



# The state of CICS in the modern enterprise

## Part 3: Key CICS findings and survey demographics

*A CICS survey analysis report from:*





---

## Contents

<b>Introduction</b> .....	<b>3</b>
<b>Key findings</b> .....	<b>4</b>
<b>Survey methodology and demographics</b> .....	<b>5</b>
Industry profile .....	5
IT organization profile .....	6
Job function profile .....	7
<b>Conclusion</b> .....	<b>8</b>

## Survey data charts

Respondents by industry .....	5
Respondents by size of total organization .....	6
Respondents by size of IT organization .....	6
Respondents by size of mainframe organization .....	7
Respondents by job function .....	7

IBM, CICS, and z/OS are registered trademarks of International Business Machines Corporation in the United States, other countries, or both. All other products mentioned herein may be service marks, trademarks, or registered trademarks of their respective companies.

---

## Introduction

While most people don't realize how much the mainframe touches their lives, statistics show its reach is wide ranging. According to Pat Toole, a one-time General Manager of System z (now "IBM Z"), "92 of the top 100 banks use the mainframe to provide at-your-fingertip banking services to their customers." And according to SHARE past president Janet Sun, "Nine out of the top 10 global life and health insurance providers process their high-volume transactions on a System z mainframe."

CICS is an integral part of that picture. As IBM's Martin Keen notes, "Almost every commercial electronic transaction that you make is processed by CICS – withdrawing money from an ATM, paying with a credit or debit card, or booking tickets. CICS processes 30 billion transactions a day, and in the course of a week those transactions are valued at one trillion dollars." He also points out that CICS is used more broadly than many realize. "Although many people associate CICS transaction processing with the financial industry, that only accounts for 41percent of the industries using CICS. The other biggest users of CICS Transaction Server are government, insurance, distribution, and healthcare, among many others."

Because CICS is central to so many organizations' operations, *Enterprise Tech Journal* often conducts a CICS survey aimed at IT professionals. The survey explores the usage, challenges, and future of CICS based on the experience of people working in this area. H&W is producing this report to analyze the results and provide context for them.

The first part of this report examined the place that CICS holds in the modern enterprise, and it looked at CICS' importance in relation to its role in the recent past. The second part of the report explored the relationship between CICS and its data sources to see if traditional patterns were continuing or changing course.

This final part of the report summarizes key findings from across the survey. This part also reveals the demographics of the participating companies. How do you and your organization compare to the typical respondent?



---

## Key findings

In considering the findings of the 2015 CICS survey, these observations emerge:

- CICS remains an integral part of the IT environment, with usage actually rising among respondents over the past three years. Almost two-thirds (62 percent) of 2015 respondents said that 51 to 100 percent of their business-critical applications are online through CICS. This is up from 54 percent of 2012 respondents who said the same thing.
- CICS applications are actively providing services through more modern means. Almost two-thirds (65 percent) of respondents shared that at least some of their business-critical CICS applications were available through a web interface to PCs, phones, tablets, or some combination thereof. Impressively, another 11 percent of respondents said all of their business-critical CICS applications were available this way.
- CICS is accessing more business-critical data than in the past. Some 70 percent of this year's respondents said that CICS accesses 51 to 100 percent of their business-critical data on the mainframe. This percentage is up from three years ago, when only 62 percent of respondents said the same thing.
- CICS accesses several types of data, but which ones is shifting. The percentage of people who said CICS accesses data stored in VSAM, Db2, and IMS went up this year compared with 2012, while the percentage of people who said Oracle and DL/1 actually fell.
- The two leading types of data that CICS accesses are VSAM and Db2 by a wide margin. More than 90 percent of respondents said that CICS accesses data in VSAM, and another 82 percent said CICS accesses data in Db2. IMS came in a distant third, with only 31 percent of respondents choosing it. Another 20 percent chose Oracle. (Respondents could choose multiple answers.)
- VSAM is not just being referenced for historical purposes but is still being actively updated. Almost all respondents with VSAM — 99 percent — said that batch updates some portion of that data. About half (49 percent) of those respondents said that batch is updating 51 to 100 percent of their VSAM data.
- Among the 60 percent of respondents with VSAM challenges, the top two were solvable. “Lack of availability for CICS applications during certain periods of the day or night,” cited by 74 percent of respondents, and “Lack of real-time data for internal or external customers because of the delay due to batch processing,” cited by 48 percent, can be addressed with software. (Respondents could choose multiple answers.)
- Db2 usage presents a picture of inconsistencies. In 2012, two-thirds of respondents predicted the amount of data in Db2 would Increase. However, the actual percentage of respondents who said they have business-critical data in Db2 data was up only slightly (3 percent) in 2015. Even more interestingly, respondents who said the percentage of data in Db2 was Decreasing shifted somewhat steeply; 20 percent of 2015 respondents chose Decreasing versus just 3 percent of 2012 respondents.

---

## Survey methodology and demographics

The research was conducted in late 2014 as a web survey by Enterprise Systems Media, which publishes *Enterprise Tech Journal*. H&W Computer Systems has exclusive rights to these results.

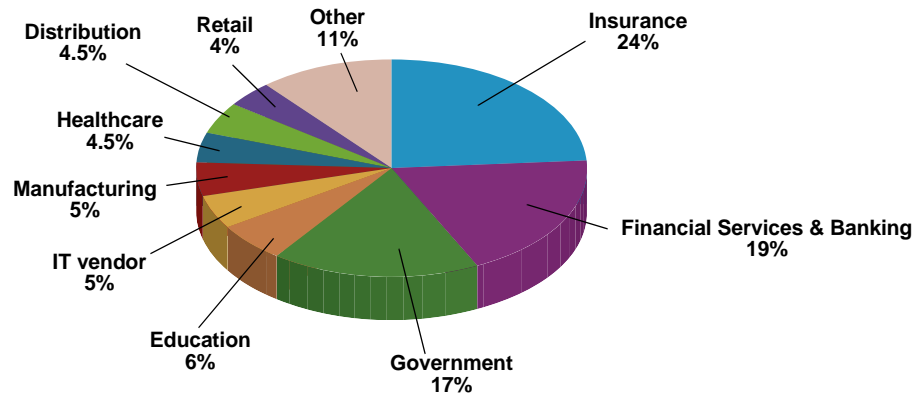
Respondents were selected from *Enterprise Tech Journal*'s subscriber base of 25,000 IT professionals. Questions in the survey narrowed respondents to only individuals in IT organizations that use both z/OS® and CICS. The 113 respondents who met these qualifications formed the basis of the survey results.

Commonly accepted standards for statistical analysis were used to ensure validity and significance.

### Industry profile

The survey drew upon a good cross-section of industries, with strong representation from the Insurance (24 percent), Financial Services & Banking (19 percent), and Government sectors (17 percent). The Other category (11 percent) showed great diversity, with representatives from such industries as utilities, airlines, and telecommunications.

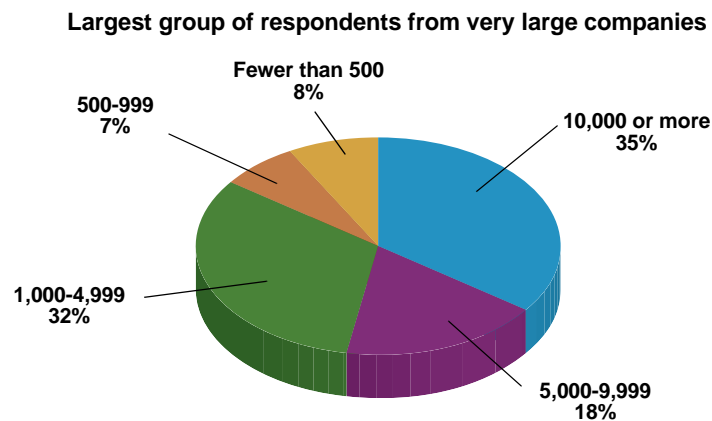
**Insurance, Financial Services & Banking, and Government largest represented industries**



*Figure 1. Respondents by industry*



The survey asked respondents to indicate the total number of employees in their organization. The largest group (35 percent) came from organizations with more than 10,000 total employees. Respondents from companies with 1,000 to 4,999 employees comprised 32 percent of the total. Respondents from companies with 5,000 to 9,999 employees was the third largest group with 18 percent.

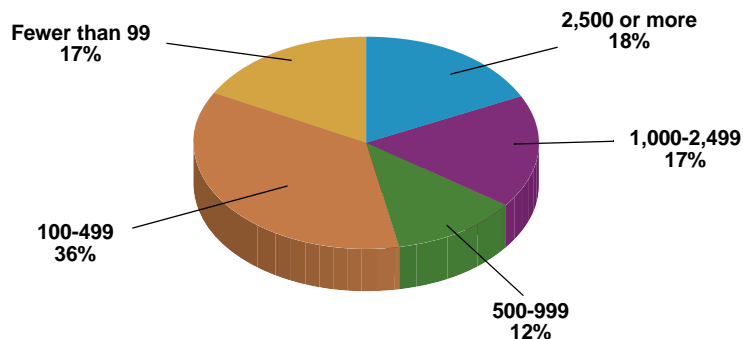


**Figure 2. Respondents by size of total organization**

### ***IT organization profile***

The largest percentage of respondents (36 percent) came from organizations with 100-499 IT employees. The remaining organizations had evenly distributed sizes of IT organizations, with 18 percent saying 2,500 or more, 17 percent choosing 1,000 to 2,499, and 17 percent saying 99 or fewer. The 500 to 999 IT employees option was least frequently chosen at 12 percent.

**Largest group has 100 to 499 IT employees, but others evenly distributed**

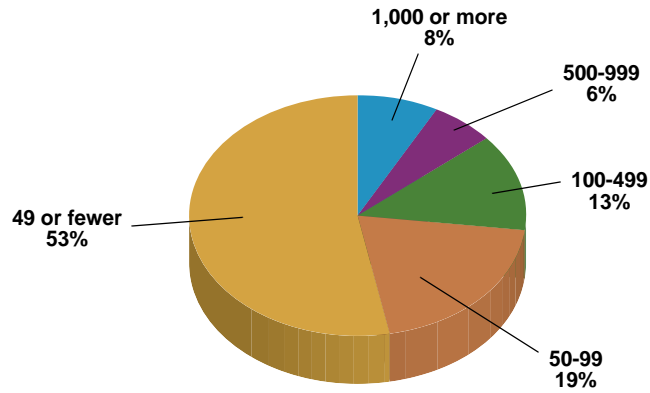


**Figure 3. Respondents by size of IT organization**

---

A majority of the respondents (53 percent) were from organizations whose mainframe groups consisted of 49 or fewer employees.

**More than half of respondents have mainframe group of 49 or fewer employees**

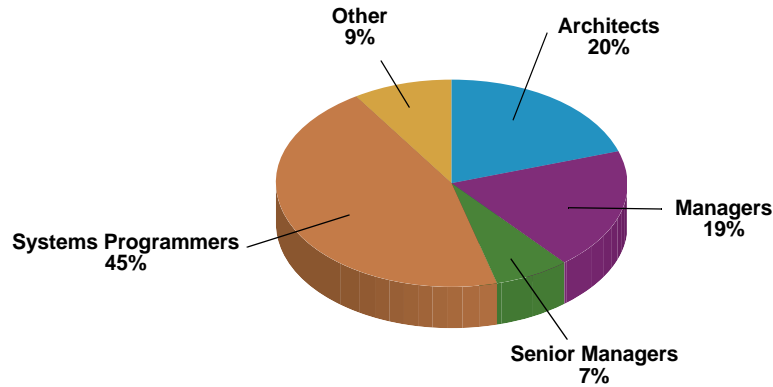


*Figure 4. Respondents by size of mainframe organization*

**Job function profile**

Systems Programmers (45 percent) were the primary respondents to the survey followed by Architects (20 percent), Managers (19 percent), and Senior Managers (17 percent).

**System Programmers represent the largest group by job function**



*Figure 5. Respondents by job function*

---

## Conclusion

CICS remains an integral part of the IT environment, with usage actually rising over the past three years, and its functionality being extended to mobile devices, PCs, and web services. CICS is accessing more business-critical data than in the past, but the types of data are changing somewhat, with use of Oracle and DL/1 dropping. The two leading data types in use still are VSAM and Db2 by a wide margin, with IMS coming in a distant third. More than 9 out of 10 respondents said their CICS applications access VSAM, and 99 percent of those people are updating some portion of VSAM using batch. Db2 is a little more complicated, with actual usage rising only slightly, and past predictions of usage increases not coming true. Those who said usage was Decreasing also shifted dramatically to 20 percent from 3 percent in 2012.

Most survey respondents were from the Insurance, Financial Services & Banking, or Government industries. The largest majority of respondents (35 percent) came from large organizations (10,000 total employees). However, the majority of respondents were from mid-sized IT groups (100-499 IT employees) and the smallest mainframe groups (49 or fewer employees). In addition, most respondents considered themselves either Systems Programmers (45 percent), Architects (20 percent), or Managers (19 percent), with Senior Managers at 7 percent.

## About H&W

Headquartered in Boise, Idaho, H&W has been a leading provider of quality software solutions since 1979. H&W creates reliable, technically sound solutions like SYSB-II that provide long-term value. Today, corporations worldwide, including many Global 500 companies, trust H&W for their IT software and services needs. Call 1-800-338-6692 or visit [www.hwcs.com](http://www.hwcs.com).

## References

Keen, Martin. 5 things to know about CICS transaction server. IBM, March 8, 2013, [https://www.ibm.com/developerworks/community/blogs/5things/entry/5\\_things\\_to\\_know\\_about\\_ibm\\_cics\\_transaction\\_server?lang=en](https://www.ibm.com/developerworks/community/blogs/5things/entry/5_things_to_know_about_ibm_cics_transaction_server?lang=en)

Sun, Janet L., *Don't Believe the Myth-information about the Mainframe: Part 1*, SHARE, May 07, 2013, <http://www.share.org/p/bl/et/blogid=2&blogaid=234>

Toole, Pat. *From Shopping To Space Travel, How The Mainframe Changed Our World*. Forbes, April 8, 2014, <http://www.forbes.com/sites/ibm/2014/04/08/from-shopping-to-space-travel-how-the-mainframe-changed-our-world/>.



6154 North Meeker Pl., Ste. 100  
Boise, ID 83713  
800-338-6692  
[www.hwcs.com](http://www.hwcs.com)

©2015 by H&W Computer Systems, Inc.  
All rights reserved