systemware

The Aging Workforce

WHEN TIME MARCHES ON

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In the mid to late nineties, there was a global panic around the expected issues that would surface when computer clocks rolled into the new millennium. The "Y2K Bug," as it was commonly known, centered around critical program updates needed for computer systems to accurately translate a four-digit year at the turn of the century.

Companies had concerns that they lacked the resources with the appropriate mainframe knowledge and skillset to make the adjustments. This led to widespread theories and grim predictions of a world that could potentially shut down at the stroke of midnight. Despite the hype, most computer systems made it through Y2K without major issues, and once everything was in the clear, the priority to modernize those systems became much lower. Out of sight, out of mind.

Why are we back here again?

Unlike Y2K, where the problem could essentially be resolved with a date field change, the current digital climate faces an issue that is much bigger and more difficult to address. Now, more than two decades later, those same mainframe systems are being discussed once again - only this time, there is an additional 20 years of employee attrition. Many of those same skilled mainframe workers are either retired or quickly heading towards retirement, which has led to a gradual and natural reduction of experts in the field. As a result, we are feeling the inevitable effects of an aging technology workforce.

The emergence of innovative cloud technologies and an increased digital demand brought on by the pandemic has propelled this topic back into the forefront. Companies are realizing, in many cases a little too late, that legacy coders are signing off, and replacements are in short supply. Over the past 5 years, businesses have lost an average of 23% of their mainframe workforce, and of those, 63% of the positions remain unfilled.[1]

A recent example was seen in early 2020 during the onset of COVID-19. Unemployment systems were under intense pressure when businesses closed and a sudden increase in demand for benefits caught them off-guard. The systems simply could not handle the crushing volume of jobless consumers in need of assistance, and there were limited technical resources with the expertise to repair the failing processes. U.S. government officials were requesting help from the public for resources with knowledge of mainframe technology.[2]

The U.S Internal Revenue Service was challenged with a similar scenario during this crisis as well. In an effort to efficiently distribute millions in aid to Americans mandated by the Coronavirus Economic Security Act[3], the IRS was scrambling to find programmers who could make needed updates to their COBOL-based systems to efficiently process stimulus payments.

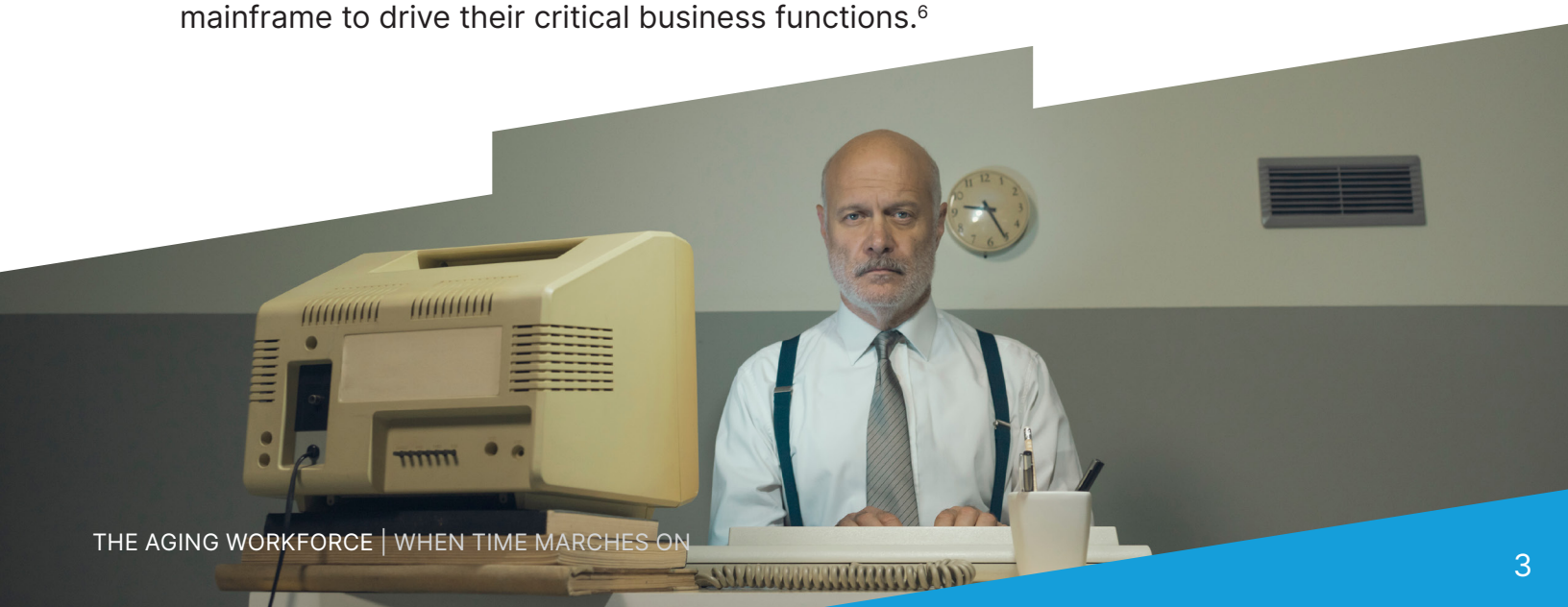
Both situations were an unexpected load test, and it was not just government entities that were affected. Millions of people needed immediate online access to perform common everyday tasks such as work, school, retail, and banking. It increased awareness for organizations with dependence on legacy applications. Companies were forced to face the reality of inefficiencies with systems that were simply not designed to handle enormous volumes of sudden content growth, as well as a lack of resources with the experience to provide necessary program maintenance for their dated technologies.

Think the mainframe is dead? Not so fast.

"The mainframe is dead" is a phrase that has been loosely spoken in the halls of corporate America for decades, yet studies find that there are between 200 to 250 billion lines of COBOL code still running on mainframe systems in active production environments today.[4]

The mainframe is still very much alive and is a big part of today's IT infrastructure, along with several programming languages including COBOL, which is often referred to as "the language that wouldn't die."[5] The underlying problem is that the older languages are outlasting the careers of those who designed and understand how to efficiently write or debug them -- much less navigate and manage complex mainframe environments.

To put it into perspective, 71% of Fortune 500 companies run COBOL on the mainframe to drive their critical business functions.[6]



The stats below shine a light on some of today's largest business systems that still run COBOL:[4]

- **Healthcare:** Data for 60 million patients
- **Banking:** 95% ATM transactions
- **Travel:** 96% of the bookings
- **Social Security:** 60 million lines of code
- **Point of sale:** 80% of all transactions daily
- **IRS:** 50 million lines of code

COBOL programmers on average are 55 years old.[4] The new generation of product developers are not proficient in the legacy programming languages of the past. Studies find that Millennials and younger generations are not being trained in the same technology specialties as Baby Boomers and Gen Xers, and many have no desire to learn them, as they see the future is moving to newer cloud-based technologies. In addition, training for programming languages such as Fortran, Assembly, and COBOL that support mainframe and other legacy environments is becoming increasingly harder to find in college curriculums. Only an estimated 30% of universities even provide COBOL courses today.[4]

How Do We Move Forward?

Companies that run their business in legacy environments have deeply embedded custom processes along with ancillary knowledge and experience surrounding it which provides a wealth of meaning and history. The technical resources that understand the history of these custom processes are a valuable asset that is often overlooked. Even if employees decide to delay retirement, we simply cannot stop time and are still left with a temporary solution to a long-term problem.

In response to the acknowledged short supply of trained technical resources to support legacy systems, companies are evaluating which applications can best be migrated off the mainframe and into a hybrid or cloud environment, allowing these resources to focus on critical core systems. Content management systems are increasingly being viewed as targets to move into a hybrid architecture. The only path forward is an evaluation of new hybrid systems that include the latest technologies which are centered around cloud implementations. The benefits seen from a move to these modern platforms far outweigh the risk of doing nothing and is actively being considered as a high business priority in many executive boardrooms.

Companies can no longer avoid difficult conversations relating to the migration of applications from the mainframe and into a modern cloud or hybrid architecture. They often fear that change will disrupt key business processes and take years to complete, but the clock is ticking to have resources available that understand the applications and who will participate in the migration.

Finding the Perfect Fit for Your Organization

While content migration is certainly a big move and can often be an overwhelming task, the process has greatly advanced over the years. In addition to a strategic game plan, organizations seeking to modernize require an experienced business partner to help execute and monitor the content migration for a smooth transition.

For over 40 years, Systemware has been working with the world's largest organizations to seamlessly capture, manage, and deliver content. Ideal for companies suffering from resource constraints, Systemware's intelligent approach to content migration provides a simplified method to move your legacy content management system to our innovative Content Cloud platform.

Every day, people with the skills to support legacy systems are leaving the workforce and are not being replaced with workers possessing the same skillset. If you have concerns that those who support your legacy content management systems fall into the aging category and may soon retire, it is probably time to have a discussion about migrating to a modern platform and review your situation. In this case, waiting too long could mean losing access to the resources that know these systems and can help to provide a more seamless migration process.

About Systemware

Systemware helps the world's largest and most highly regulated organizations simplify infrastructure, optimize cost, create workflow efficiencies, and meet information governance requirements. Our intelligent content services platform, Content Cloud, enables users to find and extract information wherever it is stored and transform and deliver it in the exact context needed for each business line. Content Cloud delivers optimized performance in public, private, hybrid, and IBM zSystems environments, as well as a fully hosted SaaS offering.

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