

Information Security Program

Prioritizing cybersecurity resources
and mitigation strategies is vital to ensuring
the county's continued ability to serve

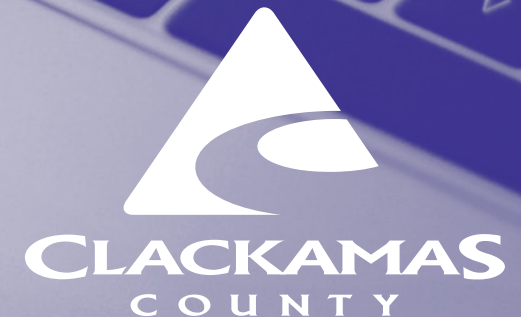
May 2023
A Report by the County Internal Auditor

Jodi Cochran, CPA, CIA, CGMA, CRMA
County Internal Auditor

Kathy Yeung, CPA
Senior Internal Auditor

Minh Dan Vuong, Chair
Internal Audit Oversight Committee

Brian T. Nava
County Treasurer



Translation Notice

The Office of County Internal Audit is committed to providing meaningful access to users of the report. For accommodations, translations, or additional information, please contact us via email at ocia@clackamas.us or via phone at 503-742-5983.

La Oficina de Auditoría Interna del se compromete a brindar un acceso significativo a los usuarios del informe. Para obtener adaptaciones, traducciones o información adicional, contáctenos por correo electrónico a ocia@clackamas.us o por teléfono al 503-742-5983.

县内部审计办公室致力于为该报告的用户提供有意义的访问权限。有关翻译或其他信息，请通过电子邮件 ocia@clackamas.us 或拨打 503-742-5983 与我们联系。

Офис окружного внутреннего аудита стремится к предоставлению реального доступа пользователям отчета. Для услуг по размещению и переводу, а также за дополнительной информацией вы можете связаться с нами по электронной почте ocia@clackamas.us или телефону 503-742-5983.

Văn phòng Kiểm toán Nội bộ Hạt cam kết cung cấp phương tiện phù hợp để người dùng tiếp cận báo cáo. Để biết thêm thông tin về, dịch thuật, hoặc các thông tin khác, vui lòng liên hệ chúng tôi qua email ocia@clackamas.us hoặc số điện thoại 503-742-5983.

Управління внутрішнього контролю округу прагне забезпечити повноцінний доступ до звіту для осіб, які звертаються за ним. З питань щодо розміщення, перекладів або отримання додаткової інформації, будь ласка, напишіть нам на електронну пошту ocia@clackamas.us або зателефонуйте за номером 503-742-5983.

Public Report

Vulnerable to cybersecurity attacks, local governments face damaging financial, operational and social impacts.

President Biden stated in the March 2, 2023, White House release of the National Cybersecurity Strategy, “Cybersecurity is essential to the basic functioning of our economy, the operation of our critical infrastructure, the strength of our democracy and democratic institutions, the privacy of our data and communications, and our national defense.”

Prioritizing cybersecurity resources and mitigation strategies is vital to ensuring the county’s continued ability to serve.

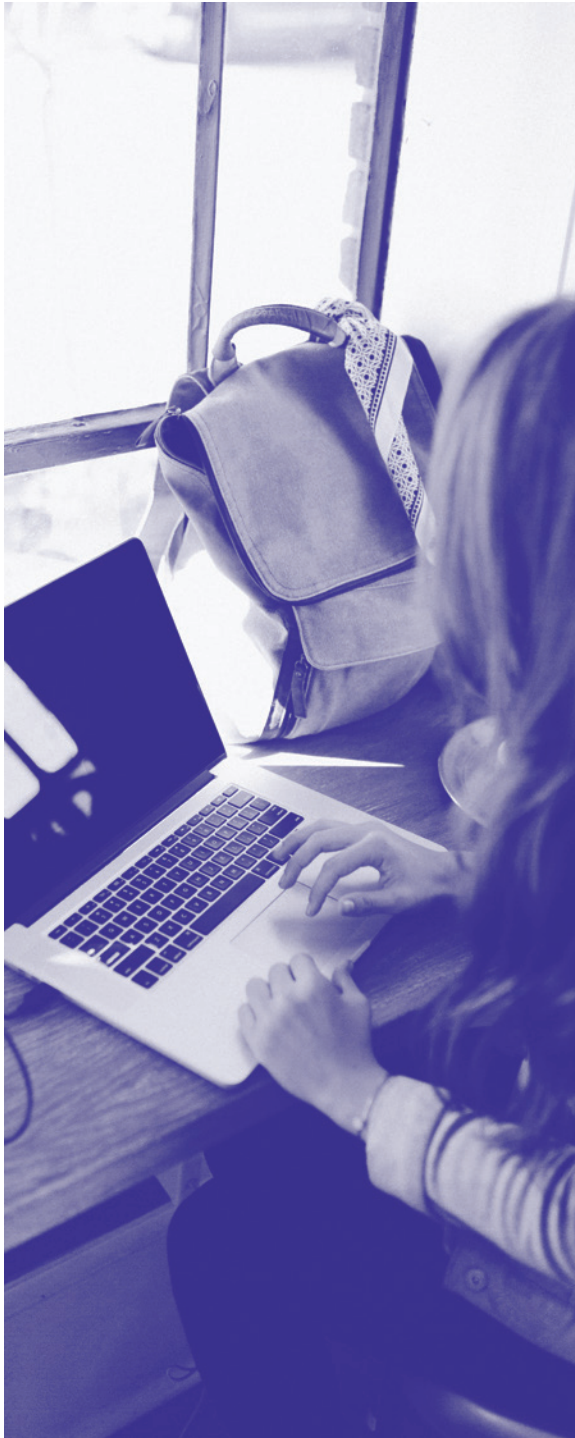
An inadequate cybersecurity strategy continues to be among the top identified risks facing organizations. Cybercrime is criminal activity targeting or using a computer, a computer network or a networked device.¹ The global average annual cost of cybercrime was estimated at \$8.4 trillion in 2022. It is anticipated to reach \$20 trillion by 2026.² These crimes include theft and damage to both data and data systems. According to an independent study by the Ponemon Institute, the average cost of a data breach, globally, in 2022 was \$4.35 million. Large and small data breaches often go undetected for months and may take months to contain once detected. The 2022 average cost of a ransomware system breach was \$4.54 million, slightly higher than the average cost of a data breach.³ Clackamas County’s Risk Management team has indicated the cost of insurance coverage for such incidents continues to rise, adding to the financial risk assumed by the county.

Such an attack can cripple, both financially and logistically, a local government’s ability to provide services and support to its community. For those attacking local governments, the goal is not necessarily financial reward but disrupting society at the local level. Disruptions in county and city operations can shake confidence in local government and potentially endanger residents. Since 2019, publicly acknowledged

1 Kasperksy, [Resource Center](#)

2 Statista, [Ani Pertosyan, Dec. 2, 2022](#)

3 IBM-Ponemon Institute, [2022 Cost of Data Breach report](#)



cybercrimes against Oregon local governments have impacted Curry, Tillamook and Linn counties; the cities of Oregon City, Portland, St Helens, Keizer and Albany; Portland and Centennial school districts; and more. The number of undetected or unreported attacks is unknown. A recent survey coordinated through the International City/County Management Association indicated that nearly one-third of U.S. local governments would be unable to tell if they were under attack in cyberspace.⁴

Recent legislation at the national and state levels, like the State and Local Government Cybersecurity Act of 2021, attempt to develop and strengthen national, state and local technology infrastructure postures. On September 16, 2022, the U.S. Department of Homeland Security announced a first-of-its-kind cybersecurity grant program specifically for state, local and territorial governments across the country. This grant program will distribute \$1 billion over four years to help eligible entities address cybersecurity risks and threats to state, local and territorial governments' information systems.⁵

Clackamas County cybersecurity assessment

In collaboration with the county's Technology Services department, the Office of County Internal Audit assessed the maturity of the county's information security program relative to the cybersecurity Critical Security Controls developed by the Center for Internet Security.⁶ The assessment of the county's information security program established a maturity baseline framed by the Center for Internet Security Critical Security Controls.

4 Richard Forno, University of Maryland, Baltimore County, [The Conversation](#)

5 U.S. Cybersecurity and Infrastructure Security Agency, [CyberGrants](#)

6 Center for Internet Security, [Critical Security Controls V8](#)



The public distribution of specific engagement methodologies, observations, recommendations and management responses would increase the county's cybersecurity risks. In accordance with Oregon Revised Statutes⁷, generally accepted government auditing standards⁸ and the *International Standards for the Professional Practice of Internal Auditing*⁹, this information will be kept confidential.

Recommendations

In supporting the development and strengthening of the county's technology infrastructure and cybersecurity posture, areas for improvement were identified and communicated to county leadership. It is recommended the county, through its Technology Services department, continue:

- addressing identified vulnerabilities
- increasing capabilities and capacity to detect, identify, protect, recover and respond to information security threats.
- developing information security strategies, resources, policies and procedures which align with industry standards and best practices.
- using low-cost cybersecurity resources federally funded by the U.S. Cybersecurity and Infrastructure Security Agency and available through the Multi-State Information Sharing and Analysis Center.
- leveraging cybersecurity grant opportunities.

⁷ Oregon Revised Statute (ORS) 192.345(23), Public records conditionally exempt from disclosure https://oregon.public.law/statutes/ors_192.345 ; ORS 192.355(1) Internal advisory opinions; ORS 192.355(33)(C) Information about review or approval of programs relating to the security of data transmission by whatever means provided https://oregon.public.law/statutes/ors_192.355

⁸ United States Government Accountability Office, Government Auditing Standards 9.61 – 9.67, Reporting Confidential or Sensitive Information www.gao.gov/yellowbook

⁹ Institute of Internal Auditors, *International Standards for the Professional Practice of Internal Auditing*, [Code of Ethics Principle 3: Confidentiality](#)



The county's Technology Services management team agreed with the recommendations made and continues to implement policy and process improvements.

Future comparisons with the initial assessment will demonstrate how well the county is:

- implementing its responses
- continuing to mitigate risks
- committing to a robust cybersecurity strategy
- achieving the county's vision of an acceptable information security environment

The Office of County Internal Audit will monitor implementation efforts and provide status updates to County leadership and residents.

Collaborative, proactive efforts

Members of the county's Technology Services department contributed extensive amounts of time and effort to provide access to the information and data reviewed. These contributions significantly supported the engagement's completion and timeliness. Throughout the engagement, the Technology Services team demonstrated the county's core values, SPIRIT, and modeled a commitment to building public trust through good government.

Special thanks to Kevin Galusha, Chris Fricke, Linu Parappilly, and the Technology Services team for their contributions and support; and Mark McBride and Dylan Blaylock with the Public and Government Affairs department for their assistance in the report design, formatting, and conducting post-audit administrative tasks.

About the Office of County Internal Audit



Our Mission

Provide county leadership objective assurance, advice and insight to optimize county efforts and achievements.

Our Vision

The public:

- engages with an accountable, high performing, and transparent local government
- is confident that its interests are protected

Our Strategic Objectives

The Office supports Clackamas County by:

- focusing on risks to county achievement
- promoting continuous improvement
- enhancing accountability and transparency
- fostering county SPIRIT
- building public trust



Our Professional Standards

The Office of County Internal Audit governs itself by adhering to The Institute of Internal Auditors' mandatory guidance, including the:

- Definition of Internal Auditing
- Code of Ethics
- *International Standards for the Professional Practice of Internal Auditing*

The Office does not fully conform to the Standards to the extent the Office has not yet received an external review. Obtaining an external peer review is one of the Office's performance goals.

Our Independence

The County Internal Auditor reports functionally to the Internal Audit Oversight Committee and administratively to the elected county Treasurer. This authority ensures the Office is free of undue influence.



Our Team

Jodi Cochran, CPA, CIA, CGMA, CRMA, County Internal Auditor
Kathy Yeung, CPA, Senior Internal Auditor

Contact Us

Office of County Internal Audit
2051 Kaen Road #460
Oregon City, OR 97045
Office: 503-742-5983
ocia@clackamas.us