Whitepaper

Modern Applications for the New-Era End User: A Framework for Success

Business models come and go as fast as the next new smartphone, driven by disruptive technologies that keep changing the game. Today's workforce is changing, too — employees are adapting to a world in which access to people and information is instantaneous, and technology is improving every year to serve them better.

Rationalizing existing technology investments, standardizing platforms and streamlining IT all make good business sense but often promote the continued use of older applications that won't satisfy today's end users or adapt to new business models. This whitepaper explores key challenges of legacy applications, research on end-user attitudes and preferences, and strategic approaches to modern applications.

Organizations are grappling with a dichotomy:

All those who turn the wheels of business — customers, workers, partners and competitors — are changing quickly. But the applications that are the wheels of business are changing slowly.

As a result, people in application-focused roles have become all too familiar with these effects:

- The applications lose their relevance to the current business model and introduce unneeded complexity for end users.
- The applications exceed support, leading to costly alternative support models, along with operational and security risks.
- The applications are not designed to comply with current policies and regulations, leading to costly updates or extra work for users.
- Business decisions are made based on what will work in the applications rather than what is really best for the business.
- Opportunities to evolve the business model, embrace new work models, or enter new markets are hampered or not pursued.
- People who use the applications become less and less satisfied.

In the context of today's business and technology, **many applications are "broken" — even if they still work as designed.**

The new-era end user

Gallup's 2022 report on the State of the Global Workplace reveals some shocking statistics about employee engagement: 79% of workers are "disengaged" — that is, they feel dispassionate, uncommitted to their jobs and don't put discretionary effort into their work. Nearly half are searching for new jobs or watching for openings. And the cost is $7.8 trillion in lost productivity around the world — equal to 11% of global GDP.[1]

As digital natives — those millennial and Gen Z professionals raised on technology — grow to make up the majority of the workforce, the tools and applications employees use for work will continue to take center stage. These tools have a direct impact on employee productivity, sentiment and ultimately, the value they will bring back to the business.

Today's end users know what's possible: When they tap their phones to order a meal or a ride-sharing service, the experience is often intuitive and instantaneous. By contrast, consider an employee who spends hours each week copying information between two poorly integrated applications — and you can imagine the futility he or she might feel.

A virtuous cycle

With new operating models that challenge how you deliver products and services to customers, it's important to look at the employee experience as a necessary half of business transformation — giving it as much prominence as the customer experience.

Organizations that prioritize both will enable workers to create the disruption that leaders envision through new business and operating models — driving revenue in the process.

Modern application use cases that benefit internal users and external customers

 A medical device manufacturer uses an Internet of Things (IoT) solution to put devices online, and a chatbot answers patient questions and makes suggestions based on each device's measurements. Patient end users achieve better outcomes and are happier with timely, intuitive experiences.	Employees on the back end get feedback on device usage, making it easier to decide which features and enhancements to prioritize.
 A commercial appliance manufacturer uses the IoT to monitor its appliances in the field, and machine learning predicts failures and the need for maintenance. Customers enjoy less downtime and proactive service calls before problems occur.	Employees don't waste time doing needless maintenance — and fewer catastrophic failures means fewer calls to do repairs in the middle of the night. The design team uses the data to improve reliability.
 An insurance company arms its inspectors and adjusters with a mobile app that replaces paper forms and captures photos and GPS coordinates directly. Customers get instant feedback, and some claims can be paid right on the spot. Customer satisfaction soars.	Employees no longer spend 1–2 hours each evening keying information from paper forms into an online application, leading to new levels of productivity.
 A large hospital network uses advanced analytics to predict the number of patients and conditions and who is needed on each shift. Patients get better attention because the hospital is fully staffed, and nurses and doctors are more alert with less need for double shifts.	Employee satisfaction increases with more predictable work schedules, and the hospital saves millions of dollars on overtime pay.

Strategic technical approaches

In the past, it was necessary to design business processes around the capabilities of technology. It was taken for granted that computers were complex and often difficult to use, and that workers would go the extra mile to interact with them in a way that made the computer work. "The computer can't do that" was a conversation ender. Everyone worked around the limitations of the applications they used every day.

Today, more enterprises are taking a Human-Centered Design (HCD) approach to delivering a differentiated experience. HCD is a management framework that involves the human perspective in all steps of the problem-solving process. Human involvement typically takes place in observing the problem within context, brainstorming, conceptualizing, developing and implementing the solution. The same HCD can be applied when building modern applications.

The result of HCD in modern applications is that employees can focus on their work instead of the quirks of the applications that they need to use — and processes can be optimized around generating business value instead of catering to the needs of the computer.

On the surface, it might seem like this requires throwing away existing applications and starting anew. While this is sometimes a valid approach, it is more typical to augment existing applications with modern user experiences, business orchestration and new services to provide an evolutionary approach that reduces risk and spreads costs over time.

The impact of cloud & microservices

Cloud computing has led to new architectures that are far more flexible than the rigid, monolithic applications of the past. Microservices allow breaking an application down into small components that are easy to scale up and down, reuse, and change and evolve over time.

Rather than rewriting large applications, they can be supplemented with microservices, which provide new features and availability options and can connect with new user experiences such as mobile apps. Microservices can evolve along with business and industry; they can be used to augment existing applications or to replace them in a step-by-step approach that is much less risky than a wholesale rewrite.

Furthermore, platform services and Software as a Service (SaaS) offerings can work with existing applications and microservices. This helps save development costs while delivering a more intuitive solution that saves work. For example, Azure® Active Directory®, including its Business-to-Business (B2B) and Business-to-Consumer (B2C) options, can provide single sign-on for workers, partners and customers alike, while adding security features and removing much of the overhead of traditional identity management.

Applications can be surfaced in Office 365® products such as Microsoft® SharePoint®, Teams, Outlook®, Word and Excel to bring important information into the tools that businesses already access every day. By shifting work from internal applications to SaaS and platform services, organizations can modernize while reducing development and maintenance costs.

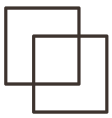
A framework for success

A common challenge for organizations is knowing where to start and what to prioritize. Starting points often vary for organizations, but overall, a robust strategy includes four key phases: aligning, envisioning and planning, building, and deploying.

Best practices:

- Define your key stakeholders (this often includes CIOs, CTOs or director-level positions such as a director of innovation).
- Perform industry and/or market analysis.
- Identify and define personas and use cases.
- Assess your unique technology landscape to define dependencies.

A strategic approach will advance the discovery of the desired operating model — while aligning to a reimagined user experience. Insight leverages a framework to help organizations define the design, architecture and strategy to address the challenge at hand and substantially reduce risk in the development phase.



Phase 1: Align.

This phase of modern applications is all about knowledge sharing, level setting and performing a situational assessment. The goal is to consolidate around a clear objective, collaborating to prioritize either new products and services or legacy applications.

At the conclusion of this phase, businesses have defined a prioritized business case, preliminary product features, user stories and benefits, as well as initial requirements and next steps. A conceptual mock of the proposed solution serves as a launchpad for the rest of the modern application journey.

Phase 2: Envision and plan.

This is an informed ideation phase that includes deeper discovery of the business and end users. Initial technical assessments are performed, and requirements are synthesized into a list of prioritized features. This phase includes:

- Strategy and design workshops
- Competitive market analysis
- Preliminary user feedback
- Conceptual wireframes and mocks
- High-level technical architecture
- Technical approach
- Initial feature backlog
- Implementation roadmap

Tip: Experienced architects or engineer-level experts help keep conversations technically sound — include them in this phase to create clarity around the technical feasibility of your projects.

Phase 3: Build.

This phase focuses on iterative development of the solutions with a focus on showing increased outcome and overall business value. A Minimal Viable Product (MVP) phased implementation approach is key to delivering value quickly. Agile iteration development ensures the application continually meets expectations, is well tested and is continually built on foundations of previous iterations. Feature development is prioritized by stakeholder input and allows control over scope and impactful gains. This phase includes:

- Development frameworks
- Source code and versioning
- Production-level solution development
- Functional and non-functional testing
- Task-level tracking and burndown
- User feedback loops

Tip: Continual involvement from key stakeholders produces the most effective results for delivering the right solution along the right timeline.

Phase 4: Deploy.

At this stage, code is stabilized and ready for production deployment. Production environments should be established with a focus on security and proper governance. Automation also plays an important role in establishing the environment and release code by leveraging DevOps pipeline release processes. Release candidates are completely tested in lower environments and scheduled for release.

Overall, an Agile delivery approach is key. Post-deployment, teams should be delivering incremental value for each sprint continuing after releases. Additional features and maintenance should be clearly defined with segregated roles and approval processes in place.

Success beyond the applications

As with any modernization project or initiative, long-term success will hinge on regular testing, reliable support and an understanding of how your modern apps fit into the organization's broader IT ecosystem.

Ensure your organization has a strategy in place to continually modernize essential workplace products, platforms and workflows. The following are indicators of a workplace technology strategy that is progressing the organization's maturity and delivering value back to the business:

- Increasing ROI on workplace technology purchases
- Boosting mobile capabilities and productivity
- Improving retention and attracting talent with modern employee/user experiences
- Better protecting users and business data, and reducing risk
- Simplifying IT management

Your partner for modern applications

Insight brings a unique approach to innovation that's focused on business outcomes — applying a user-centered design process with custom, Agile-based software development. Whether your challenge is around overwhelming requirements, technical debt of legacy applications or cumbersome development practices, Insight's experts help incrementally modernize existing applications, embracing continuous delivery and innovation at speed with a focus on quality.

Contact us today to connect with our teams.

Driving innovation with digital transformation

At Insight, we help clients enable innovation with an approach that spans people, processes and technologies. We believe the best path to digital transformation is integrative, responsive and proactively aligned to industry demands. Our client-focused approach delivers best-fit solutions across a scope of services, including the modern workplace, modern applications, modern infrastructures, the intelligent edge, cybersecurity, and data and AI.

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1 Gallup. (2022). State of the Global Workplace: 2022 Report.

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