Expert Insights

Business continuity in pandemics

Building location-agnostic work platforms for unexpected events

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Organizations can prepare for work disruption by further embracing the virtualization of work environments today.

Key takeaways

Physical disruption to work location need not derail the productivity of knowledge workers or business continuity.

Cloud-based virtual work environments with the right set of tools and workflow allow remote workers to collaborate, execute, and engage with clients from practically anywhere.

Beyond immediate needs, a business continuity platform helps promote new ways of working and a more dynamic culture.

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When everything changes

Thriving in an era of technology-driven disruption is essential. Indeed, for many, disruption has become a business cliché. Even more recently, however, pandemics and climate change are—and will likely continue to be—dramatically disrupting to businesses, educational institutions and governments around the globe, upending supply chains, commerce, travel, financial markets and even the neighborhood store. In many markets, it seemed everything changed overnight, including employees suddenly being unable to travel to a work office or client location.

Businesses have had to react quickly to challenges in where and how work gets done. But it need not be a scramble next time. Organizations can prepare in advance for work disruption by further embracing resilience and virtualization of work environments today. An effective response, coupled with limited disruption to workflow, enables distributed management of projects, and the ability to scale quickly to address volatile internal and external demands.

Teams unused to working in a distributed manner need to become productive within hours.

Solid foundation of clouds

Resilient businesses tap into cloud-based work environments that support distributed, "work anywhere" teams without sacrificing efficiency, productivity or quality. Indeed, with the right cloud-based work environment, they can be further enhanced.[1]

With the right business continuity platform, knowledge workers generally, and software developers or IT service industries in particular, can continue work despite disruption to physical location. Teams can be quickly convened to respond to new opportunities regardless of location or talent distribution.[2]

To some, this approach—enabling employees to work productively from any location, even their own homes—may sound like old news. The percentage of organizations around the world offering employees telecommuting or work-from-home programs has increased steadily from 27.6 percent of organizations in 2014 to 50 percent of organizations in 2019.[3] But that doesn't necessarily mean "work from home" is now the de facto norm. Nor does it mean that organizations and teams can retain the levels of efficiency and productivity that they typically achieve at the office.[4]

Until recently, many organizations had not accommodated work-from-home arrangements or the IT environments needed to enable remote work. With their employees co-located in traditional office environments, there's not been a need.

With current events rapidly disrupting co-located teams —whether they are sufficiently virtualized or not— organizations are now being compelled to operate in a federated model, and often overnight. Teams unused to working in a distributed manner need to become productive within hours. Not only must a new work environment be created for them without delay, it also needs to be intuitive, pre-integrated, and easy to learn.

Data security, cost and organizational productivity becomes centrally important. And more broadly, organizations need to preserve prevailing cultures and values to ensure employees enjoy a sense of connection and engagement.

Platform is the answer

Any platform used to support new virtualized working environments must also fully equip employees with the tools and processes they need, especially project teams charged with creating, developing, testing and delivering IT solutions for clients. Specifically, a platform must address:

- What tools will workers need to complete projects in their entirety? When in the process will they need specific tools, and can they be organized to support an efficient flow of work from project start to finish? Where do employees access tools? Where do they store work-in-progress, including sensitive information, proprietary code and the like? How is all this made secure?
- How and "where" will distributed team members collaborate? How will they continue to employ agile methods such as stand-ups, scrums and feedback and improvement cycles? How will project managers make sure their teams are working at optimum levels and projects remain on schedule?
- How does the new work environment help instill trust to avoid "I can't see you—are you really working on my project?" doubt in clients' minds? Is the new distributed work environment transparent such that clients can engage as they would normally?

Making the environment right

To fully support distributed workers, the work environment must satisfy parameters set by technical demands of clients. First, a business continuity platform must be able to be deployed on any cloud—or multiple clouds—and fully integrate with heterogeneous, hybrid multicloud client environments.

A critical enabler of this is "containerizing"—that is, encapsulating an app with its own operating environment—all the tools the platform comprises. From an architecture standpoint, containerization increases portability, and helps improve scalability and security. For developers, it increases productivity and simplifies the deployment process.

Second, the platform must provide DevOps capabilities for developers and enable them to deliver code quickly. At the same time, the platform needs to improve collaboration between developers and operations, while supporting the frequent release of software updates. A core value of the platform, then, is that it brings client requirements, development, and operations all together for improved responsiveness to the market.

Third, remote work cannot sacrifice security. High-value intellectual property created by digital workers demands a highly trusted and secure work, storage and delivery environment. The same applies to the data—especially client data—that the work of many teams relies on. Therefore, the platform must provide a highly secured environment for developers throughout the project lifecycle, including requirements gathering, design, development, storage, building, testing, and the exchange of source codes.

Asian insurance company: Remaining productive in a crisis

A large insurance company in Asia recently needed help building a data management platform solution and had teamed with IBM to do so. The project was interrupted by the spread of COVID-19. As business travel was suspended, the client's office was also closed, making it impossible for the teams to collaborate in person.

Instead of postponing the project, the two teams used a business continuity engineering platform. The complete digital remote work environment integrates tools, an optimized workflow, simple collaboration capabilities, and an effective project management and execution discipline. It is a cloud-based platform that can be quickly configured for use. The new platform allowed teams to collaborate and advance work on the project with a new, virtualized roadmap.

The development team employed task management tools and a Kanban board to keep track of progress, while project managers and executives used personalized views to track events and outcomes.[5] Teams now enjoy complete visibility even though they are unable to meet face to face. The development team saves work in a centralized source code repository to securely manage it as they proceed with using the DevOps tools on the platform. As development is completed, the team can continue to deploy its package to heterogeneous client environments on any infrastructure type.

Use of the new work environment has fostered real cultural change and made them a more resilient development organization.

Mechanisms should include infrastructure and security software for both persistence and transportation. Any changes to the source code should be traceable for audit purposes. Finally, access rights should be given based on personas and responsibilities so the distribution of source code is properly controlled.

Fourth, the platform must be inclusive and flexible enough to integrate the needs of the multiple roles and personas a project requires (see Figure 1). It should provide end-to-end tooling from client engagement all the way through the successful client delivery.

Project workflow beyond environment and tools

In order to help suddenly remote workers be productive from day one, the new work environment's platform must provide a coherent, managed project flow. It cannot simply outline the steps in such a flow. The flow must be baked into the design and function of the platform itself (see Figure 2).

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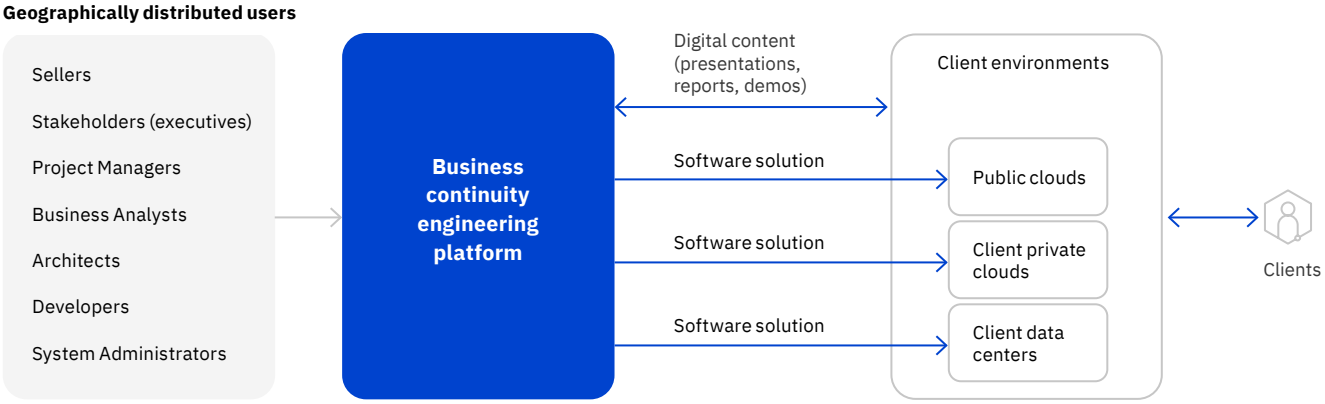
Figure 1

A Business continuity engineering platform supports team resilience

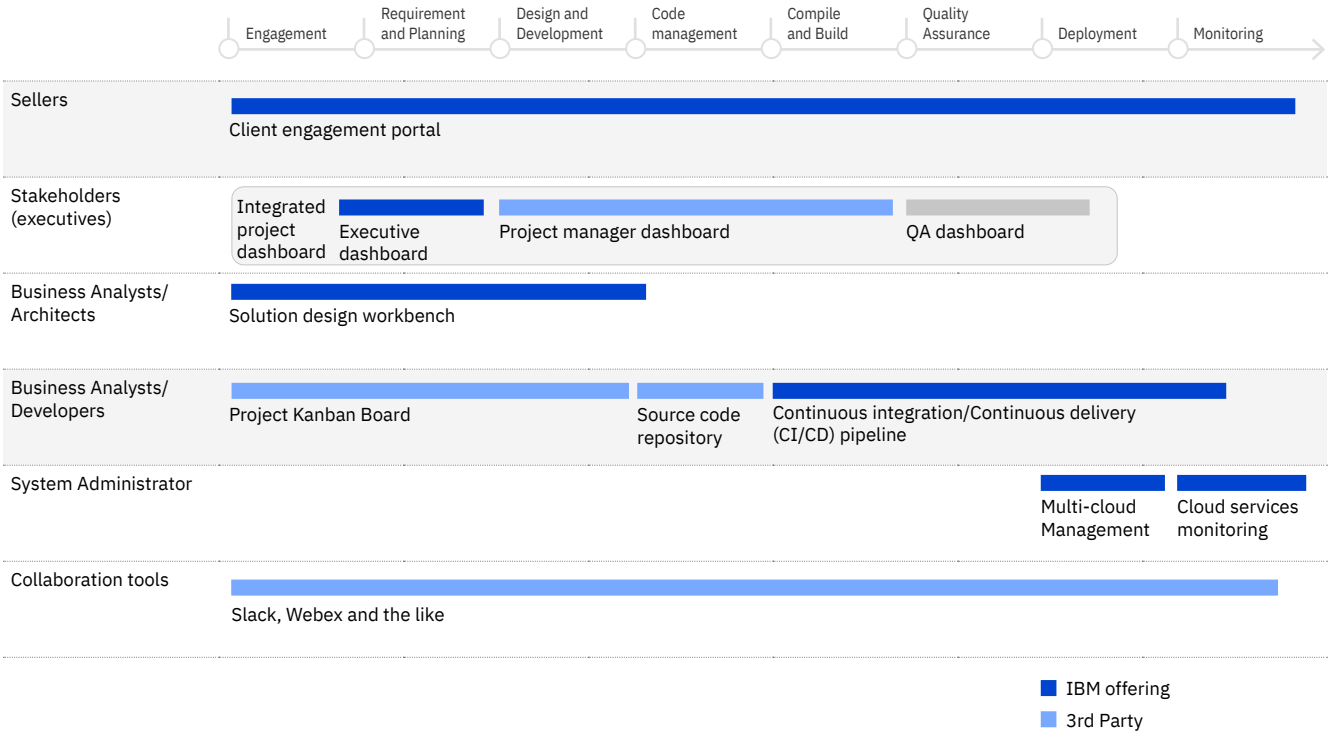


Source: IBM Institute for Business Value.

Workflow must be baked into the design and function of the platform itself.

Figure 2

Business continuity engineering platform: Project lifecycle view



Source: IBM Institute for Business Value.

Dashboards integrate and display DevOps metrics for all the roles and personas involved in the project. This gives project and client teams full transparency and up-to-date details on progress. Most importantly, dashboards and the transparency they allow support and stimulate collaboration across teams, which is especially critical for remote workers (see Figures 3 and 4).

In fact, in addition to providing a remote delivery model for knowledge workers, the business continuity platform should also enable cultural transformation. Succeeding as a remote worker requires a shift in mindset from individual development in silos to contributing as part of a seamlessly integrated team. How can a technology platform help accomplish this?

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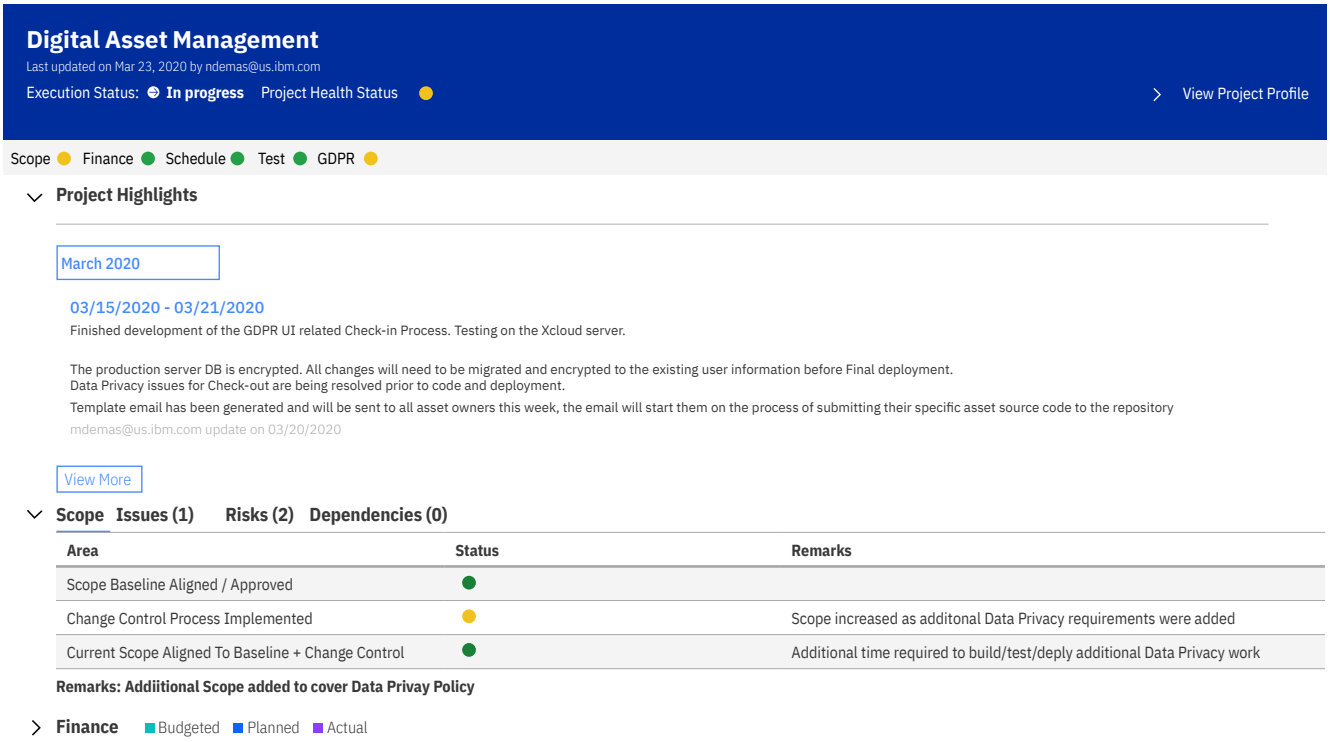
Figure 3

Integrated project dashboard: Executive view

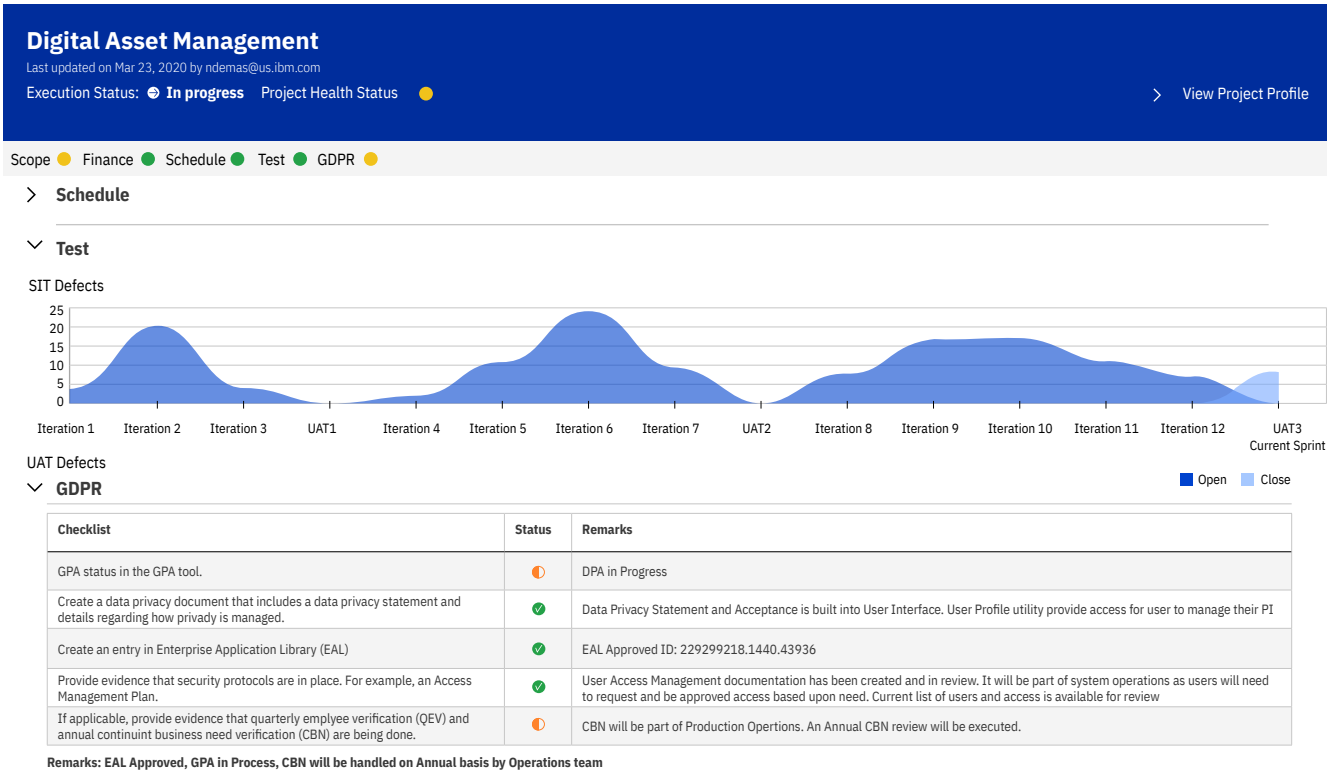


Source: IBM client experience.

Succeeding as a remote worker requires a shift in mindset from individual development in silos to contributing as part of a seamlessly integrated team.

Figure 4

Integrated Project Dashboard: Project Manager View



Source: IBM client experience.

Platform for cultural transformation

Solving the technical issues of tooling to support daily tasks, communications, and dashboards, is in some ways the easy part. It's more challenging to get people to willingly and effectively use the tools. In our experience, a well-designed platform can also help by supporting key hallmarks of a viable distributed work culture.

Successful remote work requires transparency, visibility and trust. Co-located, in-person work environments may provide some measure of these as a natural consequence of sharing physical space. A robust business continuity platform can do likewise—maybe even better.

Built-in mechanisms can provide visibility of details about program and project status, task execution status, risks, individual worker performance, budget status, and labor utilization status, as well as detailed DevOps status. This may, in fact, provide more visibility and transparency than normal work practice and so engender more trust—a single version of the truth that anyone working on the project can see.

But culture is notoriously difficult to craft, manage or control. Often it emerges from the things people actually do—their actions and the consequences of those actions over time. In some ways, then, the best way to shift the culture may be by doing, not just by describing or mandating.

We are finding that the properly designed cloud-based work environment can, in fact, help develop the right culture for remote working. It provides not only a set of tools, but a seamless approach to using them. This approach transforms culture as project participants engage with the platform and, through it, one another. Rather than receive a set of recommendations on what the culture needs to be and how to begin creating it, participants use a platform that has cultural elements embedded in it—they create the culture as they go.

Here are some actions that can help every organization develop a successful virtual working platform.

Action guide

Business continuity in pandemics

1. Create the strategy and company policies needed to support remote and distributed work.

Knowledge workers need to know clearly how they should work remotely. Put specific guidance, rules and policies in place prior to a sudden disruption, so teams are not figuring things out as they go.

2. Empower your knowledge workers with a culture that engages them in new ways of working and adds to the organization's resiliency.

To begin, apply the underlying principles of agile methods across all aspects of project management and client relationships. Design both physical and digital workspaces, and workflows to encourage a culture that rapidly adapts to change and can work as effectively in a remote, distributed manner as in a co-located environment.

3. Implement transparent, integrated communication and project reporting methods.

The lifeblood of a project is keeping everyone on the same page. Project reporting should allow rapid communication and knowledge sharing even during disruptive events across teams and, most importantly, with clients.

4. Adopt a cloud-based platform for work that is provider and cloud-agnostic.

Multicloud design allows the work environment to be delivered across clouds—and even cloud providers—without hampering performance. Such a multicloud work environment can be delivered at scale around the globe, which further helps reduce the risk of work disruption.

5. Prescribe a minimum set of tools with associated workflow and guidance.

Any business continuity platform should prescribe which baseline critical tools must be used for project management, collaboration, source code control, and other project functions. The tools should also be very easy to use in the context of a well-defined workflow.

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Notes and sources

1 IBM Institute for Business Value unpublished cloud data, 2020

2 The Project Management Institute, an association for professional project, program or portfolio managers, refers to this way of working as the foundation for the Project Economy. https://www.pmi.org/the-project-economy

3 IBM Benchmarking Program, 2020

4 IBM Benchmarking Program, 2020

5 A so-called "lean method" to improve work across teams. A Kanban board visualizes elements of the method. https://en.wikipedia.org/wiki/Kanban_(development)

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