Report Suggests Agile Integration Is the 'Blueprint for Enterprise Architecture,' Expert Agrees

By Holt Hackney

In the first couple sentences of "Agile Integration: The Blueprint for Enterprise Architecture," a recently released report by Red Hat, the authors write: "Business success is increasingly based on your ability to react to change. As new disruptive players enter markets and technology upends what consumers expect, organizations increasingly need to change plans in much shorter cycles than ever before. Modern software architectures and processes can make organizations more effective at dealing with this change and emerging as winners in their markets."

With the business case spelled out, the report goes on to describe "a new architectural framework called agile integration" that can help "your organization to create competitive advantage." This is not to be confused with the traditional "agile software development," according to the authors.

Rather, the agile methodology, when applied to agile integration, "takes the complexity of existing systems, different data types, data streams and customer expectations, and finds a way to unify them.

"A distributed integration architecture treats each integration point as a separate and unique deployment," according to Red Hat, which is a provider of open source software solutions. "The integration can then be containerized and deployed locally for a specific project or team without affecting any other integrations deployed throughout the organization.

"Each instance uses an immutable definition . . . [making] the environment highly repeatable and consistent for each instance, which is ideal for continuous integration and continuous delivery pipelines."

Erik Cottrell, Senior Vice President of Client Success and Strategy of Agile Velocity (https://agilevelocity.com/), suggested the developing trend was promising.

"Enterprise IT constraints are not new for companies adopting Agility," he said. "What's new, and exciting, is how courageous Lean/Agile Enterprises are now responding to IT infrastructure constraints with the same urgency and ingenuity as their application development counterparts. These companies recognize how profoundly IT challenges inhibit their ability to deliver value to their customer base and waste valuable team cycles. These IT innovations are foundational to an enterprise value stream."

He continued: "Agility offers relief to teams who can't know more than they do at the outset. By actually working with, and learning quickly from, small batch size teams are able to deliver value and get smarter along the way. Better still, new constraints and challenges are surfaced faster and can be addressed as work is being done, not just during planning or documenting. There's a myth that no planning is done in Agile, but we find there's the right kind of planning that actually allows teams to accelerate doing work."

Near the end of the 19-page report, Red Hat concludes that "agility is a process, not a project" that is essential.

"It has never been more important for organizations to be able to react to change in the market, and it is largely IT systems that must deliver this ability to launch new services or update existing ones quickly. Rethinking IT infrastructure has never been more important, as it is the foundation of digital services.

"Infrastructure teams have historically been tied to very long, modulated processes because of the need to mitigate risk and maintain stability. However, it is possible to shift the mindset of infrastructure from hardware or platform-based to integration-based. Integration is not a subset of infrastructure." Elaborating on this, the authors note that "it is a conceptual approach to infrastructure that includes data and applications with hardware and platforms."

To achieve the aforementioned "agile integration," the authors suggested three technology pillars:

- "Distributed integration, which uses messaging and enterprise integration patterns to integrate data and systems. These are broken down into small,

Erik Cottrell

team-driven integrations that are distributed, as needed, across projects and touchpoints.

- "Internal API management, which creates a reusable set of interfaces to allow development teams to engage with applications and systems. APIs provide guidance and structure to how applications should interact.

- "Containers, which allow integration projects to be closely aligned with development and operational projects and enable integrations to be developed, tested, and released similarly to software projects using DevOps methods."

These resonate with leaders like Cottrell, whose company is at the heart of the "Agile" movement in Austin, Texas.

"These three pillars allow teams to get to 'done' by providing the necessary access to and integration with key technologies without waiting in an IT queue, where the request has to be prioritized against other, unrelated requests," he said. "By giving teams access to these building blocks, they've reduced friction and allow for remarkable acceleration at scale, all without losing necessary discipline or appropriate controls."

Red Hat put the proverbial exclamation point on the concept in its report when it wrote that "technology has to be used to support culture change, and that means working to make infrastructure teams—and not just their software—more agile." A&G