

December 2025

ASSURANCE

Audit, Compliance & Ethics Committee Meeting



**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD OF TRUSTEES
AND
AUDIT, COMPLIANCE AND ETHICS COMMITTEE**

*All or part of the December 4, 2025, meeting of the TRS Audit, Compliance and Ethics Committee and Board of Trustees may be held by telephone or video conference call as authorized under Sections 551.130 and 551.127 of the Texas Government Code. The Board intends to have a quorum and the presiding officer physically present at the following location, which will be open to the public during the open portions of the meeting: **4655 Mueller Blvd, 2nd Floor, Boardroom.***

The open portions of the December 4, 2025, meeting are being broadcast over the Internet. Access to the Internet broadcast and agenda materials of the meeting is provided at www.trs.texas.gov. A recording of the meeting will be available at www.trs.texas.gov.

AGENDA

December 4, 2025 – 2:00 p.m.

1. Call roll of Committee members.
2. Consider the approval of the proposed minutes of the September 2025 Audit, Compliance and Ethics Committee meeting – Committee Chair
3. Receive report of the financial audit of TRS Annual Comprehensive Financial Report (ACFR) for fiscal year ended August 31, 2025 – Taylor Huff, Robert Pagenkopf and Angelica Ramirez, SAO.
4. Receive Crowe LLP's report of the financial audit of TRS Investment Company (TRICOT) for fiscal year ended August 31, 2025 – Kevin W. Smith and Michelle Buss, Crowe LLP.
5. Receive TRS Compliance reports including those related to ethics and fraud, conflicts of interest, investment policies, and the Enterprise Risk Management Update – Heather Traeger, Chris Bowlin and Michelle Pagán.
6. Receive Internal Audit's disclosure of affirmations regarding independence, ethics and professionalism – Amanda Jenami.
7. Receive an update on Internal Audit's Data Analytics Program – Jonathan O'Reilly.
8. Receive Internal Audit Annual Report for Fiscal Year 2025 – Julie Toler.
9. Receive status of prior audit and consulting recommendations - Jonathan O'Reilly.

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit, Compliance and Ethics Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit, Compliance and Ethics Committee constitutes a quorum of the Board, the meeting of the Committee is also being posted as a meeting of the Board out of an abundance of caution.

10. Discuss or consider Internal Audit and TRS Compliance administrative reports and matters related to governance, risk management, internal control, compliance violations, fraud, regulatory reviews or investigations, fraud risk areas, audits for the annual internal audit plan, or auditors' ability to perform duties – Brittney Allred, Amanda Jenami and Heather Traeger

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit, Compliance and Ethics Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit, Compliance and Ethics Committee constitutes a quorum of the Board, the meeting of the Committee is also being posted as a meeting of the Board out of an abundance of caution.

Minutes of the Audit, Compliance and Ethics Committee September 19, 2025

The Audit, Compliance and Ethics Committee of the Board of Trustees of the Teacher Retirement System of Texas met on September 18, 2025, in the boardroom located on the Second Floor of TRS' offices located at 4655 Mueller Blvd, Austin, Texas, 78723.

Committee Members Present:

Ms. Brittny Allred, Chair
Mr. Michael Ball
Ms. Laronda Graf
Mr. John R. Rutherford
Mr. Elvis Williams

Other TRS Board Members Present:

Mr. Robert H. Walls, Jr.
Mr. David Corpus
Mr. John Elliott

Others who participated:

Brian Guthrie, TRS
Caasi Lamb, TRS
Jase Auby, TRS
Heather Traeger, TRS
Amanda Jenami, TRS
Chris Cutler, TRS
Chris Bowlin, TRS
Michelle Pagán, TRS
Cui Rye, TRS
Shannon Gosewehr, TRS
Jonathan O'Reilly, TRS
Nathan Ward, TRS
Mark Chi, TRS
KJ Van Ackeren, TRS
Robert Sosa, TRS
Kack Henserling, TRS
Chris Cutler, TRS
Katherine Farrell, TRS
Suzanne Dugan, Cohen Milstein

Michael Clayton, State Auditor's Office
Taylor Huff, State Auditor's Office
Michelle Buss, Crowe LLP
Kevin Smith, Crowe LLP

Audit, Compliance and Ethics Committee Chair, Ms. Allred, called the meeting to order at 9:00 a.m.

1. Call roll of Committee members.

Ms. Farrell called the roll. A quorum was present.

2. Approve minutes of July 2025 Audit, Compliance and Ethics Committee meeting – Committee Chair Ms. Brittny Allred.

On a motion by Mr. Rutherford, seconded by Ms. Graf, the proposed minutes for the July 2025 Audit, Compliance and Ethics Committee meeting were approved as presented.

3. Receive State Auditor’s Office (SAO) presentations on the planned audits of TRS’ Fiscal Year 2025 Annual Comprehensive Financial Report (ACFR) and Pension Liability and OPEB Liability Schedules– Michael Clayton and Taylor Huff.

Ms. Taylor Huff reviewed the purpose and scope of the audit of TRS’ Annual Comprehensive Financial Report for fiscal year 2025. She concluded by reviewing the proposed timelines. She said the report is tentatively scheduled for November 20th and noted the pension and OPEB schedules will be in the spring.

4. Receive Crowe LLP’s presentation on the planned financial audit of TRS Investment Company (TRICOT) – Kevin Smith and Michelle Buss, Crowe LLP.

Ms. Michelle Buss provided the audit plan for the TRICOT audit. She reviewed the team working on the audit, discussed the audit plan and timeline, bringing the report to the December board meeting.

5. Receive TRS Compliance reports including those related to ethics and fraud, conflicts of interest, investment policies, and Enterprise Risk Management – Heather Traeger, Chris Bowlin and Michelle Pagán.

Mr. Chris Bowlin reported the quarterly testing focused on a number of tests for the quarter ending June 30, 2025. He said of note was whether or not the investment integrity questionnaire (IIQ) was received prior to investment authorization for each investment, whether or not the hedge fund test was run, was evaluated by IMD, whether or not the restricted securities list were up to date and whether or not the investments were within policy limits. He said for this quarter there were two reportable exceptions, there were two separate instances of failure to obtain an IIQ from the placement agent prior to the authorization of that investment but obtained prior to the closing of either investment deal. He reported these oversights were reviewed with the team and additional training was provided.

Ms. Heather Traeger reported on two 541(c)s conflicts reports relating to conflicts with firms and business with other clients. She reported one 541(e) conflict report relating to employees who have either a spouse or themselves with a relationship potentially tied to a TRS investment. She reported four items came through the hotline. She said each were investigated in turn and appropriate action was taken where warranted.

Ms. Michelle Pagán reported there was one change to the enterprise spotlight report since the last meeting in July. She said the talent continuity trend increased, the risk level remained guarded due to unavoidable employee turnover and the return-to-office initiative may result in loss of staff.

**6. Consider recommending to the Board of Trustees adoption of the following –
Amanda Jenami:**

**A. Internal Audit’s Strategic Plan and Proposed Performance Objectives for
Fiscal Year 2026;**

Ms. Amanda Jenami reviewed the proposed performance targets. She focused on the strategic key performance indicators (KPIs) noting a more focused approach to performance reporting. She said this narrowed board level reporting allows for discussions to be focused on outcomes that matter most to governance and oversight. She said operational KPIs will continue to be monitored internally to ensure performance management stays strong and robust. She then reviewed the proposed targets.

On a motion by Ms. Graf, seconded by Mr. Williams, the committee unanimously voted to recommend to the Board of Trustees the Internal Audit proposed performance objectives for fiscal year 2026, as presented by staff.

B. Proposed Audit Plan for Fiscal Year 2026.

Ms. Jenami provided an overview of the Audit Plan developed using a risk-based approach. She reviewed the audits or projects planned for fiscal year 2026, such as cloud computing specifically focused on the Microsoft Azure platform, protection of sensitive data across all platforms and the TRS reporting entity portal.

On a motion by Mr. Rutherford, seconded by Mr. Williams, the committee unanimously voted to recommend to the Board of Trustees the adoption of the audit plan for FY 2026, as presented by staff.

7. Receive Internal Audit reports.

**A. Review of TRS’ Procurement and Vendor e-System (PAVES) – Cui Rye and
Shannon Goeswehr.**

Ms. Cui Rye provided background on PAVES that supports every stage of the procurement and contract management cycle. She said this audit evaluated how effective it is in supporting contract management. She reported that PAVES is effective in supporting contract management and key controls include automated workflows and notifications that support contract management activities. She noted the audit did identify opportunities to strengthen system controls, enhance data integrity and improve the user experience.

Ms. Shannon Goeswehr, providing the management response, agreed with the recommendations.

B. Reporting Employer Testing Results – Jonathan O’Reilly and Mark Chi.

Mr. Jonathan O’Reilly provided the results of the reporting employer (RE) testing, which was an agreed-upon procedure (AUP) engagement. He reviewed the goals of the AUP as to identify areas where there are opportunities to make corrections to the accuracy of the data in the TRUST

system and as a learning experience to better understand from the reporting employer's perspective where there might be challenges. He said seven REs were tested, selected through a data-driven risk assessment. He said there were three main categories of the types of data tested: census data, eligibility data and compensation data. He reported the results were mixed with minimum census data exceptions, with higher exceptions in eligibility determination data as well as compensation data. The recommendations he said, were for the Benefit Accounting team to share the exceptions with the REs to correct any inaccuracies and to address the inaccuracies found in permanent addresses.

Mr. Mark Chi provided management's response agreeing with Audit's recommendation. He said a long-term solution is being explored related to updating member addresses, but it will not be able to proceed until after TEAM's PBT implementation.

C. Review of Innovation Portfolio Program – Nathan Ward and KJ Van Ackeren.

Mr. Nathan Ward provided an overview of the innovation portfolio program and the audit. He stated this was a very positive audit for IMD and that there were no recommendations.

Mr. KJ Van Ackeren provided management's response agreeing with the audit results.

D. Update on Prior Audit Recommendations – Jonathan O'Reilly.

Mr. O'Reilly reviewed the dashboard of prior audit recommendations noting 21 recommendations are in progress with two-thirds of them with IT and ISO areas. He reported six recommendations have been implemented since the July report.

Ms. Allred announced, without objection, that the committee would take agenda item 8 next.

8. Discuss or consider Internal Audit and TRS Compliance administrative reports and matters related to governance, risk management, internal control, compliance violations, fraud, regulatory reviews or investigations, fraud risk areas, audits for the annual internal audit plan, or auditors' ability to perform duties – Robert H. Walls, Jr., Amanda Jenami and Heather Traeger

Ms. Jenami reported on Internal Audit's Fiscal Year 2025 key performance measures. She noted that Internal Audit met or exceeded all the annual performance targets for the year.

Ms. Allred announced, without objection, that the committee would take up agenda items 7 E and F.

- E. Review of Safety and Physical Security (Alpha) – Amanda Jenami and Robert Sosa.**
- F. Audit of Business Continuity Planning and Disaster Recovery – Jack Henserling, Robert Sosa and Chris Cutler.**

At 10:06 a.m., Ms. Allred announced the committee would go into executive session under the following Agenda Item and sections of the Government Code: Item 7(E) under Section 551.076, 551.089 and 551.071 to discuss safety and physical security, Alpha, and to consult with legal counsel as needed; Item 7(F), under Section 551.076, 551.089 and 551.061 to discuss the audit of business continuity planning and disaster recovery and to consult with legal counsel as needed.

At 11:04 a.m., Ms. Allred reconvened the committee in open meeting.

There being no more business before the Audit, Compliance and Ethics Committee, the committee adjourned at 11:06 a.m.

APPROVED BY THE AUDIT, COMPLIANCE AND ETHICS COMMITTEE OF THE BOARD
OF TRUSTEES OF THE TEACHER RETIREMENT SYSTEM OF TEXAS ON THE _____
DAY OF DECEMBER 2025.

Brittney Allred
Chair, Audit Compliance and Ethics Committee
Board of Trustees
Teacher Retirement Systems of Texas

Date



Internal Audit

**Audit, Compliance & Ethics
Committee Meeting / Dec 2025**





Audit of the Fiscal Year 2025 Financial Statements of the Teacher Retirement System of Texas

Taylor Huff, Managing Senior Auditor
Robert Pagenkopf, Managing Senior Auditor
Angelica Ramirez, Assistant State Auditor/CFO



Objectives and Scope

Basic Financial Statements

(System ACFR)

Report on Internal Controls

- To obtain reasonable assurance about whether the basic financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.
- To report on any significant deficiencies and material weaknesses in internal control over financial reporting and compliance with laws, regulations, and provisions of contracts or grant agreements based on an audit of financial statements performed in accordance with the standards applicable to financial audits contained in *Government Auditing Standards*.



Audit Results - Deliverables

We issued the following deliverables related to this audit:

- We issued an **Unmodified Opinion**, dated November 20, 2025.
 - We also issued a Report on Internal Control dated November 20, 2025.
 - Report to the Legislative Audit Committee. This report was posted to the State Auditor's Office website.
- In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the major enterprise fund and the aggregate remaining funds information, consisting of the fiduciary funds of the System, as of August 31, 2025, and the respective changes in financial position, and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.
 - No material weaknesses or significant deficiencies were noted in the Report on Internal Control or communicated to System management.



Presentation to the TRS Board of Trustees

December 4, 2025

Audit Results - Emphasis of Matters

Our opinion included two emphasis of matters paragraphs.

Our opinion was not modified with respect to these matters.

- As discussed in Note 1, the financial statements present only the System and do not purport to, and do not, present fairly the financial position of the State of Texas as of August 31, 2025, the changes in its financial position, or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.
- As discussed in Note 3, the financial statements include investments valued at approximately \$119.4 billion as of August 31, 2025, whose fair values have been estimated by management in the absence of readily determinable fair values.



Required Communications

Item:	Comment:
Significant Risks	<ul style="list-style-type: none">• Management overrides of control• Existence and valuation of alternative investments• Net increase/decrease in fair value of investments• Valuation of health care claims payable
Changes in Significant Accounting Practices	<ul style="list-style-type: none">• GASB 101, <i>Compensated Absences</i>• GASB 102, <i>Certain Risk Disclosures</i>• Presentation changes to improve transparency:<ul style="list-style-type: none">• Derivative instrument assets and liabilities presented separately• Collateral obligations related to derivative instruments and securities lending presented separately
Significant Unusual Transactions	None noted.



Presentation to the TRS Board of Trustees

December 4, 2025

Item:	Comment:
Significant Difficulties Encountered During the Audit	None noted.
Disagreements with Management	None noted.
Corrected and Uncorrected Misstatements	None identified.
Fraud or Noncompliance with Laws and Regulations, Contracts or Grant Agreements	None identified.
Communication of Deficiencies in Internal Control	No reportable deficiencies identified.



Presentation to the TRS Board of Trustees

December 4, 2025

Thank You

**We want to thank the various
System Divisions for their
cooperation, assistance, and
patience throughout the audit.**

- Executive Division
- Investment Management
- Financial
- Benefit Services
- Health
- Legal and Compliance
- Information Technology
- Internal Audit



Smart decisions. Lasting value.™

Teacher Retirement Investment Company of Texas LTD. (TRICOT)

Fiscal Year End August 31, 2025
Audit Committee Presentation
Michelle Buss, Senior Manager
December 4, 2025





Results of Services

Unmodified (“Clean”) Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teacher Retirement Investment Company of Texas, Ltd., as of August 31, 2025, and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.



Results of Services

Emphasis of Matter

As discussed in Note 1, the financial statements present only TRICOT and do not purport to, and do not, present fairly the financial position of Teacher Retirement System of Texas or the State of Texas as of August 31, 2025, the changes in its financial position, or, where applicable, its cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.



Results of Services

Internal Control - No material weaknesses or significant deficiencies in internal control reported or communicated to management.

Audit Differences – none.

Required Communications

Topic	Comments
Changes in accounting principles	None noted
Other information included in annual reports	None noted
Circumstances that affect the form and content of audit report	None noted
Disagreements with management on financial accounting and reporting	None noted
Corrected or uncorrected misstatements	Corrected misstatements – none noted Uncorrected misstatements – none noted
Major issues discussed with management prior to engagement	None noted
Consultations with other accountants	None noted
Difficulties in performing the audit	None noted
Material errors, irregularities or illegal acts	None identified
Material weaknesses in internal control	None identified
Representation letter	Provided to Crowe prior to release of AFS
Independence communications	No impairments identified
Significant Estimates	Useful lives of fixed assets, deferred tax assets & liabilities



Independence Communications

- We wish to report that we are not aware of any relationship between Crowe LLP and TRICOT that, in our professional judgment, may reasonably be thought to impair our independence.
- Accordingly, and relating to our examination of the financial statements of TRICOT as of August 31, 2025, and for the year then ended, we are independent certified public accountants with respect to TRICOT within the meaning of the applicable pronouncements of the American Institute of Certified Public Accountants' Code of Professional Conduct, its interpretations and rulings.



Thank You

Kevin W. Smith

Audit Partner

214.777.5208

kevin.w.smith@crowe.com

Michelle Buss

Senior Manager

214.777.5216

michelle.buss@crowe.com

"Crowe" is the brand name under which the member firms of Crowe Global operate and provide professional services, and those firms together form the Crowe Global network of independent audit, tax, and consulting firms. Crowe may be used to refer to individual firms, to several such firms, or to all firms within the Crowe Global network. The Crowe Horwath Global Risk Consulting entities, Crowe Healthcare Risk Consulting LLC, and our affiliate in Grand Cayman are subsidiaries of Crowe LLP. Crowe LLP is an Indiana limited liability partnership and the U.S. member firm of Crowe Global. Services to clients are provided by the individual member firms of Crowe Global, but Crowe Global itself is a Swiss entity that does not provide services to clients. Each member firm is a separate legal entity responsible only for its own acts and omissions and not those of any other Crowe Global network firm or other party. Visit www.crowe.com/disclosure for more information about Crowe LLP, its subsidiaries, and Crowe Global. The information in this document is not – and is not intended to be – audit, tax, accounting, advisory, risk, performance, consulting, business, financial, investment, legal, or other professional advice. Some firm services may not be available to attest clients. The information is general in nature, based on existing authorities, and is subject to change. The information is not a substitute for professional advice or services, and you should consult a qualified professional adviser before taking any action based on the information. Crowe is not responsible for any loss incurred by any person who relies on the information discussed in this document. Visit www.crowe.com/disclosure for more information about Crowe LLP, its subsidiaries, and Crowe Global. © 2021 Crowe LLP.



TRS Compliance: Ethics Overview

Heather Traeger and Chris Bowlin

Dec. 2025

Quarterly Investment Compliance Testing
Investment Policy Statement (IPS), Securities Lending Policy (SLP), and Proxy Voting Policy
Quarter ending September 30, 2025

Procedures Performed	Test Results
<p style="text-align: center;"><u>Business Objective 1: Board Reports</u></p> <p style="text-align: center;">All required information is reported to the TRS Board of Trustees</p>	
<ul style="list-style-type: none"> Obtain evidence that all requirements reported to Board of Trustees 	<ul style="list-style-type: none"> All reporting requirements were met; documentation provided supported information tested
<p style="text-align: center;"><u>Business Objective 2: Investment Selection and Approval</u></p> <p style="text-align: center;">Investments made are within delegated limits and established selection criteria</p>	
<ul style="list-style-type: none"> Obtain evidence that Investment Integrity Questionnaires (IIQs) were received prior to investment authorization and deal closing Obtain evidence from the investment teams that the CIO conditional approval was addressed after the IIC Obtain evidence of prudence or recommendation letters where required Obtain evidence that all counterparty requirements were met Obtain evidence that new investments in emerging managers met requirements Obtain evidence that approved investments were within policy limits 	<ul style="list-style-type: none"> Each investment tested had a completed questionnaire prior to IIC date CIO conditional approvals during this period were documented in the IIC minutes and the required actions were completed after the IIC No prudence letters were required for this period All Credit Risk Management reporting requirements were met, and documentation provided supported information tested All investments met policy requirements for the tested period For all investments tested, no manager or partner organization exceeded the authorized limits and verified term sheet calculations with manager exposure file
<p style="text-align: center;"><u>Business Objective 3: Other (IPS, SLP, other reporting)</u></p> <p style="text-align: center;">Risk limits are followed for other investment and proxy voting policies and procedures were followed</p>	
<ul style="list-style-type: none"> Obtain senior management disclosure about known compliance violations Obtain evidence that TRS securities lending program complied with policy guidelines Obtain evidence that the proxy voting committee complied with the proxy voting policy, including maintaining a voting record, documenting exceptions and reviewing TRS' service provider guidance. 	<ul style="list-style-type: none"> Obtained quarterly compliance certification from IMD IIC and Legal No security lending violations were identified All requirements of Proxy Voting Policy Sections 2 and 4(a)-(b) were met

Legend:



Significant to TRS



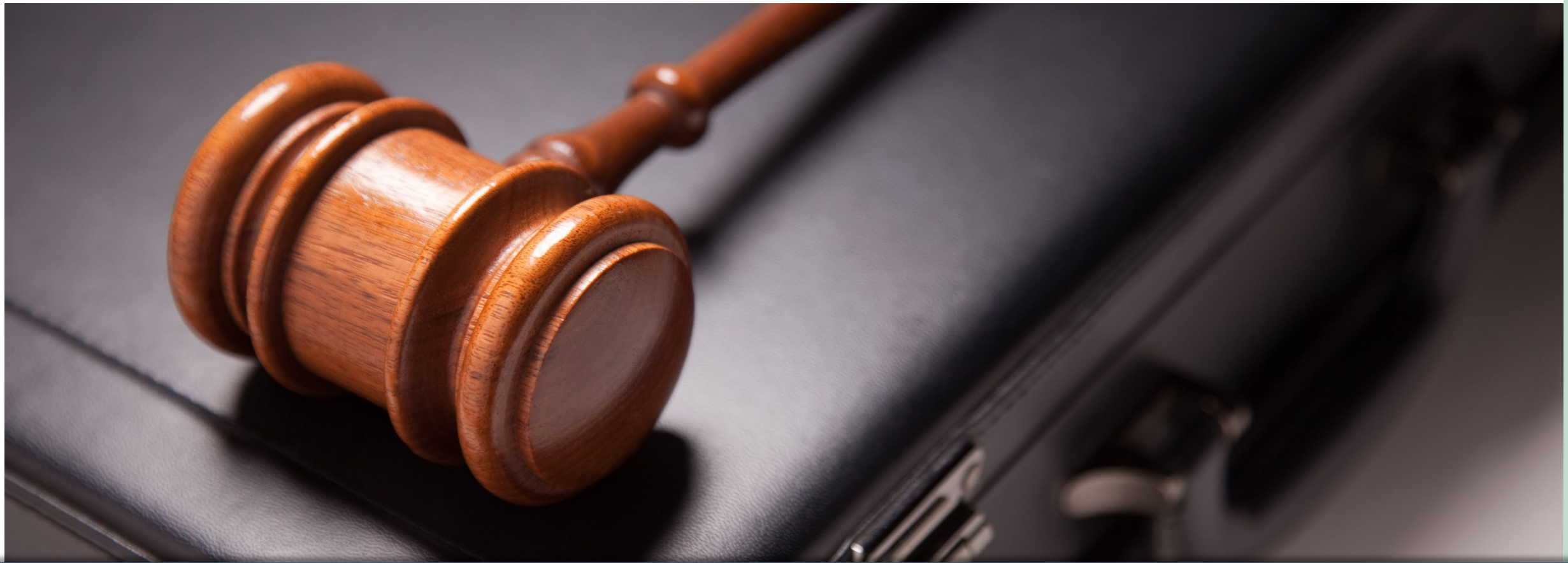
Significant to Business Objectives



Other Reportable Exception



Positive Test Result/ No Exception



Enterprise Risk Management Update

Dec. 5, 2025

Michelle Pagán

Director, Enterprise Risk, Strategy & Performance



Agenda

- Enterprise Stoplight Report
- Category Risk Level Changes & Trending
- Risk Trending Dashboard



Enterprise Stoplight Report* – December 2025



Business Continuity	Communications & External Relations	Cybersecurity	Data Privacy & Confidentiality	Employer Reporting
Enterprise Technology	External Fraud	Facilities Management & Planning	Financial Operations	Global Operations
Health Care Plans Administration	Internal Fraud	Pension Funding	Pension Services	Portfolio Exposure
Procurement & Contracts	Records & Information Management	Regulatory, Compliance & Litigation	Talent Continuity	TEAM Program
TRS-ActiveCare Affordability	TRS-Care Funding			

Categories Added

- External Fraud
- Internal Fraud

Categories Deleted

- Ethics & Fraud Prevention

RISK CATEGORY LEVEL - Threat to Achieving TRS Goals & Objectives

HIGH	ELEVATED	CAUTION	GUARDED	LOW
------	----------	---------	---------	-----

EXPECTED RISK CATEGORY TREND - NEXT 12-24 MONTHS

INCREASE	DECREASE	NO CHANGE
----------	----------	-----------

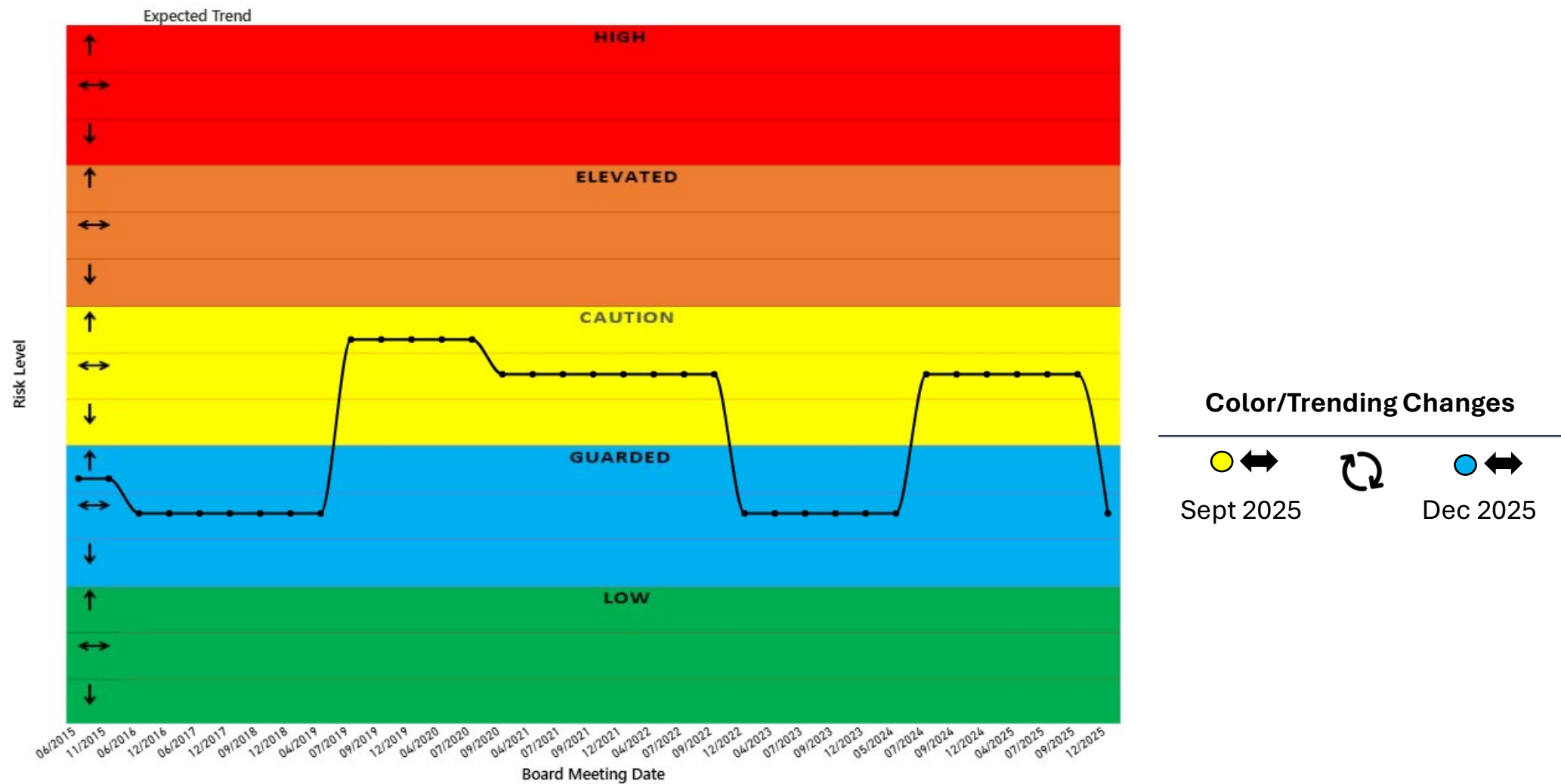
*Risk category ratings are based on a point in time and independent of other risk categories.



Category Risk Level Changes & Trending



Risk Category: Facilities Management & Planning





Risk Trending Dashboard



Enterprise Risk Categories	Current Risk Level	Expected Trend	10-Year Historical Trend
December 2025		12-24 months	
Cybersecurity	Elevated	Increase	
Enterprise Technology	Elevated	Increase	
Pension Funding	Elevated	Increase	
Records & Information Management	Elevated	Decrease	
TEAM Program	Caution	Increase	
Communications & External Relations	Caution	Stable	
Data Privacy & Confidentiality	Caution	Stable	
Health Care Plans Administration	Caution	Stable	
Procurement & Contracts	Caution	Stable	
TRS-ActiveCare Affordability	Caution	Stable	
Business Continuity	Caution	Decrease	
Talent Continuity	Guarded	Increase	
Employer Reporting	Guarded	Stable	
Facilities Management & Planning	Guarded	Stable	
Financial Operations	Guarded	Stable	
Global Operations	Guarded	Stable	
Pension Services	Guarded	Stable	
Regulatory, Compliance & Litigation	Guarded	Stable	
Portfolio Exposure (i.e., Market)	Low	Increase	
TRS-Care Funding	Low	Stable	



Internal Audit

Presented By:
Amanda Jenami, CPA, CIA, CISA, CIDA, CFE

Dec. 4, 2025







Background: Requirements Regarding Independence, Ethics & Professionalism

Independence¹

The freedom from conditions that threaten the ability of the internal audit activity to carry out internal audit responsibilities in an unbiased manner.

Threats to Independence²

- Self-interest threat
- Self-review threat
- Bias threat
- Familiarity threat
- Undue influence threat
- Management participation threat
- Structural threat

Conceptual Framework Approach to Independence²

- Identify
- Evaluate
- Safeguard against threats

Sources:

1: The Institute of Internal Auditors *Global Internal Audit Standards (GIAS)*

2: U.S. Government Accountability Office's *Generally Accepted Government Auditing Standards (GAGAS)*

Domain II: Ethics & Professionalism¹

Demonstrate Integrity

1.1 Honesty and Professional Courage | 1.2 Organization's Ethical Expectations | 1.3 Legal and Ethical Behavior

Maintain Objectivity

2.1 Individual Objectivity | 2.2 Safeguarding Objectivity | 2.3 Disclosing impairments to Objectivity

Demonstrate Competency

3.1 Competency | 3.2 Continuing Professional Development

Exercise Due Professional Care

4.1 Conformance with Global Internal Audit Standards | 4.2 Due Professional Care | 4.3 Professional Skepticism

Maintain Confidentiality

5.1 Use of Information | 5.2 Protection of Information



Overview: Disclosure of Affirmations Regarding Independence, Ethics & Professionalism

**Internal Audit
is:**



Independent per Charter provisions



Free from interference in audit selection, scope, procedures, frequency, timing, and report content



Independent and compliant with ethical and professional standards



Free from instances of undue influence or impairment



Safeguarded against threats to independence



Safeguards for Non-Audit Services



Advisory services:
Management
implements
recommendations



**Committee
participation:** Non-
voting, advisory only



Benchmarking:
Management
decides on
implementation



**Coordination with
external auditors:**
No management
decisions by IA



Questions?



Internal Audit

Update on IA's Data Analytics Program

Dec. 4, 2025

Presented By:

Jonathan O'Reilly, Business Intelligence Director



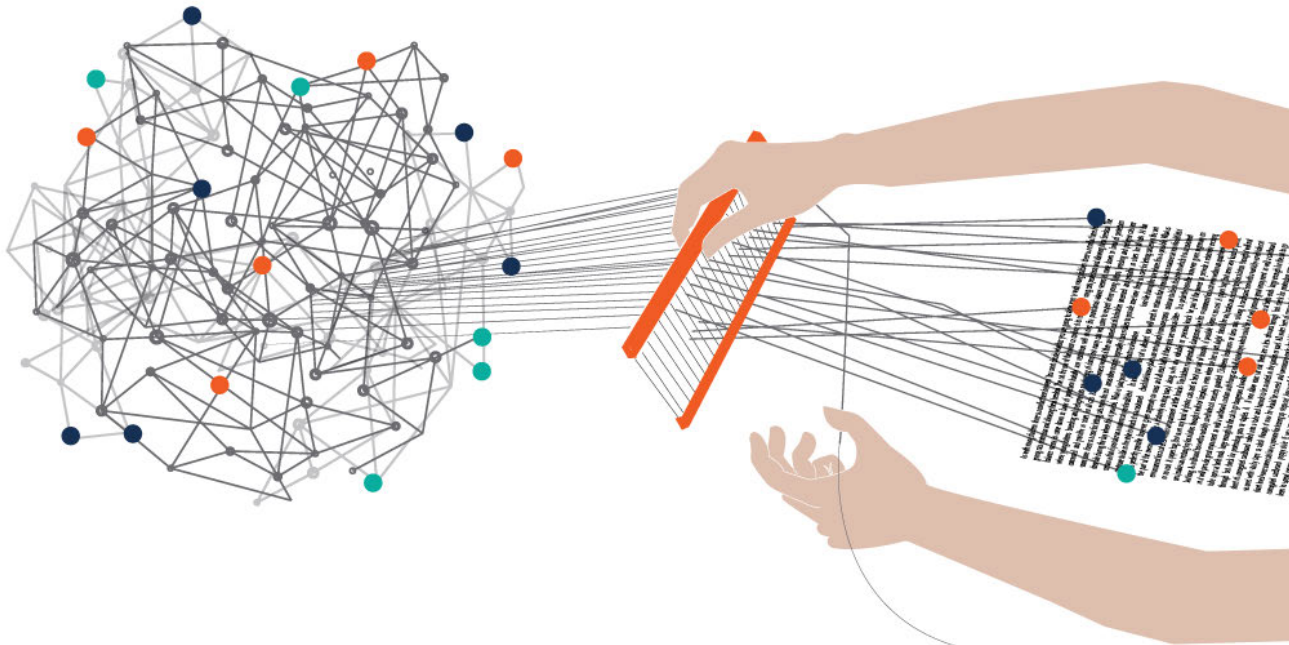


Business Intelligence Overview



Leverage data to:

- Guide Internal Audit's areas of focus
- Inform scoping of audits
- Help our clients identify and address potential risks



Weave insights from data:

- Exceptions to business process
- Data integrity
- Data synchronization
- Vendor contract compliance



FY25 Year in Review – IA Business Intelligence Team

Personnel Changes

- Senior Business Intelligence Analyst hire (Feb. 2025)



Tyler Dixon
Senior Business Intelligence Analyst



Jonathan O'Reilly, M.A.
Director of Business Intelligence



Teklehaimanot Derseh
Senior Business Intelligence Analyst



Olga Jerman, Ph.D.
Senior Business Intelligence Analyst



Sharon Riley, M.A.
Senior Business Intelligence Analyst



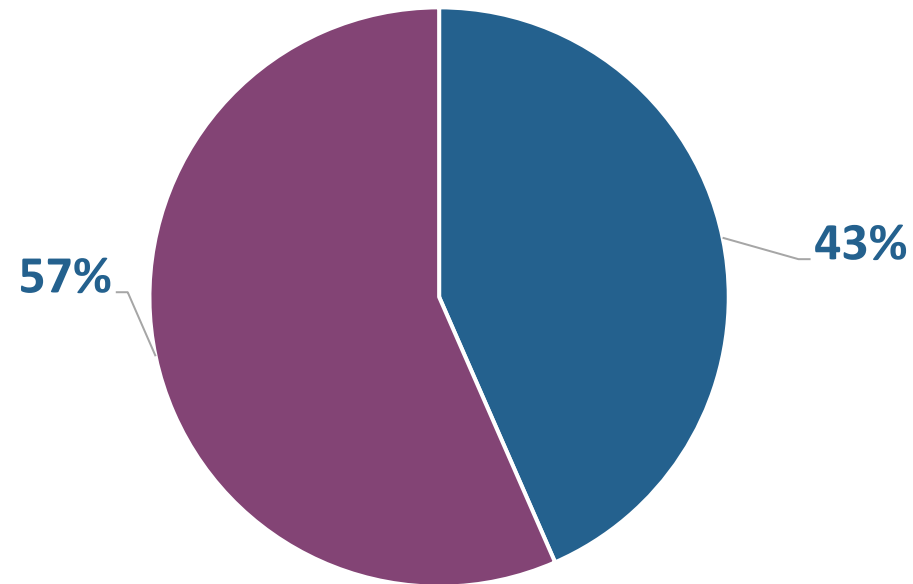


FY25 Year in Review – Resource Allocation



Audit Projects/Activities

- Annual Comprehensive Financial Report (ACFR)
Testing of Annuity Payments
- Reporting Employers Testing (Agreed-Upon Procedures)
- Review of TRS' Procurement and Vendor e-System (PAVES)
- Annual Risk Assessment
- Continuous auditing bots
- Continuous monitoring dashboards



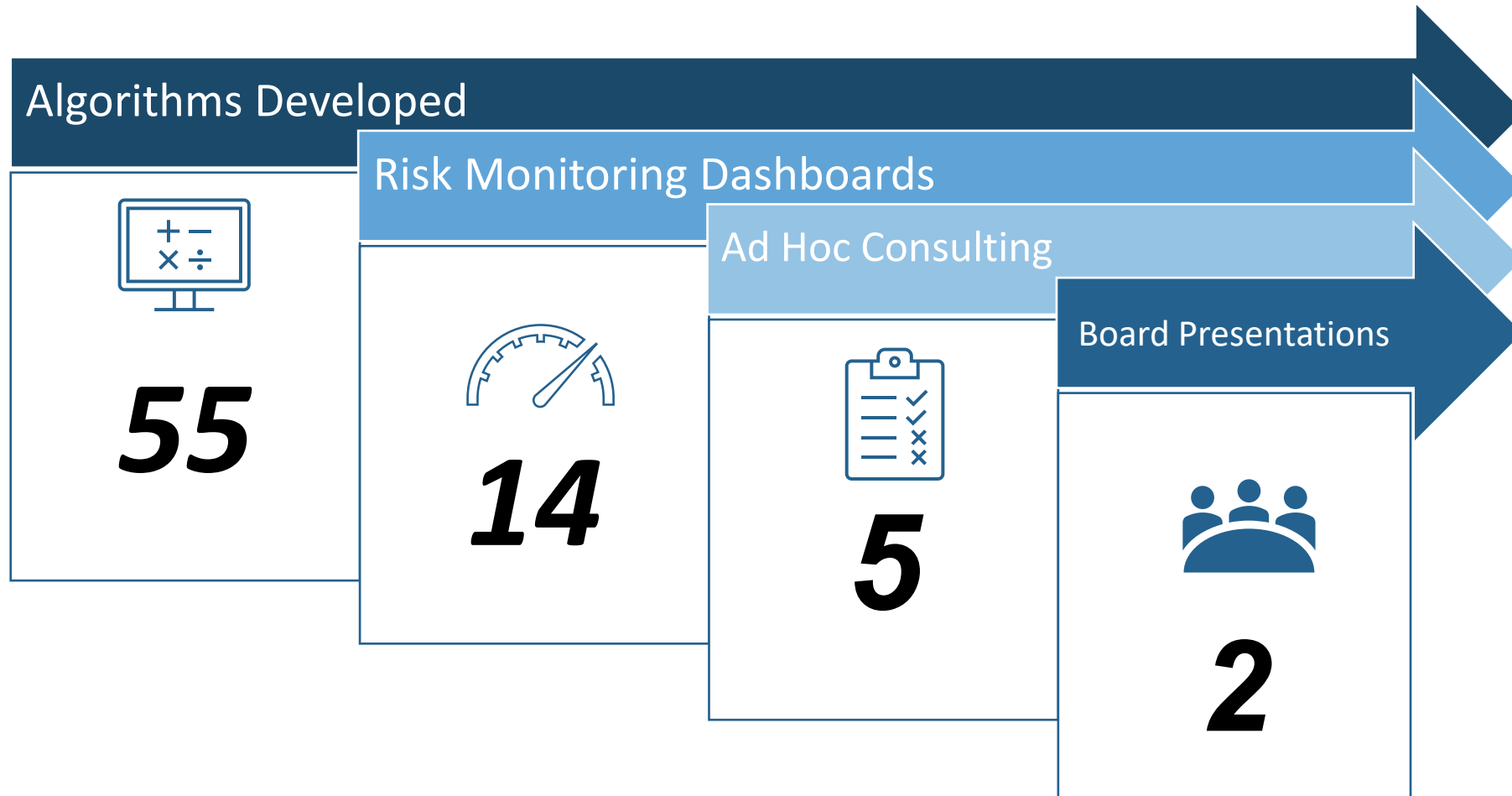
Advisory Projects

- Ad Hoc Requests for data analysis
- Healthcare Claims Analysis

** Excludes non-project activities such as training, leave and general duties.*



FY25 Year in Review – By the Numbers





Healthcare Claims Data Analytics – Areas of Focus



Providing
**Insights on
Risk**

Benefit Matrices

- <0.01% payment risk

Dental/Vision, Medicare
Advantage Limited Time
Enrollment Opportunity (LTEO)

- Pre and Post Implementation Testing

Double Payments

- <0.01% payment risk

Maternity Services

- <0.07% payment risk

New CPT Codes

- 0% payment risk

TRS-Care Premium
Accuracy

- <0.01% of TRS-Care premiums



Monitoring Insights on Risk

21 Risk Monitoring Dashboards

- Continuously monitor risk beyond initial data analysis scope
- Regular internal review and trend sharing with Health Division



Healthcare Claims Data Analytics – Project Spotlights



Claims Analyzed

4M (\$318M)

Benefit Matrices

- Assess vendor compliance with customized TRS-ActiveCare plan design
- <0.01% risk; Vendor addressed \$50k in claim adjustments

Claims Analyzed

5M (\$3.2B)

Double Payments

- Assess duplicate payments due to atypical scenarios such as concurrent or billing by shared provider IDs
- <0.01% risk; Vendor enhancements to internal policies, backend reporting and claim adjustments

Claims Analyzed

216K (\$53M)

New CPT Codes

- Assess potential risk associated with newly introduced billing codes
- No risk identified; vendor implements timely controls in line with industry standards

Member's Coverage Tested

192K

Dental/Vision Testing

- Provided test support for accuracy checks in several areas:
 - Pre and Post implementation accuracy of coverage and premiums
 - Vendor enrollment confirmation
 - Direct Billing processes
 - Net Pay Change Letter



Pension Data Analytics – Continuous Testing



**45
Bots**



**271
Tests**



Member/Reporting Employer (RE) Payroll
Data Integrity



Member/RE Contribution Accuracy



Refund Processes



Annuity Payments



Pension Data Analytics – Project Spotlights



Payroll Records Analyzed

11.7M



Agreed-Upon Procedures (AUP)

- Data-driven risk assessment including 9 risk factors to drive RE selection
- Analytics support during AUP, including 6 targeted sampling scripts

Payroll Records Analyzed

12M



Annual Auditing Bot

- Ensure service credit accuracy by checking records where Days Worked is expected
- Enhanced logic to identify more scenarios with increased confidence

FY25 Refund Requests

97,263



Continuous Auditing Bot

- Identified 23 requests via continuous auditing bot where paper refunds did not result in cases
- Leverage data analytics to integrate data systems to ensure synchronicity

FY25 New Annuitants

25K



Assurance - External

- Assist SAO's ACFR testing by utilizing bots to test program rules and highlight potential exceptions, including:
 - Annuitant payment changes
 - New annuitant eligibility and accuracy of payments



RE Training Analysis Spotlight – Overview



- Summer 2024

- Employer Reporting team conducted 36 Reporting Employer (RE) trainings
- 21 (58%) identified by Internal Audit's data analysis of RE reporting error data

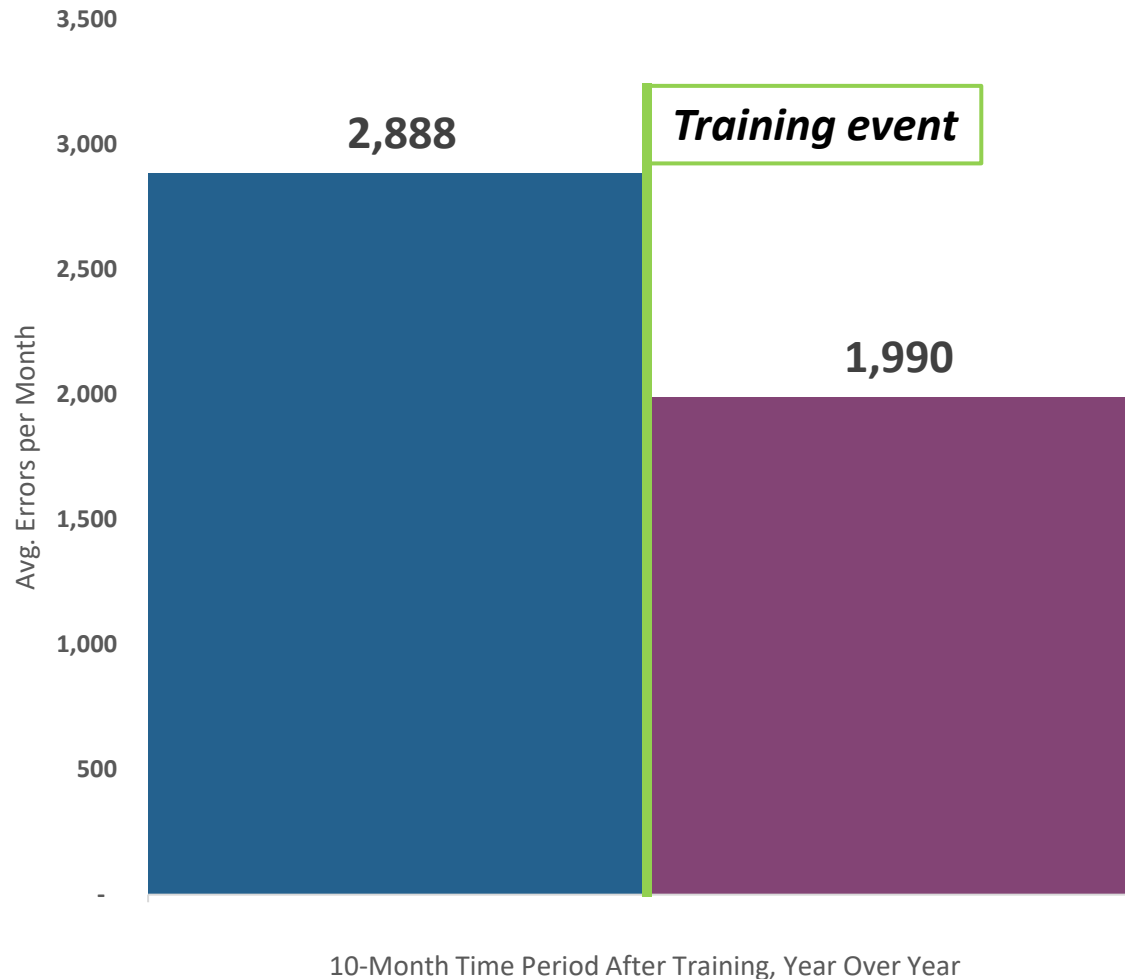
- Developed dashboards to monitor changes in reporting errors

- Impact Analysis

- Measured success metrics 10 months after training
- Estimated training impact
 - Attempted to control for seasonal trends
 - Compared Pre/Post-Training time periods year over year

RE Training Analysis Spotlight – Reporting Errors Impact

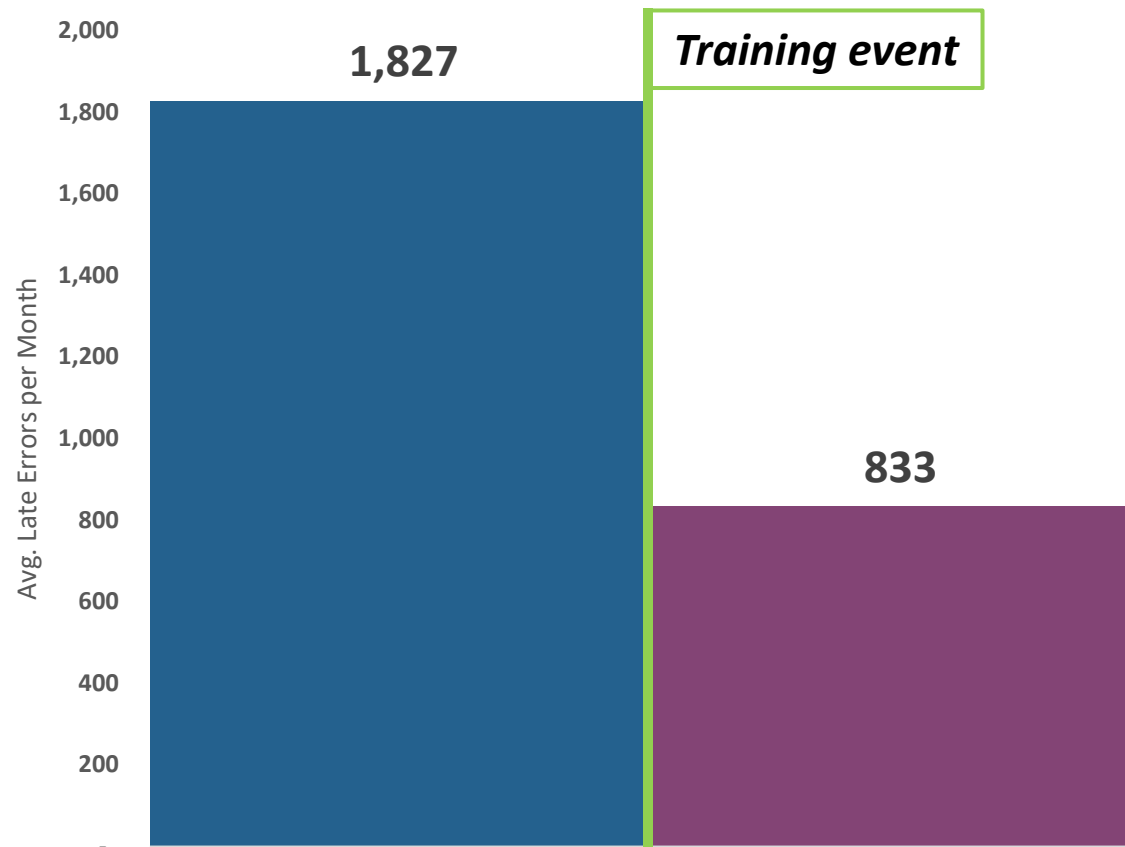
Average Reporting Errors Per Month
Period Before Training vs. Period After Training



- Overall errors decreased by **-39%** compared to expected
- 14 REs (67%) saw improvements (average **-64%** decrease)

RE Training Analysis Spotlight – Late Reporting Errors Impact

Average Late Reporting Errors Per Month
Period Before Training vs. Period After Training



- Overall late errors decreased by **-82%** compared to expected
- 16 REs (76%) saw improvements (average **-92%** decrease)

	10 Month Period After Training
	10 Month Period Before Training



PAVES Post-Audit Advisory Spotlight

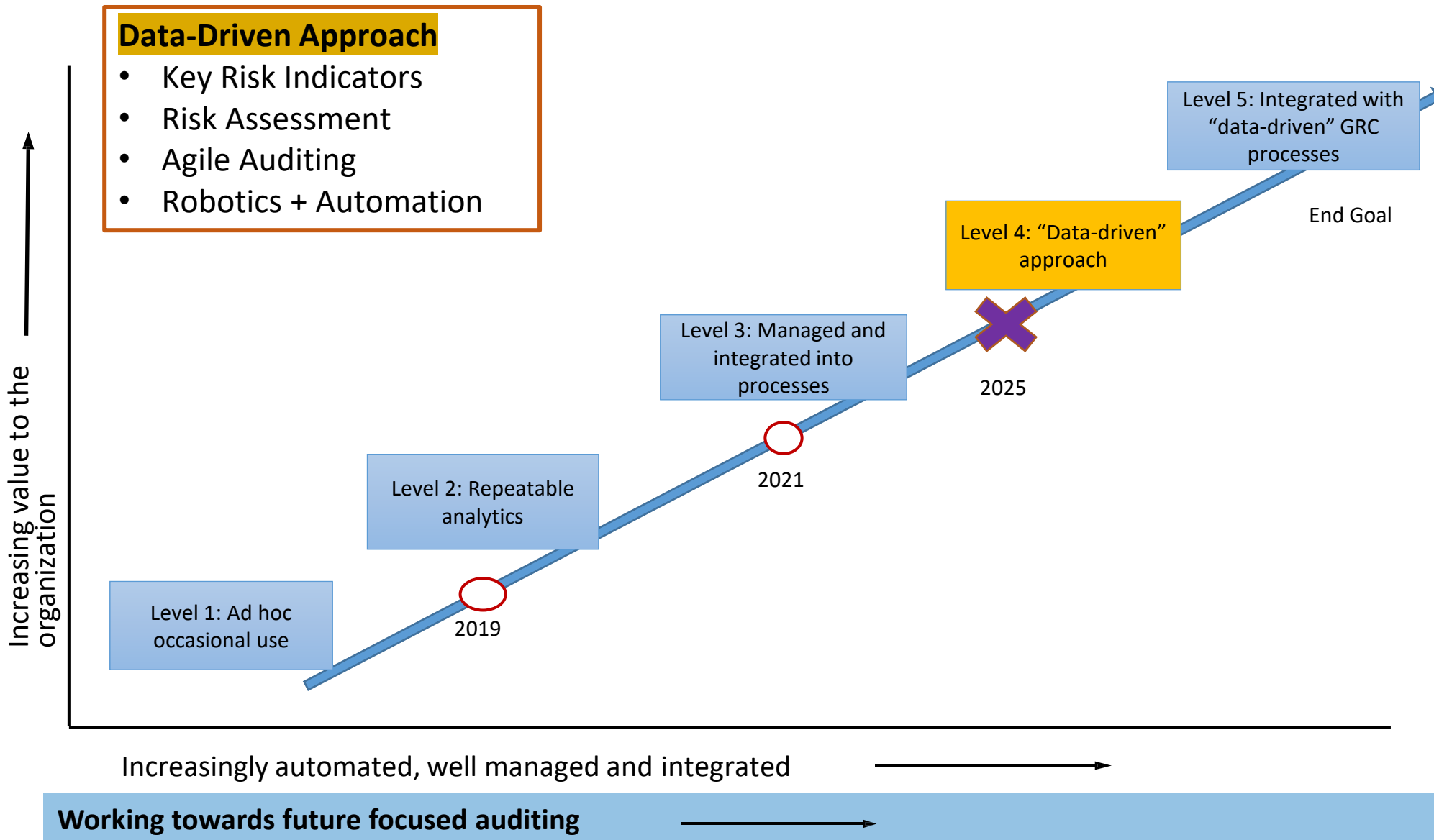


Compliance Requirements	Data Deficiencies	Data Integrity
<p>Ensure contracts meet guideline requirements, such as:</p> <ul style="list-style-type: none">• Renewals have completed Vendor Performance Review• Contracts >\$100k have completed contract risk assessment	<p>Ensure key data fields are not missing, such as:</p> <ul style="list-style-type: none">• Amended contracts have Amendment Effective Date• Renewable contracts have Renewal Process Notification date	<p>Ensure key data fields are accurate, such as:</p> <ul style="list-style-type: none">• Accumulative Paid Amount matches sum of Paid Invoices• Encumbered Amount matches executed purchases orders
10 queries	8 queries	4 queries
<i>22 data integrity queries developed</i>		



Questions?

Appendix I - Data Analytics Maturity Model & Progress





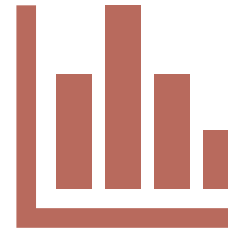
Appendix II - Involvement and Participation



TRS

Participation in AI initiatives

- Microsoft Copilot Pilot
- M365 Copilot Champion



Professional Associations

Association of Public Pension Fund Auditors (APPFA)

- April panel presentation

National Pension Education Association (NPEA)

- October panel presentation



Appendix III - FY26 Projects at a Glance



Health Care

- Review of Enrollment and Eligibility File Processes
- Review of SB 1264 Processes
- Claims Analysis: Psychotherapy and Hospital



Benefits

- Support for Death Claims Audit
- Reporting Employers data analysis



Executive

- Support for SAO ACFR audit
- Continue PAVES data integrity query support



Internal Audit

FY2025 Internal Audit Annual Report

Dec. 4, 2025

Presented By:

Julie Toler, CFA, CFP®, CIA, CRMA





FY2025 Internal Audit Annual Report



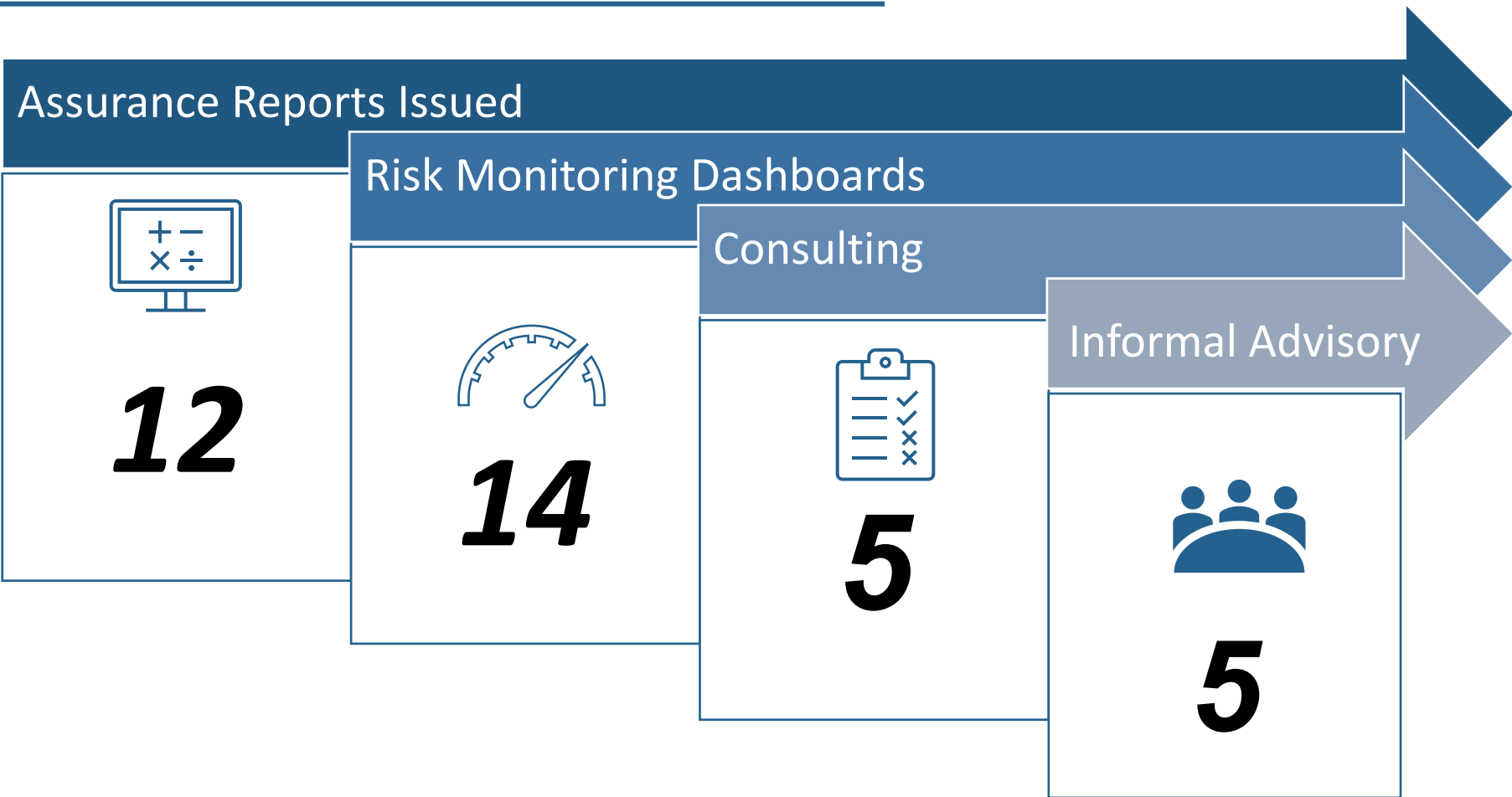
The Internal Audit Annual Report provides information on the audit plan, assurance, consulting, advisory projects completed and other Internal Audit activities in fiscal year 2025. It meets the annual reporting requirement of the Texas Internal Auditing Act (Texas Government Code, Chapter 2102.009 and Texas Government Code, Sections 2102.015 and 2102.0091).

This report follows the State Auditor's Office reporting guidelines and includes the following:

- I. Compliance with Texas Government Code, Section 2102.015: Publication of Audit Plan and Annual Report on Internet
- II. Revised Internal Audit Plan for Fiscal Year 2025
- III. Consulting Services and Non-Audit Services Completed
- IV. External Quality Assurance Review (Peer Review)
- V. Internal Audit Plan for Fiscal Year 2026
- VI. External Audit Services Procured in Fiscal Year 2025
- VII. Reporting Suspected Fraud and Abuse



By the Numbers



2025 YEAR IN REVIEW



INDEPENDENT • OBJECTIVE • ASSURANCE • CONSULTING

WHO WE ARE:

14 Auditors

5 Business Intelligence Analysts

1 Administrative Professional

WHAT WE BRING:

HIGHLY CREDENTIALLED PROFESSIONALS:

5
Certified Public
Accountants4
Certified Information
Systems Auditors8
Certified Internal
Auditors2
Certified Fraud
Examiners3
Certified Information
Systems Security
Professionals2
Chartered Financial
Analysts8
MBAs2
PhDs166
166 years total
audit experience125
125 years total data
analysis experience88
88 years total
IT experience54
54 years total
investment experience

DIVERSE BACKGROUNDS:

AUDIT EXPERIENCE

WITH
**BIG FOUR
AUDIT FIRMS**
&
**TEXAS STATE
GOVERNMENT**DIVERSE PROBLEM
SOLVING SKILLS

INCLUDING:

- AUDIT
- ACCOUNTING
- TREASURY
- INVESTMENT MANAGEMENT
- TRADING
- DATA ANALYSIS
- CYBER SECURITY
- INFORMATION TECHNOLOGY

WORK EXPERIENCE

AUSTRALIA
THE UK
CHINA
INDIA
PAKISTAN
RUSSIA
USA

WHAT WE DID IN 2025:

ROBOTICS PROCESS AUTOMATION INITIATIVE

CREATED 2 ROBOTS
FOR PENSION DATA
ANALYSISCREATED 53 ALGORITHMS
FOR HEALTHCARE CLAIMS
DATA ANALYSIS8 ADVISORY
PROJECTS

12 TRS AUDITS



870

HOURS of CONTINUING PROFESSIONAL
EDUCATION (CPE) COMPLETED

Q1

- Syed Israr attended the Emerging Issues in Investments & Derivatives conference.
- Katie Linczer and Amanda Jenami attended and presented at APPFA's fall conference.
- Stephen Randall and Jonathan O'Reilly attended APPFA's fall conference.
- Cui Rye attended IIA's Enterprise Risk Management conference, and P2F2 conference.
- Jonathan O'Reilly attended and presented at the NPEA conference.

Q2

- Welcomed Tyler Dixon as Senior Business Intelligence Analyst.
- Welcomed Jessica Simon as Senior Auditor.
- Welcomed Jack Henserling as Senior IT Auditor.
- Lisa Wei attended the Open Source Intelligence Summit.
- Olga Jerman, Jonathan O'Reilly, Sharon Riley, Katie Linczer, Julie Toler, Nathan Ward, Stephen Randall and Lisa Wei volunteered at the Central Texas Food Bank.

Q3

- Stephen Randall and Lisa Wei attended the DIR Information Security Forum.
- Olga Jerman, Sharon Riley, Lisa Wei, Teklehaimanot Derseh, Cui Rye and Tyler Dixon attended IIA's Analytics, Automation, & AI conference.
- Amanda Jenami, Julie Toler and Jonathan O'Reilly attended and presented at APPFA's spring conference.
- Sharon Riley and Nathan Ward attended APPFA's spring conference.
- Lisa Wei and Stephen Randall attended SANS AI Cybersecurity Summit.

Q4

- Welcomed Elijah Marchlewski as Senior IT Auditor.
- Cui Rye, Kathey Mitchell, Jessica Simon and Julie Toler attended the SAO Audit Conference.
- Amanda Jenami and Cui Rye attended the ACFE Global Fraud conference.
- Teklehaimanot Derseh and Olga Jerman attended the NAMPI conference.
- IT Team participated in the Annual Disaster Recovery Testing.



Questions



Internal Audit

Update on Recommendation Implementation
Status as of Nov. 10, 2025

Dec. 4, 2025

Presented By:
Jonathan O'Reilly, Business Intelligence Director





Highlights



43

Recommendations
(Total)

15

Internal Audit
Reports

15

Recommendations
Rated Significant

Implementation Status

39

¹⁸⁺

Pending

4

²⁻

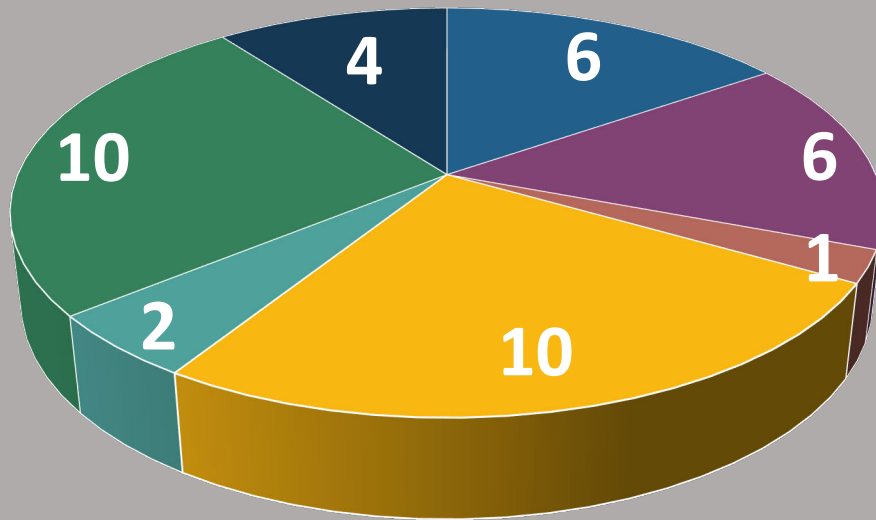
Satisfactorily
Implemented

0

⁰⁻

Implemented,
Pending IA
Validation

Ownership of Pending Recommendations



Pension Services

Admin Services

HD

Contract Services

IMD

IT

ISO

Age of Recommendations

27

1-12
months

3

13-24
months

5

25-36
months

4

37-48
months

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 10, 2025**

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
22-401 Review of Records Management					
3.1 Continue efforts to implement record management automated features	In Progress	Other Reportable	6/2022	3/2023	12/2025
3.2 Include shared and personal drives to Microsoft project	In Progress	Other Reportable	6/2022	5/2025	12/2025
23-102 Review of Reporting Employer Processes					
1.3.a. Develop and implement KPIs	In Progress	Other Reportable	7/2023	6/2024	12/2026
24-102 Audit of Pension Refund Processes					
1.2 Ensure refunds are accurate	In Progress	Significant	5/2024	5/2024	8/2026

Significant to Business Objectives

	<ul style="list-style-type: none"> • Past <i>original</i> estimated completion date, and • No management action plan <u>or</u> no progress on management action plan
	<ul style="list-style-type: none"> • Past <i>original</i> estimated completion date • Progress on management action plan
	<ul style="list-style-type: none"> • <i>Original</i> estimated completion date has not changed • Progress on management action plan
	<ul style="list-style-type: none"> • Satisfactory implementation of management action plan <u>or</u> acceptance of risk by management
	<ul style="list-style-type: none"> • Implementation of management action plan pending Internal Audit validation

Other Reportable

	<ul style="list-style-type: none"> • Past first <i>revised</i> estimated completion date • No management action plan <u>or</u> no progress on management action plan
	<ul style="list-style-type: none"> • Past first <i>revised</i> estimated completion date • Progress on management action plan
	<ul style="list-style-type: none"> • Within <i>original</i> <u>or</u> first <i>revised</i> estimated completion date • Progress on management action plan
	<ul style="list-style-type: none"> • Satisfactory implementation of management action plan <u>or</u> acceptance of risk by management

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 10, 2025**

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
25-102 Reporting Employer Testing (AUP)					
1.1 Correct census, eligibility, and compensation data inaccuracies: Communicate Instructions to Reporting Employers	In Progress	Other Reportable	9/2025	11/2025	
1.2 Correct census, eligibility, and compensation data inaccuracies: Conduct Targeted Training Sessions	In Progress	Other Reportable	9/2025	3/2026	
1.3 Correct census, eligibility, and compensation data inaccuracies: Complete All Required Corrections	In Progress	Other Reportable	9/2025	6/2026	
2. Enhance processes for maintaining updated member addresses	In Progress	Other Reportable	9/2025	3/2027	
25-301 Review of Energy, Natural Resources and Infrastructure Portfolio Operations					
2.2 Opportunity to enhance feedback loop to ensure effectiveness of external fees monitoring activities	In Progress	Other Reportable	4/2025	12/2025	
25-302 Review of Investment Middle Office Operations					
1.1 Process Guidance and Key Person Risk	In Progress	Other Reportable	7/2025	5/2026	
25-403 Review of TRS' Procurement and Vendor e-System (PAVES)					
1.1 Notification Relevance and Clarity	In Progress	Other Reportable	9/2025	9/2026	
1.2 Notification Content and Sender Identity	In Progress	Other Reportable	9/2025	9/2026	
1.3 Vendor Password Reset Functionality	In Progress	Other Reportable	9/2025	1/2026	
1.4 User Validity	In Progress	Other Reportable	9/2025	9/2026	

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 10, 2025**

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
25-403 Review of TRS' Procurement and Vendor e-System (PAVES)					
2.1 Data Entry	In Progress	Other Reportable	9/2025	9/2026	
2.2 Field Definitions and User Clarity	In Progress	Other Reportable	9/2025	9/2026	
2.3 Audit Trail for Operational Data	In Progress	Other Reportable	9/2025	12/2025	
2.4 Report Accuracy	In Progress	Other Reportable	9/2025	12/2025	
2.5 Report Usability and Filtering	In Progress	Other Reportable	9/2025	9/2026	
3.1 User Satisfaction	In Progress	Other Reportable	9/2025	9/2026	



Internal Audit Administrative Reports

December 4, 2025

Presented By:
Amanda Jenami, CPA, CISA, CIA, CIDA, CFSA, CRMA, CFE



FY2026 Strategic Goals

Goal 1: Provide assurance to the board of trustees and senior management (4 KPIs)

Goal 2: Serve as trusted advisor to the board of trustees and management (3 KPIs)

Goal 3: Attract, develop and retain outstanding talent (5 KPIs)

Goal 4: Leverage technology (2 KPIs)

FY2026 Key Performance Indicators (KPIs)

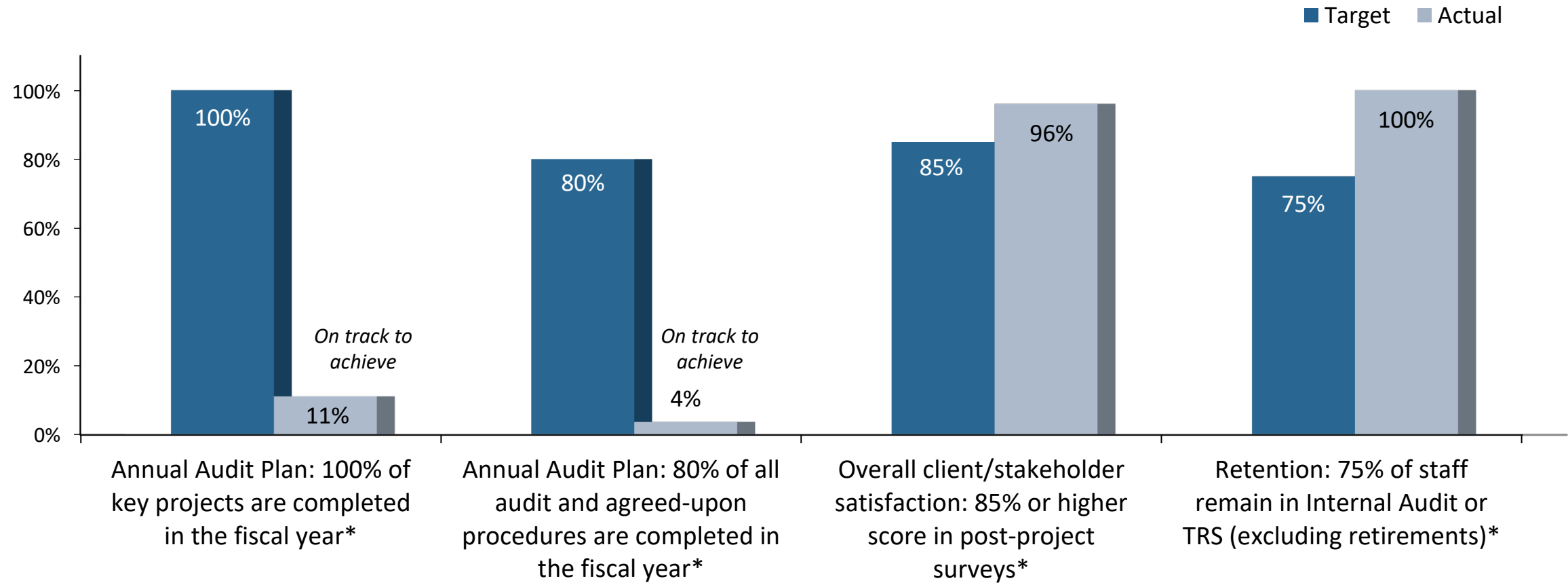
Internal Audit is on track to achieve 100% (4 of 4) of its strategic performance targets for the 2026 fiscal year.



Strategic Key Performance Indicators



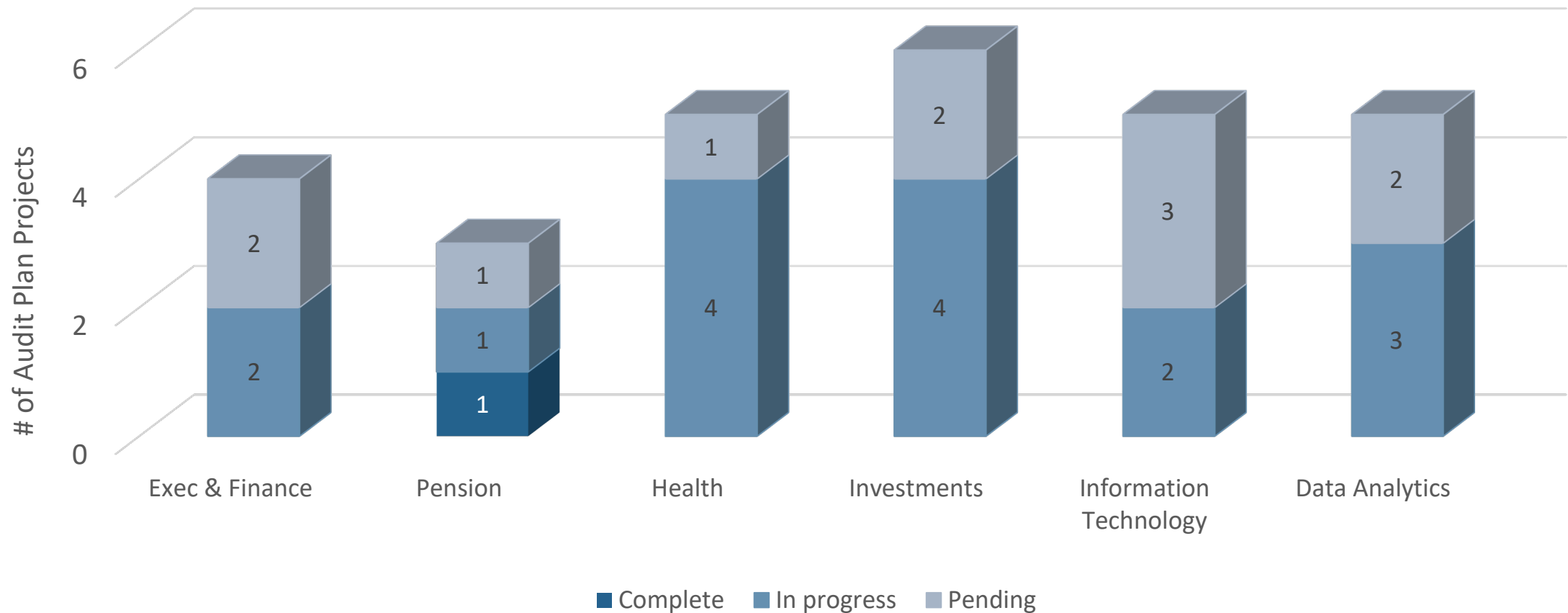
FY26 Strategic KPIs



FY26 Audit Plan Status through First Quarter



Audit Plan Project Status
FY2025 Year to Date



Detailed list of Audit Plan projects & status is provided in the Appendix



Staff Highlights: New Team Member!



Arby Gonzales Operations Audit Director

Arby brings nearly 20 years of progressive experience in audit leadership and risk management across Texas government and higher education sectors. He has a proven track record of building and leading audit teams, conducting enterprise-wide operational assessments and delivering strategic risk advice to boards and executive leadership.

Arby's recent roles include leading internal audit and compliance for the Texas Higher Education Coordinating Board, directing audit operations at the Texas Department of Insurance and managing audit teams at the Texas State Auditor's Office and Texas Department of Motor Vehicles. He serves on the Board of Governors for the Institute of Internal Auditors – Austin Chapter and regularly presents on agile audit practices and audit-client relations.



Staff Highlights: New Certifications!



Lisa Wei

Advanced certification in AI Audit (AAIA)
ISACA

Arby Gonzales

Certified Internal Auditor (CIA)
Institute of Internal Auditors





Questions



Appendix



Detailed FY26 Audit Plan Status: Audit & Formal Advisory Projects



	Complete	In Progress	Pending
Executive & Business Administration			
Review of Communications			✓
Review of the Ethics Program			✓
Review of Project Governance			✓
Follow-Up of Prior Audits		✓	
Special requests, initiatives and emerging Issues (all divisions)		✓	
Health			
Review of Enrollment and Eligibility File Processes		✓	
Review of SB 1264 Processes		✓	
Review of Mass Mailings			✓
Healthcare Claims Data Analysis (Provider Compliance & Industry Standards)*		✓	
Healthcare Claims Data Analysis (Contract requirements)		✓	
Pension			
ACFR Testing of Annuity Payments*	✓		
Review of Death Claims*			✓
Reporting Employer Data Analysis*		✓	

	Complete	In Progress	Pending
Investments			
Review of Custodian Controls*		✓	
Review of Fixed Income Portfolio Operations			✓
Review of Real Estate Portfolio Operations*			✓
Information Technology			
Audit of Cloud Computing*		✓	
Audit of Data Loss Prevention*			✓
Review of Cyber Controls*			✓
Audit of TRS Reporting Entry Portal*			✓
Data Analytics			
Anti-Depression Pharmacy Claims Testing			✓
Benefit Matrices and Experimental Services Testing			✓
Hospital Claims Policy Testing		✓	
Psychotherapy Claims Testing		✓	
PAVES Quality Assurance Bots		✓	

* FY26 key project



Internal Audit Advisory Services during First Quarter



EXECUTIVE

- Served on Levels 1 & 2 Project Review committees
- Served on the Risk Oversight Committee
- Served on the Enterprise Data Governance Council

INFORMATION TECHNOLOGY

- Attended the Project Review Committee meetings
- Bi-weekly meetings with Information Security and Legal and Compliance
- Participated in the annual Disaster Recovery testing
- Attended Information Security Advisory Team (ISAT) meetings
- Attended Change Management Team (CMT) meetings
- Held collaboration meetings with Chief Information Officer (CIO) and Chief Information Security Officer
- Served on Enterprise Risk Management (ERM) Cybersecurity Team

INVESTMENT MANAGEMENT DIVISION (IMD)

- Attended Internal Investment Committee (IIC) meetings
- Attended Securities Lending monitoring calls
- Held collaboration meetings with Investment Compliance and Investment Risk
- Held collaboration meetings with IMD management

PENSION SERVICES

- Performed RE data integrity tests via data analytics
- Held monthly collaboration meetings with Benefits Accounting management

HEALTH DIVISION (HD)

- Performed health plan program integrity tests via data analytics
- Held quarterly collaboration meetings with Health Division management