An Open Approach to Digital Transformation

RESEARCH BY:

Al Gillen
Group Vice President, Software Development and Open Source, IDC

Jim Mercer
Research Director, DevOps, IDC
Table of Contents

Digital Transformation (DX) and Innovation are Top Priorities 3
The World is Digitally Transforming 4
Profiles in Transformation 5
Effective Transformation Requires an Open Architecture 6
The Power of Open Source is Clearly Unleashing Innovation 7
Organizations Must Accelerate Readiness for Modern App Delivery 8
Organizations Must Center Activity on Customer Value 9
Continuous Delivery Excellence is the Goal 10
Open Architecture Requires Open Processes 11
DevOps is Mainstream But Must Scale 12
Accelerate Transformation by Bringing People, Process, and Technology Together 13
Open Processes Require Open Culture 14
How to Create an Open Enterprise Culture 15
About the Analysts 16
Message from the Sponsor 17
Digital Transformation (DX) and Innovation are Top Priorities

Anticipated impact:
Starts with accelerated development of innovative solutions and better customer experience

By 2024...
Over 50% of all IT spending will be directly for digital transformation and innovation, up from 31% in 2018—growing at a CAGR of 17%

Anticipated benefits:
Will stem from digitally enhanced offerings, operations, and relationships

This changes the game. To stay competitive, organizations must holistically embrace:

- Open culture to foster collaboration
- Open architecture to enable innovation
- Open processes to ensure integration
The World is Digitally Transforming

By 2024, 80% of all new applications developed using a programming language will be deployed in containers to gain the benefits of deployment speed, application consistency, and portability.

By 2023, 40% of global organizations will release code to production daily for select applications, up from 3% in 2019.

Well over 50% of global organizations use more than one cloud for development and deployment purposes.

By 2023, 50% of global organizations will neglect investing in market-driven operations and will lose market share to existing competitors who made the investments, as well as to new digital market entries.

By 2023, 47% of North American companies will see their president, CEO, owner, chairman, GM, or managing director drive DX strategy and implementation in their companies. Of the remainder, 40% are driven by CIO, CTO, or head of technology/ transformation.
Profiles in Transformation

In the current era of digitally driven change, most organizations will need to reorient how they work and the technology they use.

“Digitally Determined”

DX is either integrated across the enterprise or is the strategy

35.8% Worldwide

46.8% North America

“Digitally Distraught”

DX is ad hoc and short-term with silos of innovation

64.2% Worldwide

53.2% North America
Effective Transformation Requires an Open Architecture

Today...

41% of organizations prefer using community or commercially supported open source software for provisioning net new infrastructure resources.

This trend is expected to continue to support the next wave of modern enterprise applications.

By 2023...

500 million new logical applications will be created.

This is a new paradigm in app development and delivery—it means a change in what apps are and how they are built, deployed, and updated.

By 2023...

40% of enterprise apps will be built using open source software from public repositories.

The remaining 60% of code will be custom for an organization’s business model or use case.

By 2022...

35% of production apps will be cloud-native—utilizing microservices, containers, and dynamic orchestration.

This will be brought on by the acceleration of legacy app modernization and net-new development.
The Power of Open Source is Clearly Unleashing Innovation

We are now in the era of multiplied innovation, where organizations are moving beyond incremental transformation to a more wide-scale transformation. This requires them to leverage an ecosystem of talent, technology, and processes, making open technologies a natural choice.

- **59%** of organizations look to take full advantage of open source innovation and community support when investing in automation solutions for app dev and deploy.
- **1 in 4 organizations** prefers to use community (self-supported) open source software for net-new IT management and automation solutions.
- **30%** of code for all customer applications is built using open source repositories/libraries.
**Organizations Must Accelerate Readiness for Modern App Delivery**

### Optimization
- **26%+** of U.S. organizations are using DevOps practices such as automated testing, automated code quality, continuous integration, and continuous delivery.
- **29%** of U.S. developers are using containers regularly.
- **26%** of U.S. developers are piloting the use of containers.
- **51%** of U.S. developers want to spend more time coding.
- **31%** of U.S. developers want to spend less time on debugging.

### Agility
- **25%** of U.S. organizations are seeking standardization of container orchestration and automated infrastructure.

### Cloud-native
- **68%** of U.S. organizations are prioritizing application containerization to accelerate application delivery.
- **34%** of U.S. organizations expect cloud-native to be an integrated part of their organizational strategy by 2021.
Organizations Must Center Activity on Customer Value

An open enterprise culture is important for improving long-term customer satisfaction, as it centers activity on customer value.

#1 Attracting and retaining customers is the business priority—now more than ever.

53% of enterprises say that customer experience is a top priority in the IT department.

Forward-looking companies will have an advantage as just 36% currently use customer experiences/satisfaction to measure team performance.

#2 Customer advocacy is the second most important digital success metric among enterprises.
Continuous Delivery Excellence is the Goal

Enterprises that have fully shifted to these new automated approaches dramatically accelerate their ability to push out digital innovation.

These organizations see code deployments at twice the daily and weekly rates compared to organizations not using DevOps practices.

The ability to accelerate digital innovation volume and pace will be the most critical new benchmark for organizations competing in the digital economy.
Open Architecture Requires Open Processes

Knock down the silos. Enterprises thrive with a DevOps culture enabling business innovation and facilitating open source innovation.

- 62% of U.S. organizations use open source software as the basis for their DevOps practices.
- 64% of U.S. organizations expect open source software to give them access to technology that provides better and faster innovation.
- 48% of enterprises state that DevOps teams drive business value.
DevOps is Mainstream But Must Scale

Organizations must start to think business-centric collaboration; it is all about enabling DevOps-led business transformation.

DevOps is the intersection of people, process, and technology that aligns with business leadership, culture, and strategy. Take the learnings from a more collaborative style of working and push this through into the wider organization.

Adoption

77% of enterprises use DevOps.

Coverage

40% of app workloads will be developed using DevOps by 2021.

Scale

65% of enterprises struggle to scale DevOps.
Accelerate Transformation by Bringing People, Process, and Technology Together

- Merge Dev and Ops into one organization... 28%
- Identify, agree, and document new measurable KPIs... 25%
- Work more closely with the business... 35%
Open Processes Require Open Culture

Enterprises must reorient toward open cultures, where every employee is both a techie and focused on business value. It is always a work in progress.

Cultivating collaboration, an innovation mindset, and professional adaptability is now crucial for remaining competitive and requires:

- Shared accountability
- Transparency, collaboration
- End-to-end team ownership with business stakeholder
- Accountability, experimentation, and fast failing

By 2023...

- More than 65% of organizations will rely on open source components in apps driving a sharp increase in software component analysis tools and related utilities.
- 60% of the G2000 enterprises will have created their own software ecosystem.
- 90% will use publicly accessible community repositories to access reusable code components.
How to Create an Open Enterprise Culture

Facilitate learning and risk taking—essential elements for innovation and keeping hard-to-find talent (as money is no longer enough).

Organizations must:

- Take down hierarchies and champion cross-functional collaboration.
- Focus on sharing rather than owning, encouraging fast failures, and being comfortable with an approach using minimum viable products.

Only 24% of enterprises currently embrace these approaches.

49% of enterprises have named digital skill development a primary challenge.

31% name reskilling and/or employee training as a priority.
About the Analysts

Al Gillen
Group Vice President, Software Development and Open Source, IDC

Al Gillen oversees IDC’s software development research portfolio. Research disciplines in this group include developer research covering census, demographics, and developer activities; platform as a service and cloud application services for developers; and developer life cycle and quality assurance products. In addition, Al jointly oversees IDC’s DevOps research program, and runs a program focused on the ecosystem of open source software pan-industry.

More about Al Gillen

Jim Mercer
Research Director, DevOps, IDC

In this role, Jim is responsible for researching, writing, and advising clients on the fast-evolving DevOps market. Jim’s core research includes topics such as rapid enterprise application development, modern microservice-based packaging and automated deployment, and life cycle/management strategies as applied to a DevOps practice. In addition, he examines how the move to DevOps methodologies impacts enterprise use of open source and preferences for using on-premises computing and development platforms versus public cloud services. Jim advises Senior IT, business, and investment executives globally in the creation of strategy and operational tactics that drive the execution of digital transformation and business optimization.

More about Jim Mercer
Message from the Sponsor

Digital success requires an “open transformation” game plan.

Integrate

- Enable DevOps-led business transformation
- Integrate new technologies with existing solutions
- Simplify the connection of apps, services, APIs, data, or connected assets

Innovate

- Shift to modern application architectures supported by agile and open infrastructure
- Standardize, modernize, and automate technology architectures
- Advance continuous delivery as a working paradigm

Collaborate

- Foster a culture of inclusivity, transparency, and adaptability
- Adopt processes that allow the business to ‘fail fast, learn, and iterate”
- Empower employees to be customer-centric

For more information:

redhat.com/digitaltransformation
About IDC
International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world’s leading technology media, research, and events company.

IDC Custom Solutions
This publication was produced by IDC Custom Solutions. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis independently conducted and published by IDC, unless specific vendor sponsorship is noted. IDC Custom Solutions makes IDC content available in a wide range of formats for distribution by various companies. A license to distribute IDC content does not imply endorsement of or opinion about the licensee.