



A mainframe DevOps journey starts with IBM application discovery tools

Sun Life accelerates digital transformation through modernization

by Dave Fawcett

5-minute read

For the insurance and financial services industries, the need to deliver a high-quality digital experience isn't a question of "if," and it's not even a question of "when." With aggressive technology-based providers—fintechs—encroaching ever deeper into the insurance and financial services space, Sun Life recognizes that the time for digitization is now. Change can't wait.

The most significant and fundamental change is the need to speed up and



streamline the application delivery pipeline. In today's digital climate, time to market—the time required to get new services into the hands of customers—is

everything. But for the vast majority of large, established providers that rely on mainframes to run their core applications, achieving this new level

of agility requires them to overcome a series of interrelated challenges with a common core: application age and complexity.

The case of Sun Life Financial exemplifies how many providers are modernizing their application development practices to bring new digital offerings to their clients faster. One of the largest companies in Canada, Sun Life knew implicitly that all the business logic embedded in its mainframe applications—developed and implemented over decades—

would continue to be required to administer its business. At the same time, it also recognized the widening set of risks that reliance on these applications posed to its digital transformation strategy.

As a product owner and scrum master within Sun Life's DevOps Center of Excellence, Gary Lesage and his team of developers are at the leading edge of the company's mainframe DevOps journey. In addition to people and process issues, tooling requirements are among his top priorities.

With all these factors in mind, he sees the expected retirement of nearly one third of his developer employees—and the institutional knowledge they possess—as one of the top challenges to Sun Life's agile transformation. "Because much of our code was written decades ago and was not well documented, we rely on the knowledge and experience of subject matter experts," Lesage explains. "As they retire, we need a way to pass knowledge on to the new generation of developers to keep the transformation ball rolling."

“Time to market is critical to going up against digital competitors and to meeting client expectations. What we've done shows that with DevOps tools like ADDI (Application Discovery and Delivery Intelligence), the mainframe can be just as quick as distributed environments in the long run.”

Gary Lesage, Product Owner, Sun Life Financial

The implications of knowledge loss are felt most when it comes to making changes to existing mainframe code, such as those that come with developing new digital services. The problem with such changes is that core applications are typically intertwined with—and logically dependent upon—other applications.

Apart from the knowledge of in-house experts, Lesage points out, the only way to analyze the impact of changes on other applications was to use aging, home-grown search control management tools to parse through the code, line by line. “Even with these tools, simply searching through code can account for up to 40% of a development team’s time,” he says. “Frankly, the team was not designed to support a DevOps-type world.”

Reduced
application
code search
times by

50%

compared with manual approaches

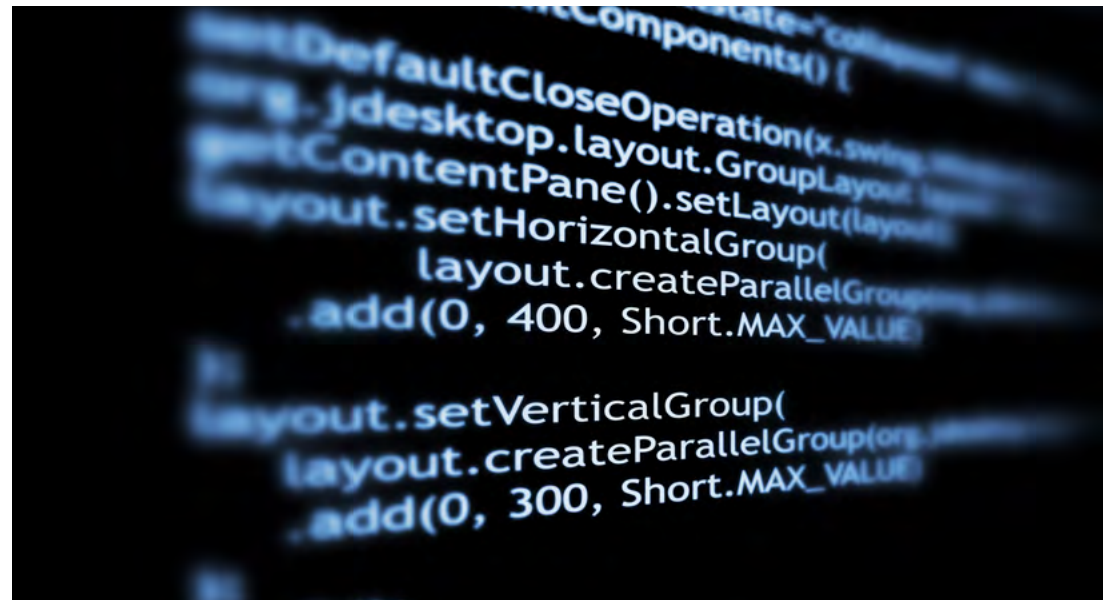
Decreased
time to market
for new service
delivery by

increasing

developer efficiency

Faster discovery means improved agility

It's not surprising that one of the first steps on Sun Life's mainframe modernization journey was to put in place application discovery tools to make impact analysis faster and more efficient. A longtime IBM® zSystems user, Sun Life implemented the [IBM Application Discovery and Delivery Intelligence \(ADDI\)](#) solution. As part of the deployment, the company received design, configuration, and customization support from the IBM Deployment Project Office (DPO), an IBM program focused on helping customers with their DevOps tooling rollouts.



From the start, Lesage recognized that the shift to automated application discovery tools represented a

significant cultural change for employees, and that a gradual rollout was key to getting buy-in. "Our strategy

was to introduce the application discovery component to a pilot group of developers. We would get them to look at code, edit code, use the debugger and application discovery for impact analysis—and then to expand to the rest of the user base,” says Lesage. “What we’ve seen confirms that the best way to drive adoption among existing users is to demonstrate value.”

Among new hires it’s a different story. The visualization and automation capabilities of ADDI resonated right off the bat with the newer generation of application developers. These employees were already familiar with the newest programming languages, skills essential to Sun Life’s digital transformation.

For the growing number of the Sun Life developers putting ADDI to work, the use cases are countless. Some are performed continuously, while others on a limited project basis. But what they all have in common is the need to know the structure of a mainframe app inside and out, and perhaps most importantly, how it relates to others—before they start modernizing it.

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Poised for digital transformation

Lesage points to two projects as examples. In the first, he and his team were asked how the company's mainframe applications would need to change in the rare (but not unheard of) case of interest rates going to zero or even negative. "Our developers used ADDI to find complex connections between a variety of investment and insurance applications," says Lesage. "It took us 50% less time than a line-by-line code search."

The second, more common example was a change to the COBOL compiler



that was connected to over 100 programs running on the IBM zSystems. "In addition to identifying where the connections were in the code, the

developers needed to know whether the changes followed COBOL's rules-based restriction. Using ADDI enabled us to reduce analysis time by 35%."

Another benefit of using ADDI is to be able to understand the use and dependencies within the JCL and batch scheduler information. “Historically, none of our developers had the ability to generate job graphs,” he notes. “The fact that we were able to inject our scheduling information into ADDI and generate graphs was a totally new. It added to the overall improvement in the efficiency of our team.”

In the big strategic picture, Sun Life’s adoption of ADDI represents an important step in the company’s mainframe modernization journey, and in the transformation of its development processes through DevOps practices. To Lesage,

the biggest impact of automated application discovery is the time required to get new digital capabilities into the hands of clients. “Time to market is critical to going up against digital competitors and to meeting client’s expectations,” Lesage explains. “What we’ve done shows that with DevOps tools like ADDI, the mainframe can be just as quick as distributed environments. We can adapt to what’s coming, provide clients with a good digital experience and not having to move off the mainframe to do it.”

In addition to changing the way app development is done at Sun Life, mainframe DevOps tools like ADDI are also beginning to change mindsets. Developers, for example, are excited

about the visual capabilities of ADDI. Lesage notes that “it’s helping us get to the point where we’re not afraid of the workforce challenges anymore.”

But, he adds, perhaps the most profound shift caused by ADDI is in the way the senior executives see mainframes in the equation of digital transformation. “Our executives recognize the importance of modernizing our mainframes because of how much we have invested in them, because of their security, and because they tie into our cloud strategy,” Lesage explains. “We see tools like ADDI changing our conversation about mainframes, and making them an integral part of our tools going forward.”



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Solution component

- IBM® Application Discovery and Delivery Intelligence

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