

Moe Abdula, Ingo Averdunk, Roland Barcia,
Kyle Brown, Ndu Emuchay

The Cloud Adoption Playbook

Proven strategies for transforming
your organization with the cloud



WILEY

The Cloud Adoption Playbook

Proven strategies for
transforming your
organization with
the cloud

Moe Abdula
Ingo Averdunk
Roland Barcia
Kyle Brown
Ndu Emuchay

WILEY

The Cloud Adoption Playbook: Proven strategies for transforming your organization with the cloud

Published by
John Wiley & Sons, Inc.
10475 Crosspoint Boulevard
Indianapolis, IN 46256
www.wiley.com

© 2018, International Business Machines Corporation, Armonk, NY

Published simultaneously in Canada

ISBN: 978-1-119-49181-1

ISBN: 978-1-119-49185-9 (epub)

ISBN: 978-1-119-49183-5 (ePDF)

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at <http://www.wiley.com/go/permissions>.

Limit of Liability/Disclaimer of Warranty: The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If professional assistance is required, the services of a competent professional person should be sought. Neither the publisher nor the author shall be liable for damages arising herefrom. The fact that an organization or website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or website may provide or recommendations it may make. Further, readers should be aware that Internet websites listed in this work may have changed or disappeared between when this work was written and when it is read.

For general information on our other products and services please contact our Customer Care Department within the United States at (877) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Control Number: 2018933540

Trademarks: Wiley and the Wiley logo are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates, in the United States and other countries, and may not be used without written permission. IBM, the IBM Press logo, UrbanCode, uDeploy, System z, Rational, IBM Watson, WebSphere, Bluemix, InfoSphere, Optim, PureApplication, DB2, SoftLayer, and Blue Box are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. A current list of IBM trademarks is available on the web at “copyright and trademark information” as www.ibm.com/legal/copytrade.shtml. All other trademarks are the property of their respective owners. John Wiley & Sons, Inc. is not associated with any product or vendor mentioned in this book.

1

Business Drivers

The ongoing digital revolution affects individuals and businesses alike. Increasingly, social networks and digital devices are the default means for engaging government, businesses, and civil society, as well as friends and family members. People use mobile, interactive tools to determine who to trust, where to go, and what to buy. This means that the last best experience that people have anywhere becomes the minimum expectation for the experience they want everywhere, including in the enterprise. Given the competitive landscape, this means that enterprises must undertake their own digital transformations, rethink what their customers value most, and create operating models that take advantage of what is newly possible for competitive differentiation.

The challenge for the enterprise is how fast and how far to go down the path to digital transformation and cloud adoption.

Addressing Challenges for the Enterprise —

To meet this challenge, enterprises must develop a methodical approach to embracing digital transformation and the cloud. Developing that approach means that they must answer questions such as:

- How do we situate such transformation in the complexity of the enterprise itself and the regulatory environment in which the enterprise operates?
- What considered, integrated set of decisions should we make to ensure consistency and safety at scale?
- How do we ascertain what success looks like in the short term, as well as what steps we need to take in the long term to sustain it?

2 The Cloud Adoption Playbook

Increasing customer expectations and a more competitive business context have placed tremendous pressure on business leaders to change the way they set their strategies and run their organizations. New requirements to incorporate more information and greater interactivity quickly drive up costs and complexity.

Business leaders have long used information technology to improve productivity and efficiency, reach new markets, and optimize supply chains. What is new is that customer expectations have changed. How can enterprises best respond to this shift? How can they take advantage of the opportunity to innovate and grow through technology adoption? And how can they do all this cost-efficiently?

This is the domain of digital transformation and its intersection with cloud adoption. Digital transformation incorporates the change associated with the application of digital technology in all aspects of society¹. Cloud Adoption is the way in which businesses implement digital transformation.

In our work with clients, we have found that enterprises that can develop and effectively execute a digital transformation strategy and take full advantage of new technologies, such as cloud are able to transform their business models and set a new direction for entire industries.

We believe the most crucial decision that a company can make to successfully pursue a digital transformation strategy is to wholeheartedly yet thoughtfully adopt the cloud as the IT platform of choice. We have observed many companies that have successfully used cloud adoption to rapidly advance their digital transformation strategy. We have also seen companies make unsuccessful cloud adoption decisions that have hampered or set back their pace of digital transformation. What we will show you in this book is how to model your decision-making process after the successful transformations while avoiding the common pitfalls we've seen in the unsuccessful transformations.

We propose to show you how to do this by focusing on three areas:

- Think and Envision the Transformation
- Balance the Transformation
- Thrive on New Foundations

Along with insights from our direct consulting work with many industry-leading organizations, the ideas we present in *The Cloud Adoption Playbook* (the *Playbook*) are underscored by influential works including *The Three Laws*

of Performance, by Steve Zaffron and Dave Logan²; *The Innovator's Dilemma*, by Clayton Christensen³; *View from the Top*, by Michael Lindsay⁴; and the transformation of IBM itself.

This *Playbook* is for those who are (or aspire to be) catalysts for digital transformation in their organizations; leaders who see the need for transformation as well as those who have direct responsibility for executing it. We intend to bridge the business and technology divide and provide a holistic but pragmatic set of ideas that can enable considered, consistent, and successful implementation within complex organizational constructs. We hope that this *Playbook* guides you in deciding how and where to get started in your digital transformation journey, what important dimensions to consider, and how to make integrated decisions that significantly improve the chances of success while reducing risk.

We have seen many cloud adoption and digital transformation programs succeed; we have also seen many fail. We hope that the tips in this *Playbook* will add to the body of knowledge and experience on replicating success and extending its impact.

What Drives a Business to the Cloud? —

Technology in general, and the cloud specifically, are only a means to an end. The end needs to be defined in terms of a business or mission-strategic intent such as the following business drivers:

- Exceptional user experience
- Accelerated time to market
- Higher service quality
- Cost flexibility
- Repeatability and flexibility
- Safety, security, and compliance with regulation

Growing your business to meet these business drivers requires change and organizational transformation beyond just adoption of technology. To understand where cloud adoption and digital transformation fit within the enterprise, you have to place them within the context of very complex organizational constructs requiring a holistic approach. This approach needs to take into account the requirement to make progress and show success in the short term while keeping the long-term goals in sharp focus.

4 The Cloud Adoption Playbook

Because of this organizational complexity, we must define what success looks like in this context to show you what refinement looks like and to demonstrate how to achieve quick wins along the way. The following questions can help guide your organization in understanding this definition of success:

- What are our specific measures of success? Examples might include “Attract and retain top talent” or “Reduce IT delivery time by 15 percent.”
- What are some quick wins in the short term that the cloud could help us achieve? Examples might include “Conduct a workload and data classification analysis to determine what workloads have affinity to the cloud and migrate 5 percent of those to cloud within one year” or “Deliver a high-profile pilot cloud-native application that opens a new route for customer interaction, such as a native mobile app or artificial-intelligence chatbot.”
- What does sustainable success look like in the long term for our digital transformation journey? One example might be “Support idea to market rollout in less than one month.”
- What are the key success factors that our whole organization needs to understand and march toward? One example might be “Improve customer experience by 5 percent on a continuous basis as measured by Net Promoter Score (NPS).”

Quick wins are powerful ways to secure and retain sponsorship. We have seen that companies gain more success over the long term when they build effective, enduring cloud transformation programs that aligned with their strategic intent and business drivers. We recommend that you take stock and periodically evaluate this alignment and course-adjust as necessary to achieve strategic outcomes.

We recognize that cloud technologies present an unprecedented potential for organizations to re-envision their relationship with information technology. But we also believe that the cloud is a catalyst to allow you to go well beyond re-envisioning to actual realization of new types of value. Cloud adoption can transform organizations by better empowering their workforces and ultimately differentiating them from competitors. Companies that can tap this potential become disruptors in their respective markets regardless of industry, which represents a real opportunity for leaders of these organizations.

We also recognize that given their successful history and ongoing commitments with their most valued clients, organizations adopting the cloud

may experience first-hand the *innovator's dilemma*. You have to strike a balance between two worlds: delivering on existing commitments to stakeholders employing traditional IT methods and tools, and simultaneously adopting the game-changing new technologies required to meet disruptive new business opportunities. All organizations must work out how far to go in each direction to decide what is right for them. In this *Playbook*, we provide practical approaches to the decisions that need to be made and ways to take action along the important decision-making dimensions we lay out.

What Do You Gain from Cloud?

According to the 2011 National Institute of Standards and Technology (NIST) definition, “Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”

The practical outcomes that companies want to realize from cloud computing include resource elasticity, cost flexibility, and self-service provisioning. Putting these two together, you see that you need to achieve the outcomes by using the services provided by cloud providers. This requires a model that allows you to choose not only what services you want, but where they run, and what vendors or providers you purchase them from. We provide practical examples of these models throughout the book.

Taking a step back and looking at the business intents behind why customer adopt cloud, we see enterprises taking advantage of the cloud model because it promises improved efficiency, expanded innovation potential, and revenue growth. We see technology and business function leaders alike attracted to the cloud for the value that it has the potential to deliver. Within these enterprises, leaders are aligning their cloud adoption and their digital transformation programs through strategic intents such as the following:

- **Creating a customer-focused enterprise:** This intent takes advantage of the cloud model to optimize data and use analytics to adapt to new user behaviors, cultivate trust, and drive profitable growth while preserving an exceptional user experience.
- **Increasing flexibility and streamlining operations:** You can use the cloud to improve operating leverage with variable cost structures that

increase flexibility for both the user and the provider of the cloud-based service. Furthermore, you need to provide higher-quality service, accelerate time to market, and reduce risk.

- **Driving innovation while managing cost:** By using the cloud to deliver new services efficiently, these new services can improve cost flexibility, provide users instant gratification, and drive competitive differentiation. But you must balance these improvements against decreasing cost per transaction and optimization of existing investments.
- **Optimizing enterprise risk management:** You can use the cloud to achieve compliance objectives and mitigate operational risk while maximizing return on equity; combating malicious activity; and incorporating repeatability, scalability, resiliency, and flexibility.

At the time of the 2011 NIST definition, cost reduction, improved data access, and demand generation were the top business drivers for cloud adoption. We have seen business drivers, technology platforms, services offered, and cloud deployment models evolve since that time. The top business drivers for cloud now include building exceptional user experiences, providing services in a multi-cloud hybrid environment, and modernizing applications to update existing Information Technology estates. Modernization is especially important for protecting your existing investment while opening applications and data up for new value delivery.

Enterprise digital transformation began with cost savings and simple lift-and-shift initiatives purely for efficiency. Efficiency is now a given, and enterprises require a multi-cloud, integrated platform to enable them to disrupt their industries and lead in their markets.

Although the cloud has helped early adopters generate innovation and new forms of collaboration, there is a concerted shift to scale cloud adoption across the enterprise. This shift includes addressing digital transformation in a sustained way, recognizing that some business functions are more amenable to cloud adoption than others.

Leveraging business drivers and strategic intent to guide and inform the way you rethink cloud adoption and digital transformation means maintaining alignment throughout the transformation journey. Your business is reinvented as the transformation occurs and accomplishments are achieved. The cloud becomes a true catalyst, generating momentum and creating a virtuous circle that creates sustained business success with expanded effect throughout the enterprise.

With your understanding of the intrinsic relationship between business and technology and the need to continuously strive for alignment through

the techniques described in the *Playbook*, we believe that you will be much better positioned to achieve success in both the short term and the long term.

Implications to the Enterprise

Many of the ideas we describe in this book can and should apply to any organization, but we highlight the challenges that cloud adoption presents in large enterprises, particularly those that are involved in strategic outsourcing.

You need to understand the critical importance of the value that technology vendors and service providers deliver to enterprises — and, equally important, the rate of adoption and transformation within your enterprise. Although the *Playbook* assumes the perspective of the enterprise, for a fuller context, you must consider the service-provider relationships and contract vehicles through which such value is delivered to you.

Especially in strategic outsourcing arrangements, service providers earn their revenue by taking on risk on behalf of their clients. If you are in an arrangement like this, it means that you must take care to ensure that you factor in the commitments the service provider has made (including appropriate procedures, buffers, service level agreements, and checks) into how you realize the *Playbook* in real life. As a result, we recommend a holistic approach to transformation, taking into account time, relationships, organizations, assumptions, talent, culture, and other factors. Likewise, you need to take a pragmatic approach as you apply the tips in this book, one that recognizes where your organization is in their journey, that meets your organization where they are, and that guides the organization along the path of cloud adoption and digital transformation.

As you balance sustained innovation and disruptive innovation to keep pace with market forces and business priorities, the culture of care and risk-aversion typically comes into direct conflict with the need for rapid innovation. Our experience is that clearly outlined criteria along the dimensions of consideration enable decision-making for these types of trade-offs. Where you fall on the spectrum between sustained innovation and disruptive innovation and the decisions that you need to make depend on factors specific to your organization and your priorities. We address these important dimensions in Chapter 2 on the Framework and in later chapters.

We observe, especially in long-term strategic outsourcing arrangements, that enterprises see capabilities in the cloud that seem similar to — and

cheaper than — what they're paying a lot of money for in their existing contracts. Enterprises also see many new possibilities in the cloud. These possibilities can be realized through cognitive capabilities; containers; prefabricated mobile application development environments; DevOps components; and a spectrum of useful services such as data analytics, machine learning, and artificial intelligence. These kinds of services are offered in a variety of cloud environments, and organizations are applying multi-cloud adoption strategies to take advantage of these services where they exist. Therefore, market pressure is growing to employ these powerful capabilities to deliver new value faster — and at scale.

These are just a few practical examples of how innovation changes the relationship between the service provider and the service consumer in the enterprise context. Our experience is that the implications of digital transformation can be quite wide reaching. In addition to innovating with technology, you need to innovate in your vendor contracts to capture the evolving relationship between the enterprise and the service provider. Further, you must incorporate these technologies into the new enterprise operating model in order to take full and meaningful advantage of these new possibilities. It will do you no good if your contract with your service provider makes you pay for services that are no longer needed because they have been replaced by newer cloud-based technologies, or that forces you to continue to provision services such as development environments manually when they can be instead directly requested through a self-service catalog.

You also must consider your enterprise's tolerance for sustained or disruptive innovation and how that innovation fits into its priorities. The process begins by clarifying your objectives. You must decide what you really want from digital transformation and cloud adoption. You must determine the strategic intent behind those objectives, determine how well aligned your enterprise is to those objectives, and continually re-evaluate what you must do to align with these objectives.

We see many tried-and-true business models being disrupted by cloud service providers and the services that they provide. This causes enterprises to react in a variety of ways; in many cases, the response has been to adopt multimodal IT; that is trying to segregate projects into “faster” and “slower” lanes to allow innovation on the cloud even as they seek alternative solutions.

What's more, lines of business that are pressed by market forces find themselves having to work around their internal IT providers. This is because the LOB's believe they need either responsiveness or capabilities beyond what

internal IT has the capacity to offer. As a result, instead of internal IT acting as a trusted adviser and de facto service provider, others assume this role.

Summary

This chapter showed what drives businesses to the cloud, and what businesses can expect to gain from cloud adoption. This chapter also showed how the cloud can disrupt your current approaches and IT operations models — both internally and with outside vendors.

Digital transformation is not easy; it requires inspiration, a clear and consistent focus, and persistence over time. It also requires a playbook to help you understand all the different areas you need to consider and how they work together or come into conflict.

This leaves you, as a catalyst and a leader, in a challenging position. You need to be able to address the following questions:

- How do you articulate a holistic but pragmatic approach that takes organizational tensions into account and recognizes the need to move quickly and in a concerted, coordinated way?
- How do you decide where to start bringing key stakeholders to the table and charting a path that causes alignment?
- What are the steps you need to follow to significantly increase the chances of success while reducing risk to the enterprise?

We will explore the answers to these questions (and others) in Chapter 2.