application modernization road map. Will your strategy allow you to settle into a maturity level of ongoing maintenance once the initial setup for application modernization is accomplished?

Where are the costs and cost savings to be found in your application treatment plan? You’ll want to determine how favorable the cost benefits of aligning business applications with your company’s vision and goals will be.

Typical savings realized from application modernization include:

- Staffing reductions since fewer skilled workers are required for application administration.
- Efficient new and refreshed applications that can take advantage of new infrastructure and technologies, speeding time to market and boosting business advantage.

- Resource frugality, with less time required to run applications.
- Resiliency, with improved uptime.
- Potential use of software as a service, moving to SaaS from perpetual licenses for customer relationship management, HR and content management systems.

Do not plan for the future of each application in painstaking detail. Otherwise, by the time you're ready to implement, the underlying technology may have changed. Focus on continuous innovation and evolution. This approach lets you adapt to change more quickly and will help you deliver results faster. You will also realize greater value over time.

You will reach a point where everything is about to change. But there is no need to be apprehensive: At this point you've set a foundation to adapt to change and to accelerate your organization's data-driven innovation and growth.

Modernize Applications, Your Way

Whether migrating applications, rearchitecting and reengineering applications, or replacing your entire cloud-native business with SaaS, Hitachi Vantara meets you where you are. We will help you eliminate technical debt and map out a strategy for your journey to cloud and modernization.

With more than 25 years of consulting experience, our technical experts have completed over 700 cloud transformations in the last five years. We use intelligent automation tools and accelerators, the Hitachi Cloud Accelerator Platform, computer-aided translation (CAT), Botsina software and more. Our approach enables us to deliver on these transformation efforts 3.5 times faster and achieve ROIs of 108%.

[Learn more](#) about how a road map of your application modernization strategy will help reduce redundancies, improve portfolio quality and guide your evolution toward data maturity.



We Are Hitachi Vantara

We guide our customers from what's now to what's next by solving their digital challenges. Working alongside each customer, we apply our unmatched industrial and digital capabilities to their data and applications to benefit both business and society.

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PV-041-A BTD September 2021