

# Build a Next-Generation Digital Workplace

Transform Legacy Intranets to Employee  
Experience Platforms

—  
Shailesh Kumar Shivakumar

Apress®

# **Build a Next-Generation Digital Workplace**

**Transform Legacy Intranets to  
Employee Experience Platforms**

**Shailesh Kumar Shivakumar**

**Apress®**

# ***Build a Next-Generation Digital Workplace: Transform Legacy Intranets to Employee Experience Platforms***

Shailesh Kumar Shivakumar  
Bangalore, India

ISBN-13 (pbk): 978-1-4842-5511-7  
<https://doi.org/10.1007/978-1-4842-5512-4>

ISBN-13 (electronic): 978-1-4842-5512-4

Copyright © 2020 by Shailesh Kumar Shivakumar

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

Trademarked names, logos, and images may appear in this book. Rather than use a trademark symbol with every occurrence of a trademarked name, logo, or image we use the names, logos, and images only in an editorial fashion and to the benefit of the trademark owner, with no intention of infringement of the trademark.

The use in this publication of trade names, trademarks, service marks, and similar terms, even if they are not identified as such, is not to be taken as an expression of opinion as to whether or not they are subject to proprietary rights.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Managing Director, Apress Media LLC: Welmoed Spahr  
Acquisitions Editor: Shiva Ramachandran  
Development Editor: Rita Fernando  
Coordinating Editor: Rita Fernando

Cover designed by eStudioCalamar

Cover image designed by Pixabay

Distributed to the book trade worldwide by Springer Science+Business Media New York, 233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax (201) 348-4505, e-mail [orders-ny@springer-sbm.com](mailto:orders-ny@springer-sbm.com), or visit [www.springeronline.com](http://www.springeronline.com). Apress Media, LLC is a California LLC and the sole member (owner) is Springer Science + Business Media Finance Inc (SSBM Finance Inc). SSBM Finance Inc is a **Delaware** corporation.

For information on translations, please e-mail [rights@apress.com](mailto:rights@apress.com), or visit [www.apress.com/rights-permissions](http://www.apress.com/rights-permissions).

Apress titles may be purchased in bulk for academic, corporate, or promotional use. eBook versions and licenses are also available for most titles. For more information, reference our Print and eBook Bulk Sales web page at [www.apress.com/bulk-sales](http://www.apress.com/bulk-sales).

Any source code or other supplementary material referenced by the author in this book is available to readers on GitHub via the book's product page, located at [www.apress.com/9781484255117](http://www.apress.com/9781484255117). For more detailed information, please visit [www.apress.com/source-code](http://www.apress.com/source-code).

Printed on acid-free paper

*I would like to dedicate this book to:*

*my parents, Shivakumara Setty V and Anasuya T M,  
from whom I borrowed love and strength,*

*my wife, Chaitra Prabhudeva and my son Shishir,  
from whom I borrowed time and support,*

*my in-laws, Prabhudeva T M and Krishnaveni B,  
from whom I borrowed help and courage,*

*and*

*to all my teachers, who bestowed lots of love and  
knowledge upon me.*

# Table of Contents

<b>About the Author .....</b>	<b>xiii</b>
<b>Acknowledgments .....</b>	<b>xv</b>
<b>Introduction .....</b>	<b>xvii</b>
<b>Chapter 1: Introduction to Employee Experience Platforms .....</b>	<b>1</b>
Brief Introduction to Intranet Platforms .....	1
Traditional Intranet Platforms vs. Employee Experience Platforms .....	2
Key Challenges of Intranet Platforms for Employees .....	3
Expectations of Next-Generation Digital Workplaces .....	5
Employee Experience Platform .....	6
Functional View of EXPs .....	8
Drivers of EXPs .....	13
Key Features of EXPs .....	13
Critical Success Criteria of EXPs .....	17
Various Dimensions of EXPs .....	17
Recent Trends in EXP .....	18
End-to-End EXP Design Steps .....	19
Summary .....	21
<b>Chapter 2: Requirements Elaboration for EXP .....</b>	<b>23</b>
Employee Experience Requirements .....	23
Key Employee Experience Tenets .....	23
Key Employee Experience Requirements .....	25
Employee Experience Requirements Gathering and Modeling .....	26
Voice of Employee .....	27
Employee Persona .....	27
Common Challenges and Best Practices with Employee Experience Platforms .....	28

TABLE OF CONTENTS

- Requirements Elaboration Case Study ..... 31
  - Employee Portal Redesign Vision ..... 31
  - Transformation Principles..... 32
  - Key Requirements ..... 33
  - As-Is System Analysis ..... 38
- Summary..... 42
- Chapter 3: EXP Experience Design ..... 43**
  - Experience-Based Employee Engagement ..... 44
    - Benefits of the Employee Experience Layer ..... 46
  - Experience Design ..... 46
    - Discovery Stage..... 48
    - Design Stage ..... 50
    - Build, Test, and Measure Stage ..... 54
  - Design Thinking ..... 55
    - Understand ..... 55
    - Analyze ..... 56
    - Ideate..... 56
    - Prototype ..... 56
    - Iteratively Refine..... 56
  - UX Design Best Practices ..... 57
    - EXP Design Principles..... 58
    - Accessibility ..... 59
  - Sample EXP Designs ..... 61
    - Content-Focused Employee Platform ..... 62
    - Employee Dashboard..... 63
    - Tiles/Cards-Based Design ..... 66
    - Employee Collaboration Platform ..... 67
    - Employee Learning Platform ..... 68
    - Knowledge Platform for an EXP..... 69

Validation .....	71
Sample Design Execution Plan .....	72
Weekly Plan .....	73
Summary.....	75
<b>Chapter 4: Digital Workplace Development .....</b>	<b>77</b>
Requirements and Solution Principles.....	77
Key Solution Design Principles.....	79
Migration of Legacy Platforms to EXP .....	82
Software Stack .....	82
User Interface Engineering .....	84
UI Core Solution Tenets.....	84
Trends in UX.....	86
Design Process.....	87
Reference Architecture.....	88
Integration Development.....	90
Services Design.....	91
Search Development.....	93
Key Search Solution Components .....	94
Search Implementation .....	95
Security Development.....	97
SSO Development.....	97
Infrastructure Architecture.....	98
Key Cloud Design Considerations.....	98
Deployment Architecture .....	101
High Availability Solution .....	102
Scalability .....	102
Monitoring .....	103
Backup.....	103
Database High Availability .....	105
Disaster Recovery.....	106
Summary.....	107

TABLE OF CONTENTS

- Chapter 5: EXP Strategy ..... 109**
  - Employee Experience Ecosystems..... 109
    - Trends in Employee Experience..... 110
    - Key Focus Areas and Challenges for Modern Digital Workplaces ..... 112
    - Evolution of Digital Workplaces ..... 114
  - Employee Experience Frameworks..... 115
    - Transformation Themes of Employee Experience Frameworks..... 116
    - Employee Experience Platform Solution Design..... 129
    - Migration Solution Design ..... 134
  - Summary..... 139
  
- Chapter 6: Digital Workplace Testing ..... 143**
  - EXP Validation Scenarios ..... 143
    - EXP Validation Lifecycle..... 144
  - End-to-End Testing Approach..... 145
    - Testing Tools ..... 147
    - Functional Testing..... 147
    - Localization Testing ..... 148
    - Usability Testing..... 149
    - Compatibility Testing ..... 150
    - Integration Testing ..... 150
    - Data Testing ..... 151
    - Security Testing (Vulnerability Assessment and Penetration Testing) ..... 151
    - Performance Validation ..... 164
  - Test Automation Framework ..... 169
    - UI Testing Automation ..... 169
    - API Automation ..... 169
    - Key Metrics..... 170
  - Summary..... 171

<b>Chapter 7: Digital Workplace Case Study .....</b>	<b>173</b>
Case Study Background .....	173
Employee Platform Design Principles .....	174
Design Deep Dive.....	176
Persona Definition .....	176
Employee Journey Mapping .....	178
Automation Opportunities in the EXP.....	185
Solution Design of the Case Study's EXP.....	187
Maturity Model of an EXP .....	191
EXP Testing .....	192
Key Success Metrics of an EXP .....	194
Sample Transformation of Legacy Platform to EXP .....	195
Summary.....	197
<b>Chapter 8: Digital Transformation to Next-Generation Workplaces.....</b>	<b>199</b>
Legacy Modernization Overview .....	199
Goals of Legacy Modernization.....	201
Legacy Modernization Framework.....	202
Legacy Modernization Process.....	202
Digital Transformation Blueprint.....	204
Transformation Deep Dive .....	208
Cloud Migration.....	214
Key Success Factors for Cloud Migration.....	214
Steps for Cloud Migration.....	216
Sample Cloud Deployment Architecture .....	220
Challenges and Best Practices of Migrating from Legacy Platforms.....	224
Summary.....	225

TABLE OF CONTENTS

- Chapter 9: EXP Collaboration..... 227**
  - Drivers for Collaboration in EXPs ..... 228
  - Challenges for Collaboration in EXPs ..... 229
  - Collaboration Ecosystem..... 229
    - Core Collaborative Features ..... 230
    - Key Collaborative Technologies ..... 233
    - Innovative Features of Collaboration Platform ..... 234
    - Chat Bots in EXPs ..... 235
  - High-Level Assessment Framework for Enterprise Collaboration..... 236
  - Collaboration Design and Implementation ..... 240
    - Devising a Collaboration Plan for the Enterprise ..... 241
    - Collaboration User Experience Design..... 242
    - Collaboration Metrics ..... 246
    - Collaboration Road Map ..... 247
  - Collaboration Case Study ..... 249
    - System Analysis ..... 249
    - Collaboration Analysis ..... 250
    - Collaboration Development and Improvement ..... 258
  - Summary..... 263
  
- Chapter 10: Digital Workplace Security Framework ..... 265**
  - Security Design..... 266
    - General Logical Security Requirements ..... 266
    - Identification and Authentication..... 267
    - Authorization ..... 271
    - Security Event Tracking ..... 272
    - Encryption, Hashing, and Digital Signatures..... 273
    - Network Management..... 275
    - System and Network Security ..... 277
    - Application Security Controls ..... 278
    - Information Classification..... 280

Security Incident Management.....	281
Exchange of Information with Third Parties .....	284
Security Checks and Compliance .....	285
User Security Rules .....	287
Security Architecture .....	288
Security Overview of a Cloud-Based EXP .....	289
Identity and Access Management .....	291
Infrastructure Security.....	294
Network Security .....	296
Application Security.....	298
Data Security .....	298
End-User Security.....	299
Summary.....	300
<b>Chapter 11: Digital Workplace Maintenance and Governance.....</b>	<b>303</b>
EXP Maintenance Framework .....	303
Common Challenges in EXP Maintenance .....	304
Automation and Process Optimization .....	307
Automation .....	308
Process Optimization.....	309
Core Maintenance and Operations.....	310
Patch Management .....	310
Log Management.....	311
Monitoring.....	312
Early Warning System for Proactive Maintenance.....	314
Incident Management .....	319
AI-First Approach.....	319
Maintenance Automation and Optimization.....	320
Operations KPIs and Focus Areas .....	325
Operations and Maintenance KPIs.....	326
Focus Areas for Operations and Maintenance.....	327

TABLE OF CONTENTS

Governance ..... 331

    Security Governance ..... 331

Summary..... 333

**Chapter 12: EXP Case Studies ..... 335**

    Development of a Next-Generation Digital Workplace ..... 335

        Background and Business Context..... 335

        Challenges ..... 336

        Digital Transformation ..... 336

        Benefits ..... 347

    Legacy Intranet Transformation ..... 347

        Background and Business Context..... 347

        Challenges ..... 348

        Digital Transformation ..... 348

        Benefits ..... 349

    Employee Platform for Retail Organization ..... 349

        Background and Business Context..... 350

        Challenges ..... 350

        Digital Transformation ..... 350

        Benefits ..... 351

    Employee Portal for Unified Information ..... 351

        Background and Business Context..... 351

        Challenges ..... 352

        Digital Transformation ..... 352

        Benefits ..... 355

Summary..... 355

**Index..... 357**

# About the Author



**Dr. Shailesh Kumar Shivakumar** is an inventor, author, and senior architect specializing in digital technologies. He is an award-winning digital technology practitioner with skills in technology and practice management and with experience in a wide spectrum of digital technologies, including enterprise portals, content systems, enterprise search, and other open source technologies. He has more than 18 years of industry experience and was the chief architect in building a digital platform, which won a “Best Web Support Site 2013” global award. He is a Guinness World Records holder for participating in successfully developing a mobile

application in a coding marathon.

Shailesh has PhD in computer science from IGNOU, a central university of India, and has completed the executive program in business management at the Indian Institute of Management, Calcutta (IIMC). He is the author of seven technical books published by the world’s top academic publishers. He also has published a dozen technical white papers and has authored eight textbook chapters for undergraduate programs. He has published more than ten research papers in international journals and is a member of the editorial boards for three international journals.

Dr. Shailesh is the sole inventor of the inventions related to web security and personalization and holds two granted U.S. patents. He also has five patent applications. Shailesh is a frequent speaker at events such as IEEE conferences and Oracle JavaOne. Shailesh is given invited talks and participated in panel discussions in international conferences. He was Conference Advisory Committee member of International Conference on Computational Intelligence and Communication (ICCIC-19).

Dr. Shailesh is a seasoned architect and is deeply focused on enterprise architecture, building alliance partnerships with product vendors, and has a proven track record of executing complex, large-scale programs. He has successfully architected and led many engagements for Fortune 500 clients of Infosys and built globally deployed enterprise applications. He also has headed up a center of excellence for digital practices

## ABOUT THE AUTHOR

and developed several digital solutions as well as intellectual property to accelerate digital solution development. He has led multiple thought leadership and productivity improvement initiatives and has been part of special interest groups related to emerging web technologies at his organization.

Dr. Shailesh was awarded the prestigious “Albert Nelson Marquis Lifetime Achievement Award 2018” for excellence in technology and has won multiple awards including the prestigious “Infosys Awards for Excellence 2013-14” for multitalented thought leader, brand ambassador for his MFG unit, and best employee, “Pinnacle Award” “Brand Ambassador Award 2013”, “Unit Champion Award”, “Best Employee Award 2015” as well as a delivery excellency award and multiple spot awards at Infosys for his exemplary performance and contribution. He also received an honor from the executive vice chairman of his organization. He is featured as an “Infy star” in the Infosys Hall of Fame and recently led a delivery team that won the “Best Project Team Award” at his organization. He was honored as Chief guest of honor of Presidency college IT Fest COMPUTANTRA-2018, and was the guest of honor at ISTE student chapters at BNMIT, Bangalore.

Dr. Shailesh holds numerous professional certifications such as TOGAF 9, Oracle Certified Master (OCM) in Java EE5 Enterprise Architect, IBM Certified SOA Solution Designer, and IBM Certified Solution Architect Cloud Computing Infrastructure.

# Acknowledgments

I am deeply indebted to my wife Chaitra and son Shishir for their immense and unconditional support of all my initiatives.

I would like to convey my sincere and heartfelt thanks to T.P. Vasanth, my brother-in-law, for a constant stream of support and inspiration.

I would also like to recognize and thank Dr. P. V. Suresh for his constant encouragement and immense support.

Special thanks to the team at Apress consisting of Rita Fernando, Shivangi Ramachandran, and Laura Berendson for all their timely support and review help. The team is highly proactive and super responsive in planning and execution. I would also like to thank the editorial team and design team at Apress for the beautiful book design. I owe much of the book's success to the Apress team.

# Introduction

Employees such as information workers are heavily dependent on intranet platforms.

Traditional intranet platforms have helped employees find relevant information, tools, and services. As employees have gotten used to highly engaging customer-centric platforms, naturally they expect a similar experience from intranet platforms. Legacy intranet platforms that lacked the dynamism and engagement features are giving way to modern digital workplaces that provide a more engaging, personalized experience that enhances employee productivity.

*Digital workplaces/employee experience platforms (EXPs)* are digital platforms where employees can collaborate, connect, and share information and use it for their day-to-day tasks, enabling them to work from anywhere. Unlike traditional intranet platforms, digital workplaces can be accessed anywhere, anytime, and on any device. Employee experience platforms cater to various crucial use case such as learning and training, information delivery, knowledge management, self-service, gamification, content management, personalization, and such. Digital workplaces aim to engage employees at all touchpoints and impact employees' daily lives.

Given the importance of digital workplaces, it is imperative for organizations to design and roll out a digital strategy that engages its workforce effectively, to design scalable platforms, and to optimize operations costs. Organizations need to lay out the vision, identify the needs of their employees, define the goals and success metrics of the program, implement the project, and provide continuous maintenance and support.

This book provides the end-to-end coverage needed to successfully design, implement, and maintain the next generation of digital workplace platforms. Starting from requirements elaboration for digital workplace platforms, the book discusses experience design, digital workplace strategy and transformation themes, development and rollout methods, testing best practices, automated maintenance, and support.

This book also discusses the main trends in digital workplaces—such as cloud transformation, mobile-first design, legacy intranet modernization, employee-centric design (such as persona-based design and employee journey mapping), collaboration (such as enterprise social tools), legacy modernization, and gamification—to motivate employees. The book provides proven methods for rolling out collaboration features,

## INTRODUCTION

security features, process simplification, process optimization, and self-service. The book also elaborates on various automation and machine-led operations models and maintenance models for the continued success of the digital workplace platforms.

Personalized employee dashboards are one of the salient features of modern digital workplace platforms. The information and tools in the employee dashboard are based on employee roles, preferences, and previous interactions. The book discusses various design approaches to employee dashboards. The book also discusses proven best practices and methods such as transformation methods, migration steps, security design methods, and collaboration methods that can be leveraged for successfully building digital workplace platforms.

Finally, the book discusses various digital workplace case studies to provide insights into real-world implementation methodologies and rollout strategies.

The book will be useful for program managers, CIOs, digital enthusiasts, enterprise architects, and software developers to gain insights into the features and solution elements of modern digital workplace platforms.

---

**Note** *Employee experience platform* and *digital workplace* are used synonymously in this book.

The products, tools, technologies, and cloud platforms used in the book are only for pedagogical purposes. The solutions can be built using alternative technologies as well.

---

## CHAPTER 1

# Introduction to Employee Experience Platforms

Superior experiences play a pivotal role in engaging end users. User-centric digital experience platforms (DXPs) engage end users and lead to long-term relationships with them. DXPs provide an omnichannel user experience that provides an optimal experience across various touch points in the user's journey.

An employee experience platform (EXP) is designed to engage employees throughout the employee lifecycle, providing productivity-boosting tools and features. Organizations use an EXP to retain talent and continuously improve the productivity of their employees. Intranet platforms provide access to unified information and provide collaboration among internal users.

Organizations should design and implement EXPs to enable their employees with the right set of tools and services. EXPs play a vital role in engaging, empowering, and retaining the employees of an organization. Next-generation workplaces demand constant innovation and responsiveness, which can be addressed effectively by EXPs.

In this chapter, I will go over the key features and latest trends of EXPs.

## Brief Introduction to Intranet Platforms

Digital intranet platforms provide a holistic and personalized user experience for intranet users. Intranet platforms provide tools, content, and communication primarily for organization employees and internal users. Various flavors of intranet platforms are employee portals, colleague portals, sales portals, and such.

Employees expect their digital intranet experience to be similar to the most popular consumer-grade digital platforms. Digital features such as mobile-enabled user experiences, responsive user interfaces, hyper-personalization, and real-time content have become common needs of a digital user.

The intranet platform will be available to internal users in all geographic areas of the organization. The main features of intranet platforms are elaborated on in the subsequent sections.

## Traditional Intranet Platforms vs. Employee Experience Platforms

Table 1-1 highlights the main differences between traditional intranet platforms and employee experience platforms.

**Table 1-1.** *Traditional Intranet Platform vs. Employee Experience Platform*

Category	Traditional Intranet Platform	Employee Experience Platform
Technology ecosystem	Product-based architecture Based on proprietary standards and integration plug-ins Involves multiple tools often with disjointed experience	Lean and web-oriented architecture Extensible with marketplace apps Open and web standards-based architecture
Integration ecosystem	Mainly service-oriented architecture (SOA) SOAP-based integration	Lightweight integration model REST-based integration Heavy usage of APIs and lightweight microservices
Deployment and hosting	Mainly on-premise model with license-based pricing	Mainly cloud based or cloud native
Implementation design	Implementation to primarily satisfy business requirements	Employee-centric design
User experience	Heavyweight web pages Mainly desktop-based user experience Nonintuitive information architecture	Rich response and single-page application (SPA) Minimalist design Omnichannel enabled

## Key Challenges of Intranet Platforms for Employees

Though traditional intranet platforms are a popular choice for employees and internal users, traditional intranet platforms fall short of meeting modern employees' needs and expectations. Table 1-2 lists the main challenges of traditional intranet platforms.

**Table 1-2.** *Modern Employee Needs and Challenges with Legacy Intranet Platforms*

Category	Employees' Needs and Expectations	Challenges with Traditional Intranet Platforms
User experience	<p>Modern employees expect seamless user experience across all services and information.</p> <p>Employees demand consumer-grade on-the-go mobile and omnichannel experiences.</p> <p>Single-page applications and minimalistic design are preferred.</p> <p>Dashboard experience provides a unified view of all information and transactions.</p>	<p>Mainly a desktop-driven user experience.</p> <p>Disjointed user experience across various tools and Intranet applications.</p> <p>Absence of single-stop-shop experience.</p> <p>Challenges with usability and accessibility.</p> <p>Inconsistent brand identity.</p>
Information architecture	<p>Personalized and contextualized information.</p> <p>Search-centered experience for faster information discovery.</p> <p>Easily findable information.</p> <p>Expanded footer and mega menus.</p>	<p>Difficult to find relevant information.</p> <p>Mainly driven by context menus.</p> <p>Unclear navigation.</p> <p>Nonintuitive navigation tools.</p> <p>Multiple clicks to reach required information.</p>
Collaboration	<p>Information should be easily shareable.</p> <p>Instantly collaborate with colleagues.</p> <p>Create interest-based groups and communities.</p> <p>Harness collective intelligence for increased productivity.</p>	<p>Challenges with cross-team collaboration.</p> <p>Lacks engagement and motivation for employees.</p> <p>Needs integration of multiple collaboration tools.</p>

*(continued)*

**Table 1-2.** *(continued)*

<b>Category</b>	<b>Employees' Needs and Expectations</b>	<b>Challenges with Traditional Intranet Platforms</b>
Analytics	Employees expect analytics-based insights such as personalized content and information based on past transactions.	Minimal or absence of analytics. Absence of seamless analytics across various touch points.
Tools and features	Employees expect self-service and productivity improvement tools. Education, learning, and training tools. Usage of gamification features.	Minimal or absence of gamification features. Minimal self-service tools.
Artificial intelligence	Employees expect artificial intelligence (AI)–based continuous learning and improvement of the platform.	Minimal or absence of AI-based methods.
Information discovery	Organized information; provides contextualized and relevant personalized content.	Takes too much time to find relevant information. Duplicate and outdated information.
Ease of use and adoption	Should be easy to use and accessible to all. Should enable user participation.	Nonavailability of documentation; disjointed and desperate applications.
Content management	Easier authoring and publishing. Easier content discovery. Intuitive content workflows.	Lacks targeted and personalized content. Lacks localized content.
Governance	Clearly defined roles and responsibilities. Well-defined processes for business continuity, change management, and such.	Absence of success metrics. Absence of processes for content management, business continuity, and such.

## Expectations of Next-Generation Digital Workplaces

We need to analyze the expectations of modern-day employees from a digital platform to understand the need for employee experience platforms. The key expectations of modern-day employees are as follows:

- **Self-service and empowerment:** Employees expect tools and services that empower them to do their activities quicker. Employees expect self-service features, automated tools, productivity improvement tools, a holistic view with a dashboard experience, a consumer-grade user experience, and such.
- **Work-life balance and work flexibility:** The digital platform should be available to the employees anywhere, anytime, and on any device. The tools and services should be available for “on-the-go” employees. To support work flexibility, the digital platform should provide collaboration tools, mobile apps, cloud-based secure applications, and such.
- **Instant recognition/rewards:** Modern employees are used to winning and expect an instant reward for a job well done. Hence, gamification features that reward employees through points and badges are expected in the digital platform. Organizations should foster a culture of recognition (recognition by leaders, peer recognition, 360-degree recognition).
- **Social and collaboration:** Modern employees are socially active and are heavy influencers. So, employees expect social and collaborative features in a modern digital platform. Modern digital platforms should also be integrated with external social media platforms such as LinkedIn, Facebook, and such.
- **Leveraging modern digital technologies:** Cloud, mobile apps, social media platforms, and analytics are mainstream digital technologies that have gained huge popularity. Digital platforms should leverage these technologies to meet the expectations of modern employees.

- **Automation:** The digital platform should leverage machine learning and artificial intelligence technologies to automate routine activities and to provide contextual and relevant recommendations and other features.

The expectations mentioned in this section cannot be fulfilled by traditional intranet platforms because of the challenges discussed earlier. An employee experience platform is a digital platform that is designed to meet the needs of modern-day digital employees.

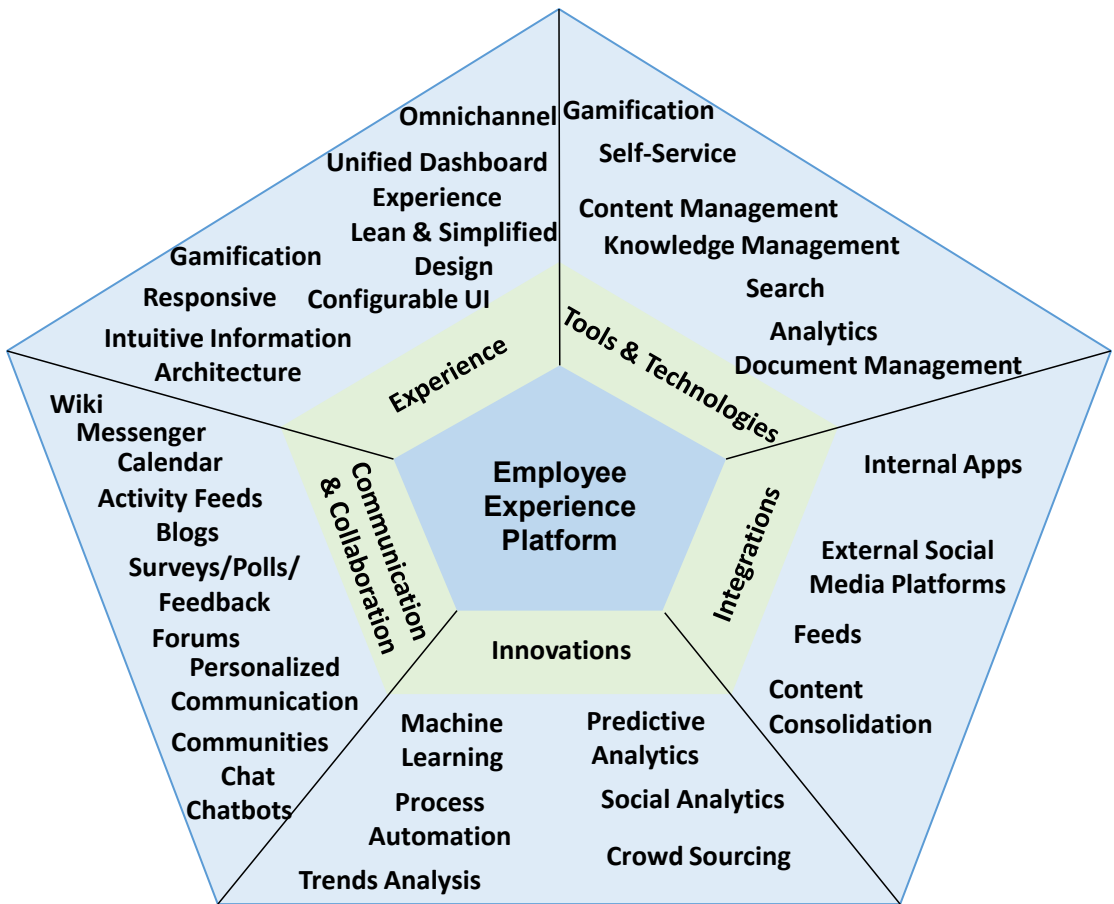
In the next section, we will mainly look at drivers, features, and other details of EXPs.

## Employee Experience Platform

*EXPs are employee-centric intranet platforms that personalize the experience for all employees and that provide contextual content and services.* EXPs offer next-generation digital workplaces that engage employees throughout the employment lifecycle and improve their productivity for their day-to-day activities. To meet the expectations of modern employees, EXPs provide a responsive and adaptive design. EXPs are built on a platform approach that is open and extensible. EXPs enable employees with the right set of self-service tools and content so that employees stay engaged with the organization.

EXPs will be the single most used application by the employees, and hence organizations must use EXPs to fully engage the employees.

Figure 1-1 shows a high-level view of an EXP.



**Figure 1-1.** High-level view of EXP

EXP broadly covers five major areas.

- **Experience:** An EXP incorporates a minimalist design and modern user experience standards including a lean and omnichannel-enabled experience, responsive user interface (UI), adoption of gamification concepts, and intuitive information architecture (such as mega menus, an expanded footer, a search-centered experience, and such).
- **Tools and technologies:** An EXP is built using various tools and technologies such as content management (to manage web content, metadata), knowledge management tools, search (for information discovery), analytics, and document management (to manage documents, assets).

- **Integrations:** To provide a seamless, integrated, and single-view experience, an EXP has to be integrated with various internal applications (such as the enterprise database, ERP, enterprise services, and such) and external applications (such as social media platforms, feeds, external services, and such).
- **Innovations:** To meet the expectations of modern digital employees and to provide a competitive advantage to the organizations, an EXP has to support and incorporate modern innovations such as automation, machine learning (to learn employees' preferences and for personalized recommendations), predictive analytics (for smart recommendations), trend analysis, social analytics, and crowd sourcing.
- **Communications and collaboration:** Collaboration plays a pivotal role in improving employee productivity. Hence, an EXP has to provide various collaboration tools such as wiki, polls, calendar, chat, messenger, blogs, communities, surveys, and such. Organizations can use communication tools to establish a direct communication channel with employees.

## Functional View of EXPs

EXP should provide various technical capabilities and prebuilt applications to meet the demands of modern employees.

Figure 1-2 shows a high-level functional view of an EXP.

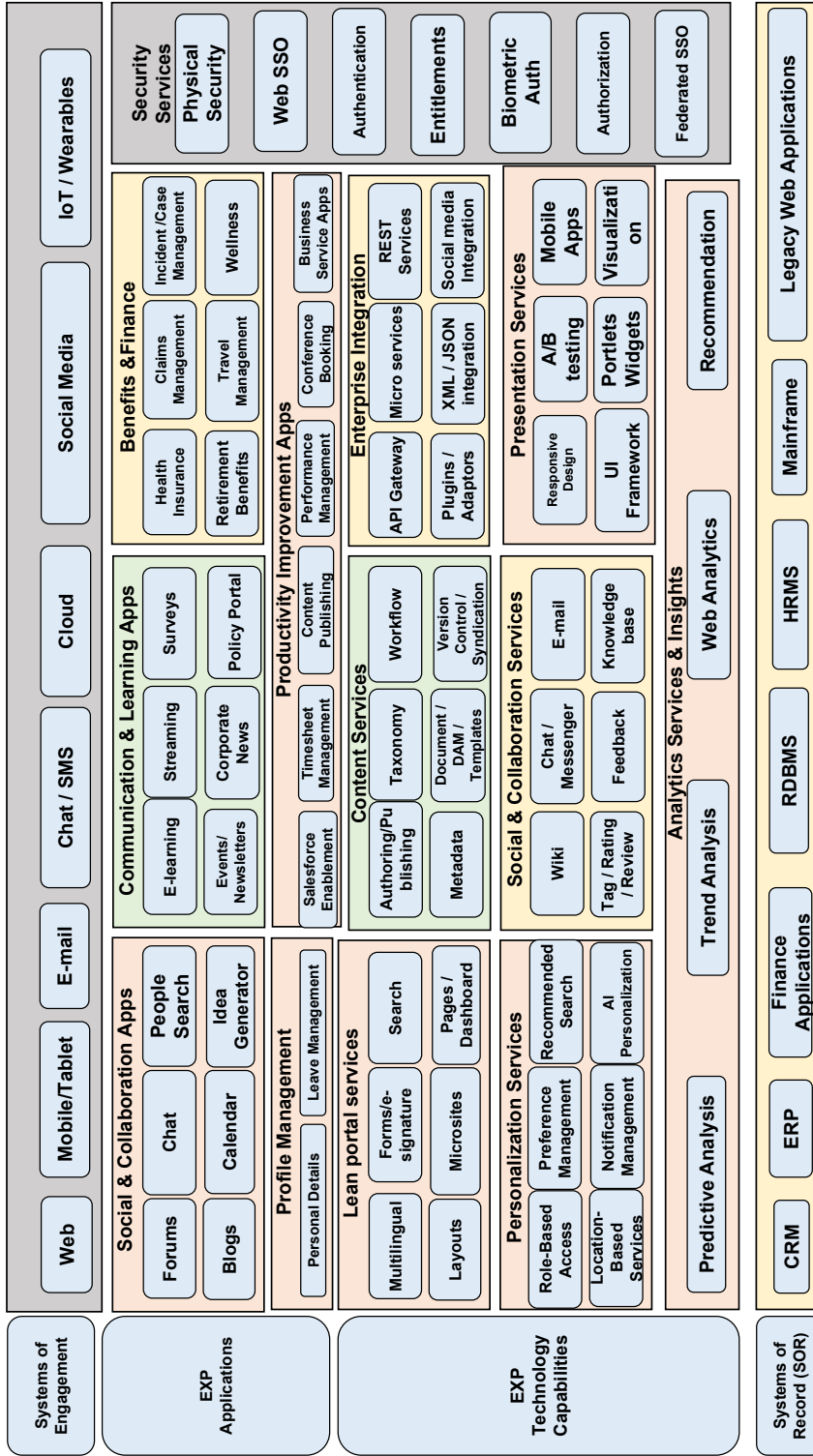


Figure 1-2. Functional view of an EXP

Broadly we can categorize the components into these layers: systems of engagement (the systems that interface with the end user), EXP applications, EXP technology capabilities, and systems of record (the systems that store data and the systems that are a single source of truth).

We will look at various components in each of the functional view layers.

## Systems of Engagement

Systems such as mobile apps, browsers, chat platforms, SMS, e-mail, cloud-based applications, and social media platforms are the main points of interactions for end users and hence belong to systems of engagement. Chatbots and wearables are trending digital platforms that also belong to this category. End users (in this case, employees) consume the information and services through systems of engagement.

## EXP Applications

This layer includes categorized applications that are specific to the employee experience domain. Each of the categories represents the main themes of EXPs.

- **Social and collaboration apps:** Apps such as chat, blog, and wikis enable employees to share and communicate information. The calendar app communicates about upcoming events. Idea generators/idea hubs are crowd-sourced platforms to solicit and generate ideas from the community. Employees need the people search feature to find colleagues based on their skill set and expertise.
- **Communication and learning apps:** Internal communication is a key feature of EXPs. Organizations use various features such as newsletters, mobile app notifications, streaming videos, and such, to communicate with their employees. Communication app EXPs enable continuous learning and skill improvement programs through self-learning apps. Employees can use self-learning apps to learn anywhere at any time at their own pace.

- **Benefits and finance apps:** EXPs should provide applications related to employee benefits such as health insurance, perks, leave, wellness, attendance, travel management, and such. Benefit applications enable employees to easily manage salary stubs, retirement benefits, employee stock management, and such. These applications provide reports and snapshot information. Other enterprise applications are claims management, incident/case/ticket management, software management, directory, performance management, asset management, and such.
- **Profile management:** Employees can manage their profile information, health information, and leave-related information.
- **Productivity improvement apps:** Based on the job roles and as required in daily activities, EXPs provide various applications to the employees. Regular employees can use applications for timesheet management, performance management, conference booking applications, software downloads, and such. The sales team can use applications such as opportunity management, contract management, deal management, order management, invoice management, budget management, and such. The content team can use content publishing-related applications. Besides these, EXPs provide various self-service applications such as account unlock/password reset, document management applications, and such.

## EXP Technical Capabilities

EXP applications leverage the underlying technical capabilities of the platform. An EXP is built on a platform philosophy to provide modular services. The following are the key technical capabilities supported by EXPs:

- **Lean portal services:** An EXP provides built-in dashboards, forms equipped with multilingual features, and search features.
- **Content services:** In this category, an EXP provides various content-related functionality such as content authoring, content publishing, content workflow management, content versioning, content archival, metadata management, and such. Applications related to corporate communications and internal communications leverage content services for content needs.

- **Enterprise integration:** An EXP needs to be integrated with various internal and external systems of records (SORs). Various integration capabilities such as API-based integration, services-based integration, and extensible adapters are part of this category. The integration components enable EXP to have high-performing and scalable integrations.
- **Personalization services:** To provide role-based and context-sensitive content delivery, EXP should support a fine-grained permission model, preference management, notification management, and such.
- **Social and collaboration services:** The social and collaboration services enable the applications to manage the collaboration content and implement social features such as wiki, blog, communities, forums, and such. Internal social and collaboration services use content services for managing the social/collaboration content.
- **Presentation services:** An EXP provides various presentation services such as a responsive design, built-in widgets/portlets/modules, and visualizations for seamless dashboard experience across all devices and channels.
- **Analytics services and insights:** Web analytics and artificial intelligence (AI) methods will be used for understanding user behavior, doing trend analysis, and providing relevant recommendations.

Security services is a horizontal concern covering all layers. EXP security involves authentication, authorization, single-sign-on (SSO), a fine-grained permission model, and other services that secure EXP resources.

## Systems of Records

Enterprises use a System of Record (SOR) as a single source of truth for managing enterprise data. Various ERP applications internally use the data managed by SORs. For instance, case management/incident management systems use customer relationship management for managing the incident data. Systems such as human resource management systems (HRMSs), enterprise resource planning (ERP), relational database management systems (RDBMSs), and legacy applications are used by EXP applications.

## Drivers of EXPs

The main drivers and motivations for EXP are as follows:

- Enable employees with self-service features to improve their productivity
- Provide an enhanced collaboration platform for all employees
- Provide improved access to information through personalized content delivery
- Inspire and engage employee across all touch points
- Add value to the employees' daily activities and increase loyalty, brand affinity, and job satisfaction
- Improve the work-life balance for employees by providing various communication modes
- Realize the overall vision and objectives of the organization.
- Optimize the operational costs through self-service and automation
- Improve the overall agility and responsiveness of the organization

## Key Features of EXPs

The following are the core attributes of EXP:

- An EXP provides rich and omnichannel-enabled user experiences.
- An EXP provides a dashboard view of relevant communication, content, functionality, and services personalized for the employee.
- An EXP should provide collaborative features for sharing content through a collaborative platform.
  - Integrate with external social media platforms such as LinkedIn or Facebook
  - Use surveys and feedback to gauge the effectiveness of tools and services