



Korcomptenz



# Design Thinking for App Modernization

Discover new opportunities for innovation, improved customer experience, and operational excellence by leveraging Design Thinking principles across your App Modernization initiatives

# Introduction

New technologies including efficient, scalable cloud platforms powered by Artificial Intelligence are prompting organizations to reconsider their legacy applications and conduct strategic modernization projects to upgrade and enhance their systems. For many companies, this prompts a critical question: How can you be certain these projects result in innovative new solutions that solve business challenges and create new opportunities rather than simply recreating what you have done in the past?

Forward thinking organizations are increasingly turning to a paradigm championed by Apple's legendary founder, Steve Jobs. This "Design Thinking" methodology combines an iterative discovery process with a focus on the needs of your users and other key stakeholders, allowing their requirements and experience to drive the final output. It's an exciting and innovative human-centered approach to creative problem solving that provides huge benefits and helps solve challenges before they become major problems.

This whitepaper has been developed to help organizations of any size take advantage of the key principles of design thinking to ensure their next technology or app modernization project is successful, generating real return on investment and providing significant competitive advantage.



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# The Innovation Imperative

It's no secret that organizations are investing in technology, significantly more almost every single year. Even during the pandemic, technology spending increased globally from \$3.872 trillion in 2020 to \$4.235 trillion in 2021, an increase of almost 10% in a single year under the most challenging economic conditions in decades. Spending is expected to rise to \$4.679 trillion by the end of 2024. The need to fundamentally transform business operations and customer experience underlies much of this investment, what has come to be known as "digital transformation." This includes a combination of process automation, artificial intelligence, and cloud migration. The goal is to work faster and more efficiently, while better serving your customers and internal team members. In other words, the underlying objective is to innovate. Consider the status quo and upend it, building something significantly better than it was before.



## Design Thinking Unlocks Innovation in Your Organization

Innovation, however, is not an easy thing to define. We tend to know it when we see it but identifying what it looks like in your organization can be challenging. How can any business leader know if a great idea in principle will be equally great in practice? Design Thinking is a proven methodology any company can leverage to help answer that question because it starts by taking advantage of a resource untapped in many organizations: Your own users. The people that interface with your customers and other stakeholders every day of the week and understand almost instinctually what can make a real difference in your success.

The goal is to approach a project by first considering the optimal solution from a given user or stakeholder's perspective, and then align those requirements with the technical, resourcing, and effort/timing needs of the program. This "user-first" approach helps organizations better understand the needs of users before technical aspects are fleshed-out, and management has made the final decision. This expands the space of possible solutions, reduces the risk associated with large projects, and ultimately delivers results. The key components of a successful Design Thinking process include empathizing with and understanding the needs of users and clearly defining those needs and any challenges before ideating and iterating solutions.



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## Keys to Success



This outcomes-based and agile-focused methodology focuses on positive results that incorporate both quantitative and qualitative criteria. The goal is to identify business needs and associated results, ideate rapidly and thoroughly with a visual mockups and prototypes, and then refine into an innovative solution while maintaining a deep understanding of the target audiences, users, and other stakeholders.

- Immersion in users, business needs, and expected outcomes
- Ideation and imagination around achieving goals
- Alignment with technology stack, security, data retention and management, and other policies
- Documentation and implementation based on the optimal ideas and opportunities



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# The Design Thinking Process

The Design Thinking process begins with a level-setting phase to define the scope of the project and the participants before the ideation and iteration phases followed by refining and finalizing the recommendations.

## Diagnostic and Analysis

- Understand objectives and needs
- Evaluate overall process
- Identify teams and stakeholders
- Inventory and document existing systems

## Ideation

- Facilitated sessions with key stakeholders
- One on one interviews with individual stakeholders
- Technical needs and planning
- Additional information gathering such as online surveys and questionnaires

## Iteration

- Present samples, mockups, and prototypes to illustrate different possible solutions
- Discuss, experiment, and explore the space of possible solutions
- Gather feedback on the various directions to identify optimal strategies prior to finalization

## Recommendations and Refinement

- Present solution blueprint and supporting materials
- Review and refine as needed
- Validate output against requirements and technical needs
- Finalize and deliver



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# App Modernization and Investments in Innovation

Application modernization is broadly defined as the practice of updated older or legacy software with newer technology. This can include a more modern programming language, technology stack, or infrastructure platform, or replacing custom legacy software with a third-party system. Organizations benefit from app modernization initiatives by deploying software that is faster, more functional, better aligned with your business needs, and easier to maintain and support. This can reduce the resources required to maintain an application, improve the pace of upgrades and bug fixes, improve stability and security, and provide other benefits over the legacy system.

Organizations have adopted a wide variety of strategies to pursue app modernization based on their unique needs, objective, and budget. These strategies include:

1	<b>Redesign</b>	Design and develop an all new app on a new platform with features to meet changing business needs
2	<b>Re-hosting</b>	Migrating a current application "as is" or with only minor revisions to a cloud-based platform or a more modern hosting environment, sometimes call "lift and shift"
3	<b>Refactoring</b>	Upgrading and migrating a legacy application by rewriting key parts of it, for example to support micro services, while migrating to a new environment
4	<b>Re-platforming</b>	Migrating a legacy application while making changes to parts of the platform, but not rewriting or rebuilding it, usually seen as a middle ground between Re-hosting and Refactoring
5	<b>Software Migration</b>	Replacing custom software with an off-the-shelf solution and migrating relevant data

Strategies such as refactoring and replatforming generally include changes that help support more modern application development approaches such as a decoupled application that can provide services to third party systems, or the use of modern development pipelines and containers to manage build and support more frequent upgrades. Overall, the general goal is to deploy the application in a new environment or new platform that allows it to run faster, be upgraded easier, readily connect to other applications, and reduces maintenance and support needs.

What's missing, however, is a sharp focus on how these approaches will benefit your users and customers. This is where Design Thinking comes in.



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# Integrating Design Thinking in Your App Modernization Roadmap

Design Thinking isn't new, but many organizations still struggle to incorporate the methodology into their projects. The reasons, of course, will vary from organization to organization, but they generally fall into a few key categories. First, many organizations take a technology centric approach, that is evaluating software based on a laundry list of features and industry reviews, rather than focusing on the needs of their own users and goals. Technology projects have become a competition of features, instead of an exploration of the benefits. Second, technology projects tend to be managed "top down" instead of "bottom up." The management of a team identifies a need. The need gets escalated to the IT or even executive team. They evaluate the software based on the budget, and make a decision with little input from actual users, or by the time input is solicited a significant portion of the decision is already made.

Design Thinking takes a different approach. The users are the ones driving the needs from beginning to end, and management only weighs in after the process is completed. This can be a frightening shift for some companies, and those concerns are not entirely without merit. Sometimes, Design Thinking produces solutions that are too expensive or time consuming to implement, or solutions that fail to address the executive team's goals for the project. If you ask someone for their "blue sky" solution, they might well plan a trip to the moon. Balance is needed in most organizations, and Design Thinking in principle needs to be refined in practice. This usually happens in a few critical ways



**Define the high-level scope of the project before you begin your ideation process to balance freedom of thought with the reality of the business**

- Processes covered
- Teams included
- Systems to be addressed

**Engage a facilitator who understands management's needs and can incorporate them into the process**

- Strategic imperatives
- Business objectives
- Potential challenges

**Focus your workshops on key elements of the project, not every single possible detail**

- User experience
- Processes and workflows
- System integrations

**Carefully consider the scope and timing after the process is completed**



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## Calculating Return on Investment

After you've confirmed the final scope, be sure to calculate the return on investment considering the potential enhancements to your revenue, reductions in costs and costs that can be avoided entirely, and any future savings on capital expenditures. You should also consider the potential non-financial benefits including improvements in customer and user satisfaction, and potentially better financial or operational controls.



## Key Advantages of Design Thinking for App Modernization

Harvard Business Review identified three things an innovation process must deliver to be successful. Superior solutions, lower risks and costs of change, and employee buy in. Design Thinking helps ensure all three of these imperatives are met by engaging users throughout the processes and exploring a larger space of solutions before finalizing your unique needs. The benefits you experience throughout will include:

- Building more innovative solutions that solve real business challenges

- Expanding organizational knowledge about processes and systems, and sharing knowledge between teams

- Identifying potential problems and challenges in advance, with the ability to work around them rather than run right into them

- Better prioritizing your business needs in areas that will have the largest impact on your organization

- Solving the hard problems in addition to easy ones



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## Key Takeways

Organizations are investing in technology and innovation but can still struggle to ensure their valuable time and money is spent on solutions that will have a real impact on their customers and internal stakeholders while providing measurable return on investment. Design Thinking is a human centered approach to problem solving that leverages the knowledge and needs of your users and other stakeholders to develop innovative solutions in an agile manner. Many organizations, however, have not fully incorporated Design Thinking principles into their technology and app modernization projects because they take a technology centric, top-down approach, and are concerned that solutions designed by users could be too costly or time consuming to implement.

These challenges can be solved by managing the scope, engaging an experienced facilitator who is aware of corporate needs, focusing your workshops, and carefully considering the output. Striking the right balance will enable your organization to build more innovative solutions, expand your knowledge and information sharing, identify potential challenges in advance, better prioritize your business needs, and ultimately solve the hard problems facing businesses today.

## About Korcomptenz

Korcomptenz is your total technology transformation partner, helping you engage your customers and prospects, enable your business, and accelerate your results. Request a consultation to learn more about our web and marketing technology services, business management solutions, mobile apps and custom development, and infrastructure management services.



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Korcomptenz is a technology transformation provider that partners with clients to improve their digital experience and insight. We unlock the power of technology in the areas of ERP, CRM, infrastructure management, and cloud to empower our clients with intelligent and experiential solutions. We **#FocusOnYou**.

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