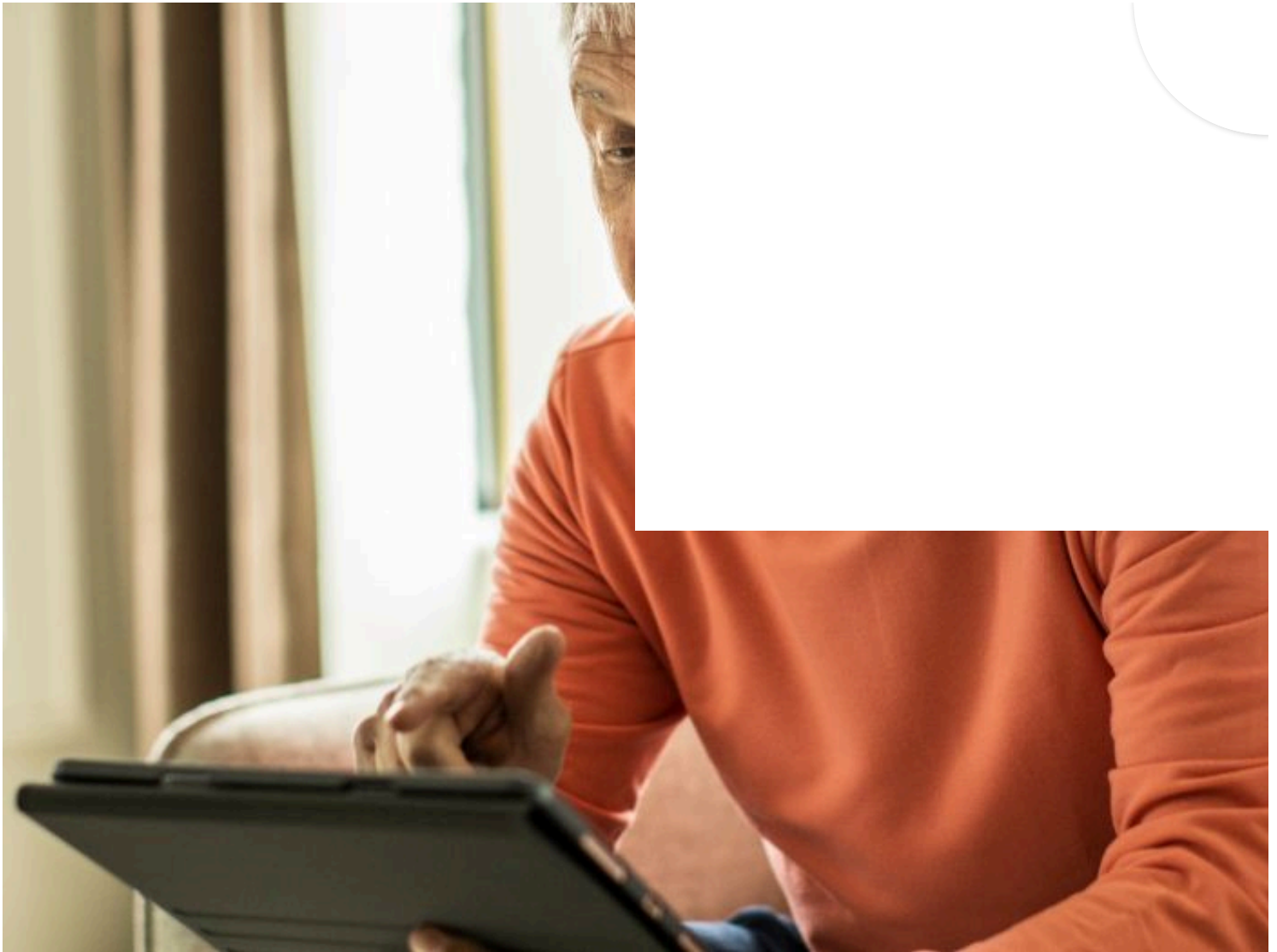


Modernizing with IBM watsonx Code Assist

NOSI transforms core applications,
upgrades to z16 and enhances efficiency
without disruption

× Close

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< Business challenges Transformation Outcomes About The National Organization for Social Insurance >

Navigating modernization challenges

The National Organization for Social Insurance (NOSI), Egypt sought to modernize their core applications to meet growing business demands and ensure scalability. The organization partnered with a third-party service provider to migrate from IBM Z®. However, the complexity of their application environment and the absence of proper documentation presented significant hurdles.

Migrating NOSI's database posed a substantial risk to continuity. Additionally, relying on external contractors strained resources and threatened project timelines. NOSI needed a solution that

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would simplify modernization, preserve their critical database infrastructure and support future growth without disrupting their business operations.

94%

94% reduction in time to analyze
superfluous COBOL code

79%

79% reduction in time to understand
complex applications

30 minutes

Reduced time from 8 hours to 30
minutes for code analysis

5 hours

Reduced time from 24 hours to 5 hours
for understanding applications

Modernization with IBM Z and IBM watsonx

In 2023, NOSI participated in IBM® TechXchange in Cairo, where they were introduced to [IBM watsonx Code Assistant™ for Z](#). They agreed to conduct a pilot program, focusing on two monolithic COBOL applications critical to their operations. The pilot enabled NOSI to gain deeper insights into these applications, identifying areas for modernization and documenting the integration between previously undocumented.

Leveraging the AI-assisted developer tools of watsonx automated the documentation process, enabling their teams to visualize application flows and better understand their environment. The use of generative AI (gen AI) in

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watsonx Code Assistant for Z streamlined COBOL code analysis and provided actionable recommendations for modernization. The hybrid solution runs on [IBM Cloud®](#) and on-prem. This success demonstrated the value of IBM Z and resulted in NOSI not exiting but fully modernizing on the platform.

NOSI's decision to modernize on the IBM Z platform as well as their success with watsonx Code Assistant for Z also led to the organization upgrading to [IBM z16®](#) for advanced performance, using [IBM Storage DS8000®](#) to expand storage capacity by 30% and adopting the IBM Z Monitoring Suite for full system observability. These changes ensured that NOSI avoided costly database migrations and optimized their existing resources while preparing for future growth and operational resilience.

Modernized applications, enhanced capacity and reduced costs

In 2024, NOSI made the strategic decision to expand and exploit the IBM Z platform. In addition to using watsonx Code Assistant for Z, they added IBM Z Monitoring Suite for observability, [IBM Cognos® Analytics](#) for reporting and IBM Storage DS8000 for increased physical storage. This decision helped NOSI to modernize their application portfolio, using watsonx Code Assistant for Z to explore, document and understand their existing COBOL applications and integration points with ease.

During their analysis, using watsonx Code Assistant for Z to explore their applications, NOSI observed up to a 94% reduction in time to analyze and locate superfluous COBOL code and programmatic routines, reducing the identification time from approximately 8 hours to nearer to 30 minutes.

In conjunction with identifying superfluous code, NOSI also saw up to a 79% reduction in the time required for their Developers to understand their existing complex applications, in some cases reducing the time from 24


This allowed the NOSI developers to increase their overall productivity by reducing considerable time spent understanding, maintaining, and updating the current application and allowing them to focus on delivering new functionality and modernization their application environment.

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Moreover, NOSI was able to avoid taking client data off the IBM Z platform, eliminating issues and risks associated with database migration and continuing to provide data resilience and security. These investments have provided NOSI with the confidence and the tools they need for sustained growth, operational resilience and data-driven decision-making.



About The National Organization for Social Insurance (NOSI)

[The National Organization for Social Insurance \(NOSI\)](#)  is a government entity based in Egypt, dedicated to managing and providing social insurance services to Egyptian citizens. Founded to ensure social protection, NOSI oversees various programs, including pensions, insurance coverage and financial benefits, impacting millions across the country. The organization plays a vital role in supporting the social and economic well-being of Egypt's workforce and retirees.

Solution components

IBM® watsonx Code Assistant™ for Z



IBM Z

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Transform with IBM watsonx Code Assistant for Z

Accelerate your mainframe modernization journey with IBM watsonx Code Assistant for Z, enabling AI-powered application transformation and enhanced productivity.

watsonx Code Assistant for Z →

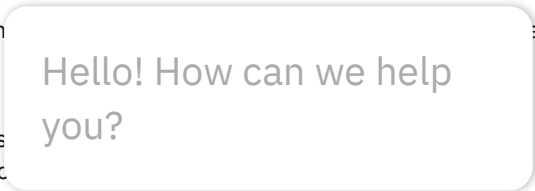
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