

MAKING CONNECTIONS, MAKING A DIFFERENCE



Making Connections 2024

The National Transit Workforce Conference

November 11 – 13, 2024 • Baltimore, MD



TRANSIT
WORKFORCE
CENTER



Tracking Your Impact

How Agencies and Unions Analyze and Use Workforce Data

FTA's Strategic Workforce Development Goals



Strengthening
Workforce Health
and Safety



Funding
Workforce
Development



Enhancing
Outreach and
Recruitment



Retaining a
Strong & Diverse
Workforce



Advancing Skills,
Careers and
Partnerships



Utilizing
Workforce Data
and Metrics

Speakers



Douglas Nevins
Senior Researcher
*ITLC / Transit
Workforce Center*



Nick Biggar
District Director
*Greater Cleveland
RTA*



Darnell Morris
Vice President
*ATU Local 268
Greater Cleveland RTA*



Valerie Campo
Mentor Program
Coordinator
*Champaign-Urbana
Mass Transit
District*



Dr. Shanta Hejmadi
Senior Data
Scientist
Metro Transit (MN)



Developing an ROI Assessment Model for Employee Development Programs Implemented by California Transit Agencies

Research sponsored by the Mineta Transportation Institute at San José State University, advised by ITLC (operator of TWC), and performed by a research team at the Center for International Trade and Transportation at California State University at Long Beach.



Research questions

Are California transit agencies tracking the impact of training initiatives and other workforce programs? How?

Are agencies measuring the ROI of training initiatives and other workforce programs?



Research approach

Literature review

Survey

Follow-up interviews



Defining Return on Investment (ROI)

Basic ROI model

(benefit – cost of investment)
÷
cost of investment

Social ROI

Accounts for broader social
impact and non-financial
benefits

Buck et al. (2022)

Other approaches

Impact can be tracked using
numerous performance
measures



Prior research



Relevant workforce initiatives

Training

Apprenticeship

Mentorship

Diversity and inclusion

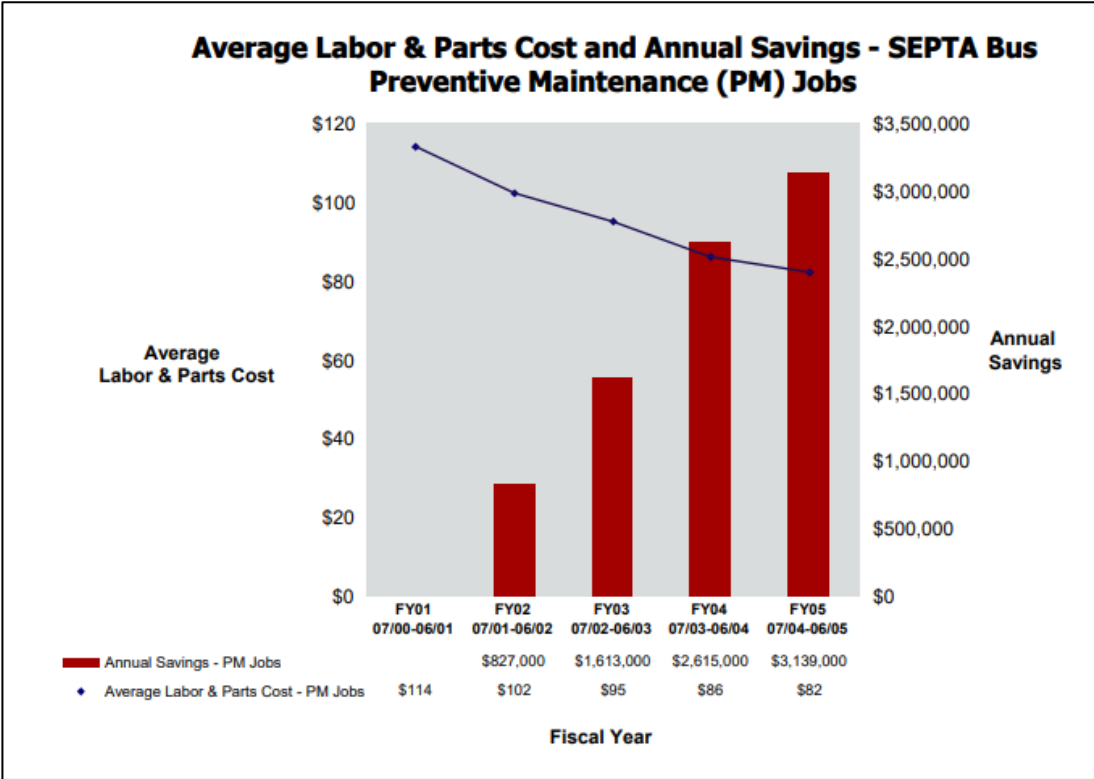
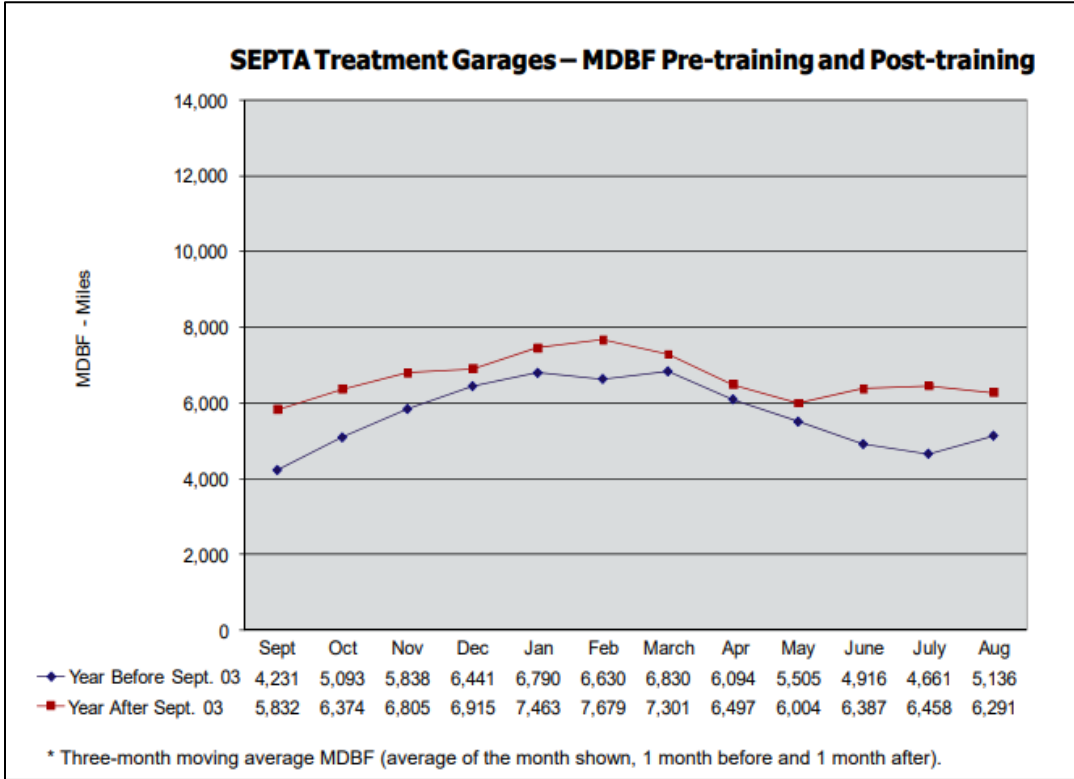
Health & wellness

Internships



Prior research

ITLC – Metrics of Success (2011)





Prior research

TCRP Report 162: Building a Sustainable Workforce in the Public Transportation Industry — A Systems Approach (2013)

Module 2 – example metrics:

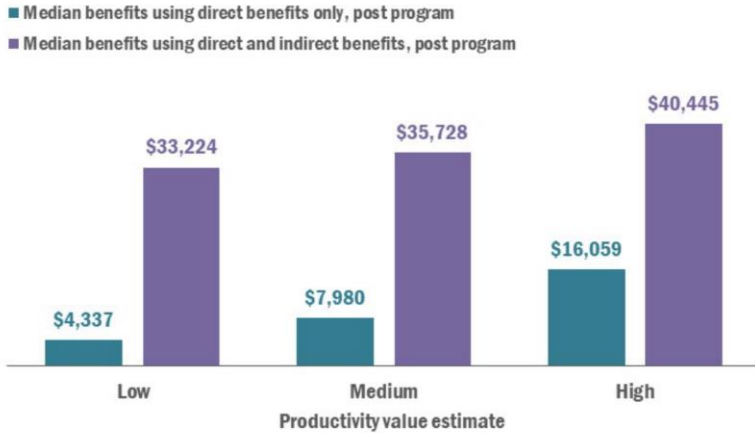
GLOBAL
Stakeholder buy-in
Time to implement
Cost to implement
Full return on investment
Sustainability
RECRUITMENT
Time to fill position
New-hire turnover within the first year
Offer-to-acceptance ratio
New-hire turnover during initial training
New-hire performance ratings
Recruiting cost ratio
RETENTION
Employee voluntary turnover rate
Cost to fill open positions
Diversity turnover
Employee engagement
Impact of turnover on employee knowledge

TRAINING AND DEVELOPMENT
Pre- and post-training knowledge/skill testing
Employee performance post-training
Percent of employees rating training as job-relevant
Impact of training on system operations, safety, and customer service
Percent of trainees satisfied with training
Recency of training materials
PROFESSIONAL CAPACITY BUILDING
Timeliness of task completion
Timeliness of scheduled activities
Percentage of employees who participate in employee development opportunities
Percentage of jobs filled internally
Percentage of operational supervisory positions filled by frontline personnel
Employee involvement in organization's decision making
Percentage of positions with an up-to-date job description



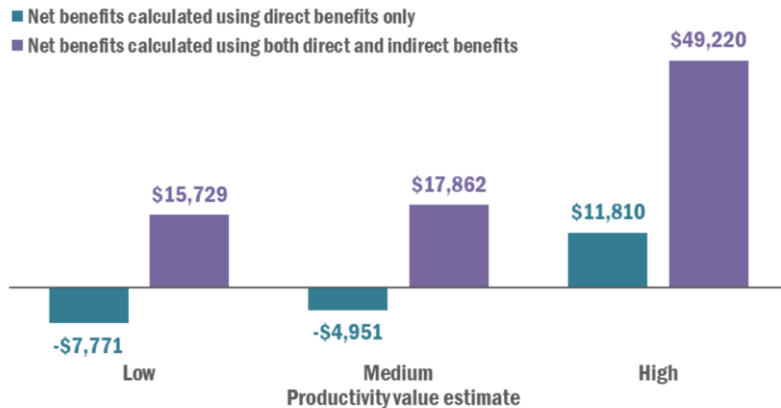
Prior research

Exhibit ES-2. Median per Apprentice Benefits in the Post-program Period



Source: AAI Employer Survey, N=68.
Note: Benefits comprise productive value minus compensation and are in 2020 dollars and discounted at 3 percent per year.

Exhibit ES-3. Median per Apprentice Net Benefits for the Full Period



Source: AAI Employer Survey, N=68.
Note: Benefits and costs are in 2020 dollars and discounted at 3 percent per year.

Assessing Employer Costs and Benefits

Costs

- Paid wages and benefits to the apprentice
- Training costs associated with RTI
- Reduced productivity of some experienced staff while they are mentoring or training the apprentice
- Costs of supplies and wastage
- Costs related to registering the program (usually in staff time to complete the accompanying paperwork)

Direct Benefits

- Value of the output or service produced by the apprentice
- Reduced costs of hiring and filling a skilled labor position

Some Indirect Benefits

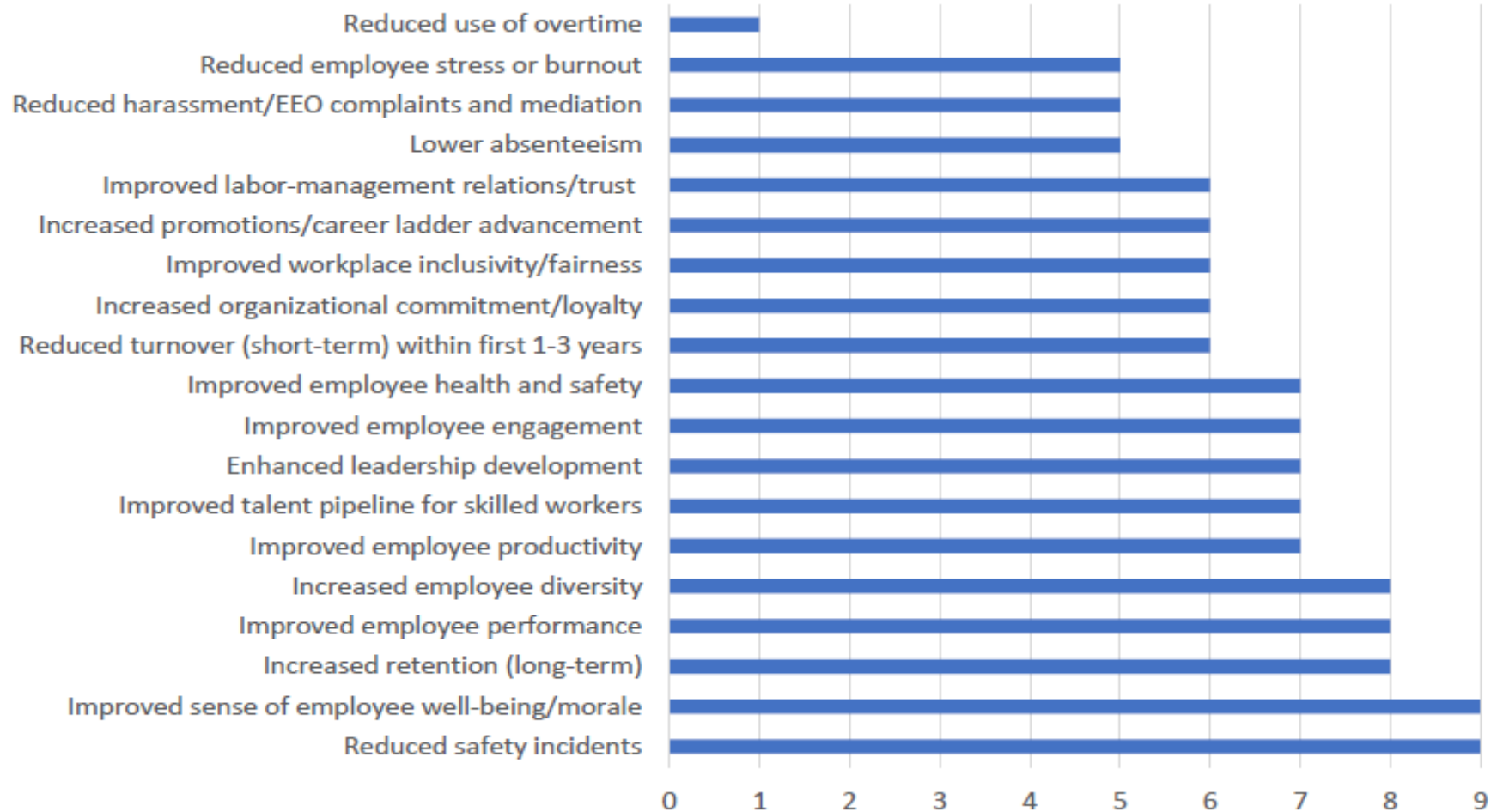
- Employer engagement and loyalty
- Reductions in turnover
- An enhanced pipeline of skilled workers
- Development of future managers
- Improved company culture

American
Apprenticeship
Initiative (AAI)
Evaluation (2022)

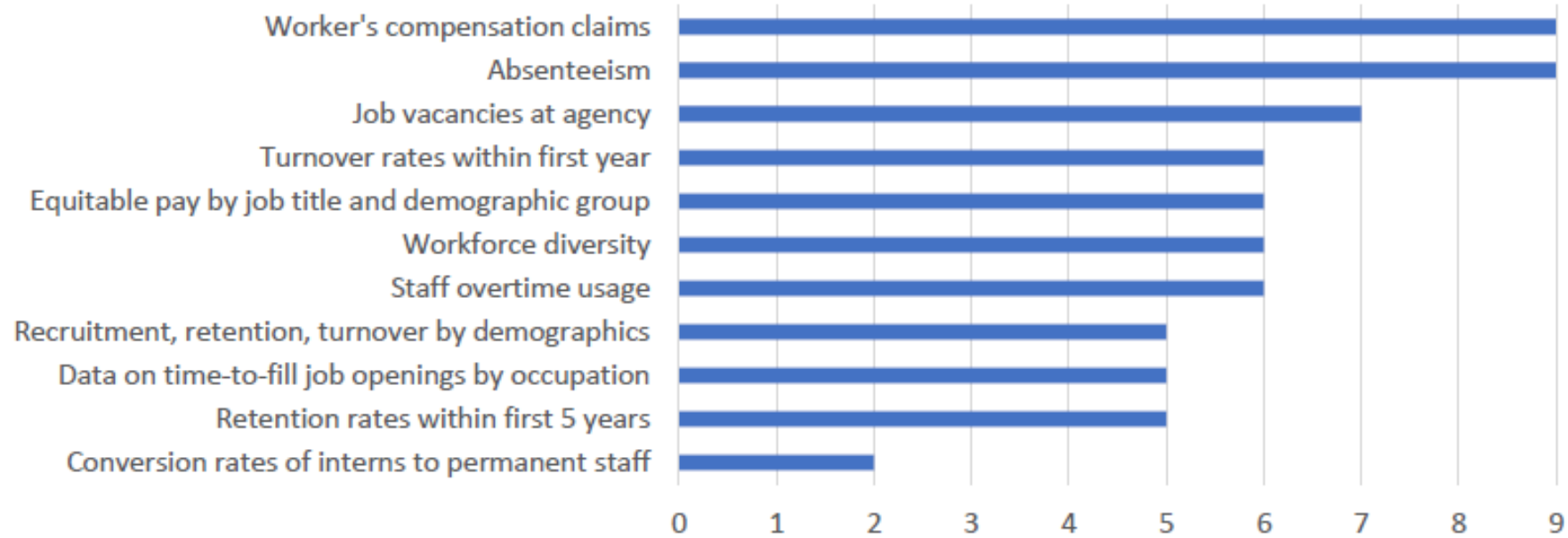
Study findings



Organizational Outcomes Employee Development Programs Aim to Achieve

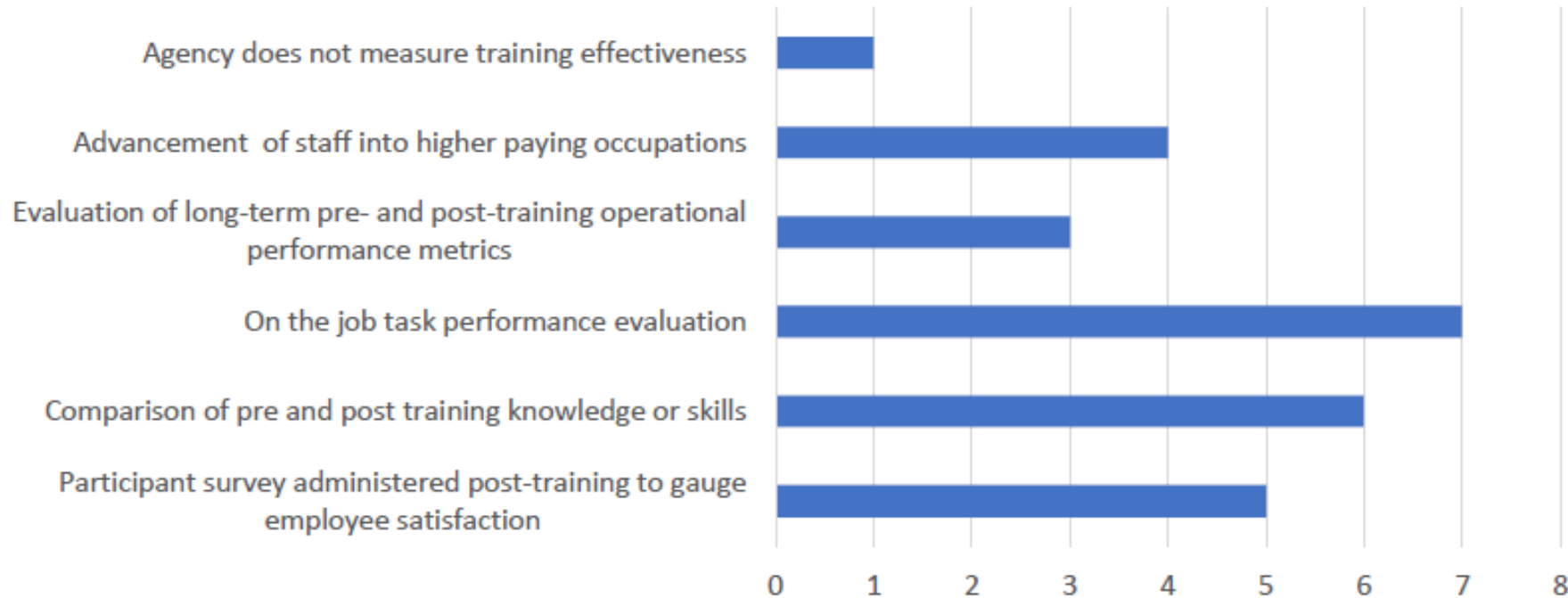


Human Resource Metric Tracking



Training Effectiveness Measures

Training Effectiveness Measures





Motivation

Justifying investments

Measuring “true cost” of vacancies and maintenance issues

Tracking “cascading impacts”

Measuring public perceptions and social cost of impacted service

Efficient and effective use of resources

Key program components

Challenges and considerations

Staff capacity

Difficulty quantifying or measuring data points (e.g. “employee morale”)

Data systems

Are data being tracked?

Control data



Needed support

Value of ROI
implementation

Toolkits

Examples of:

Metrics

Data-collection processes

ROI models

 **Thank you!**

GCRTA Positive Impact Program



Program Approach

False Starts

Core Team

Tracking Metrics

GCRTA Positive Impact Program

Program Metrics and ROI

At the 1-year mark after formal program launch, new operators paired with a mentor realized:

- 36% increase in retention
- 30% decrease in absenteeism
- 50% decrease in Misses



GCRTA Positive Impact Program

Sustaining the Program:

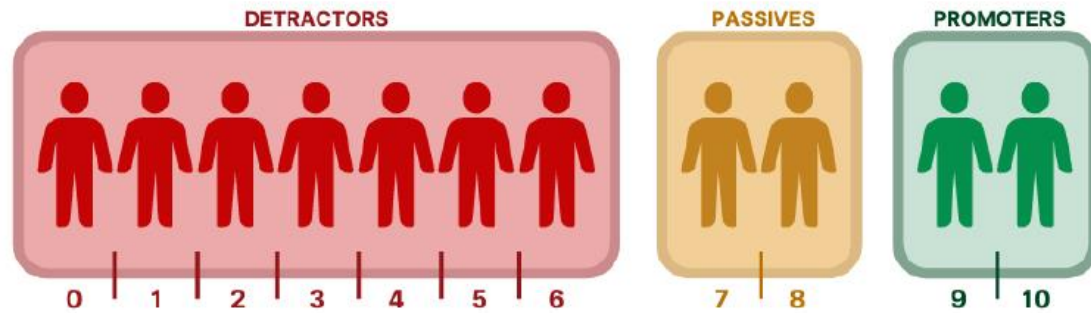
- Program Expansion
- Weekly Check-Ins
- Mentee Graduations
- Tracking Program Data
- Mentee Evaluation Forms
 - Qualitative Information
 - **Avg. Program Satisfaction: 9.15 / 10**
 - **Program Net Promoter Score: 82.35**



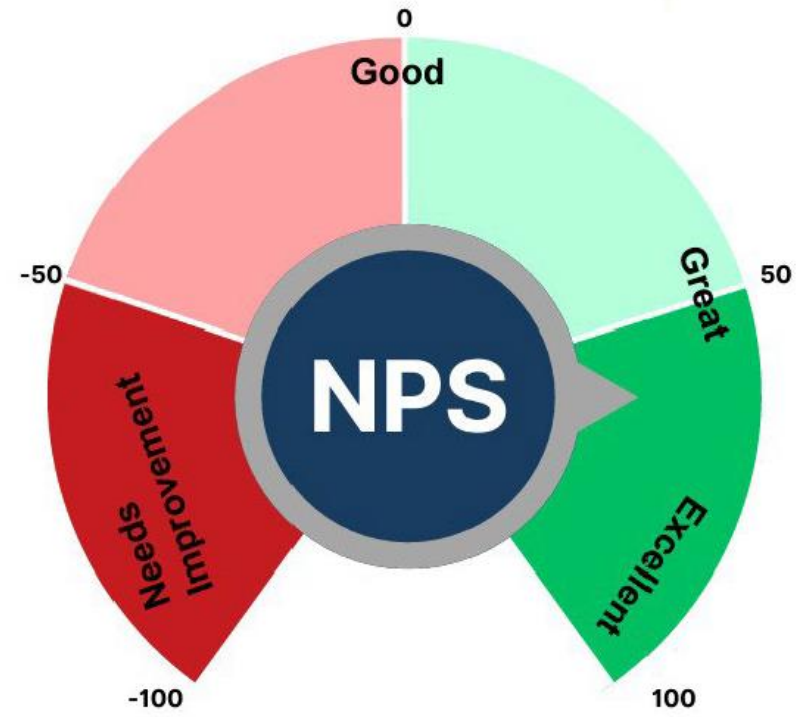
Net Promoter Score (NPS)

NPS poses the ultimate question:

"How likely would you be to recommend this program to another operator?"



$$\text{Net Promoter Score} = \% \text{Promoters} - \% \text{Detractors}$$



NEEDS IMPROVEMENT	-100-0
GOOD	0-30
GREAT	30-70
EXCELLENT	70-100

TRACKING METRICS IN THE B.U.S. MENTORING PROGRAM

An Overview of Process, Benefits, Challenges and Insights

**Valerie Campo
Champaign-Urbana Mass Transit District (MTD)
November 11, 2024**

Metrics Tracked

Retention Rates: Tracking the Operators that actually graduate from Safety and Training and if they stay for a calendar year from the date of graduation

Participation Rates:
Monitoring the frequency of mentor-mentee interactions

Satisfaction Rates:
Collecting feedback through surveys to measure program effectiveness

Importance of Tracking Metrics

- Ensures program alignment with goals
- Identifies areas for improvement
- Demonstrates value and impact to stakeholders

METRICS

Challenges Faced

- Ensuring data accuracy and consistency
- Maintaining participant engagement in surveys and feedback mechanisms

Tips for Overcoming Challenges

- Simplify data collection processes to minimize time burden
- Use incentives to encourage feedback participation
- Regularly communicate the importance and benefits of tracking metrics to participants

THANK YOU

Valerie Campo

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What works in (re)building workforce?

Using data to track Metro Transit (MN) bus operator recruiting, hiring, and retention

Dr. Shanta Hejmadi | Senior Data Scientist

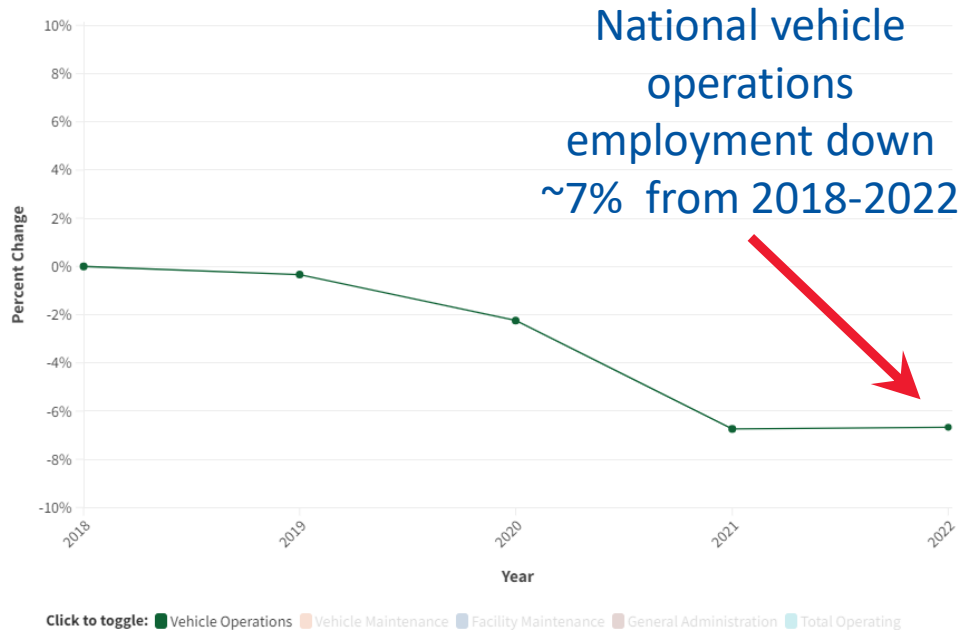
Dr. Rachael Jones | Senior Researcher

Making Connections 2024: Transit Workforce Conference November 13, 2024

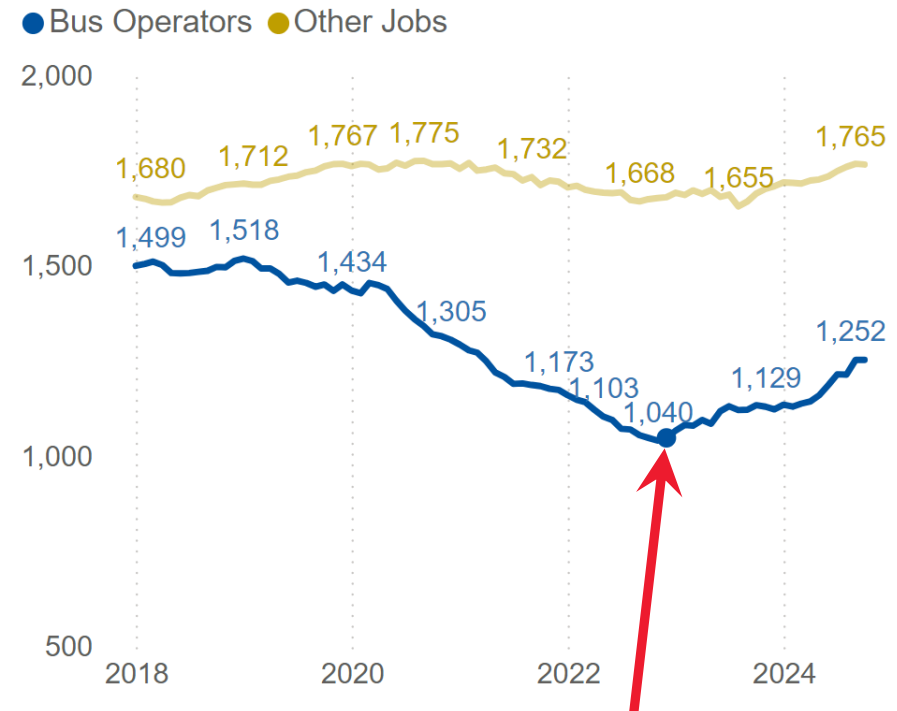


Operator workforce shortage is everywhere

Percent Change in Employment by Job Function from 2018 to 2022



Metro Transit -Bus Ops vs All Other Jobs



Bus Operator headcount down 30% Jan 2018 - Dec 2022

Making use of your organization's data treasure

- Case Study 1: Application and Recruiting Process
 - Neogov Applicant Data
- Case Study 2: Employment trends
 - PeopleSoft HCM data
- How useful is our treasure? (data governance)



How mature is your Data Governance? (How useful is your treasure?)

- ✓ Accurate: Data are what we think they are, and they reliably represent reality.
- ✓ Accessible: Data are in a database that can be queried and access is user-appropriate.
- ✓ Repeatable: Data, processing, and analysis are in version-controlled code that can be automated and run by someone other than the coder.
- ✓ Interoperable: Fields that mean the same thing are the same across organizational data resources.
- ✓ Secure: private data is protected from unauthorized use.





Case Study 1: Recruiting and Hiring

How to hire 400 operators in 12 months

- Increase wages (\$28.84 starting)
- Hiring & Referral bonus (up to \$5K)
- Marketing campaign (advertise increased wages)
- Reduce minimum qualifications (no HS diploma, 5 yrs good driving record)
- Mass application/interviewing events
- Paid training to obtain CLP (“Week Zero”)



HR staff manually pulls data from Web interface GUI



Email .csv file to Shanta



Ingest data, a bunch of cleaning code so that the aggregation code works (format of text fields, etc.)



Remove Duplicate Applicants



Merge with hires to add rows for Hired applicants



Filter to one requisition (job posting)



Analyze one requisition

Data Flow for NeoGov Applicant Data

Data Governance Scorecard: How useful is our treasure?

Applicant Data



Somewhat accurate

Requires a lot of cleaning, and hires not always accurate



Not accessible

Data not stored in a queryable database, Analysts do not have access.



Not easily repeatable

Highly manual data flows involving spreadsheets, email, & unique cleaning protocols.



Somewhat interoperable

Certain fields translate across systems, many do not.



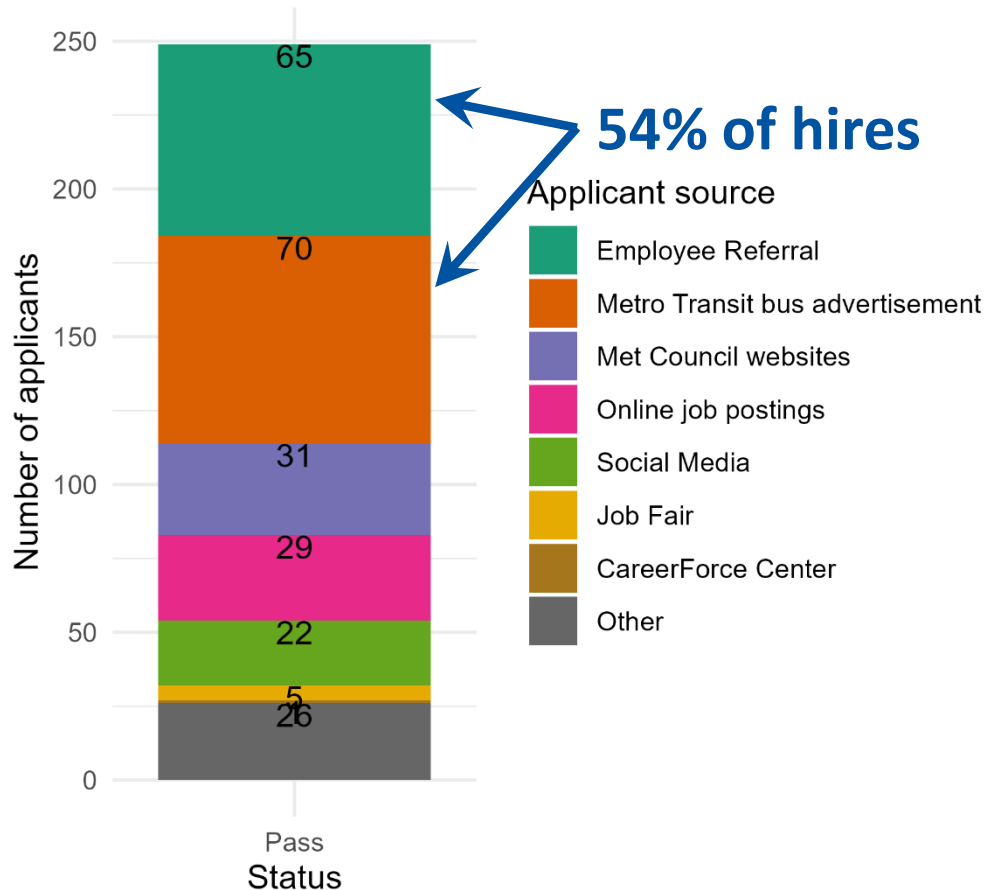
Secure

Only a few staff can access data (trade-off between security vs. accessibility)

Applicant Data: Employee referrals and Bus advertisements are the top sources of successful candidates

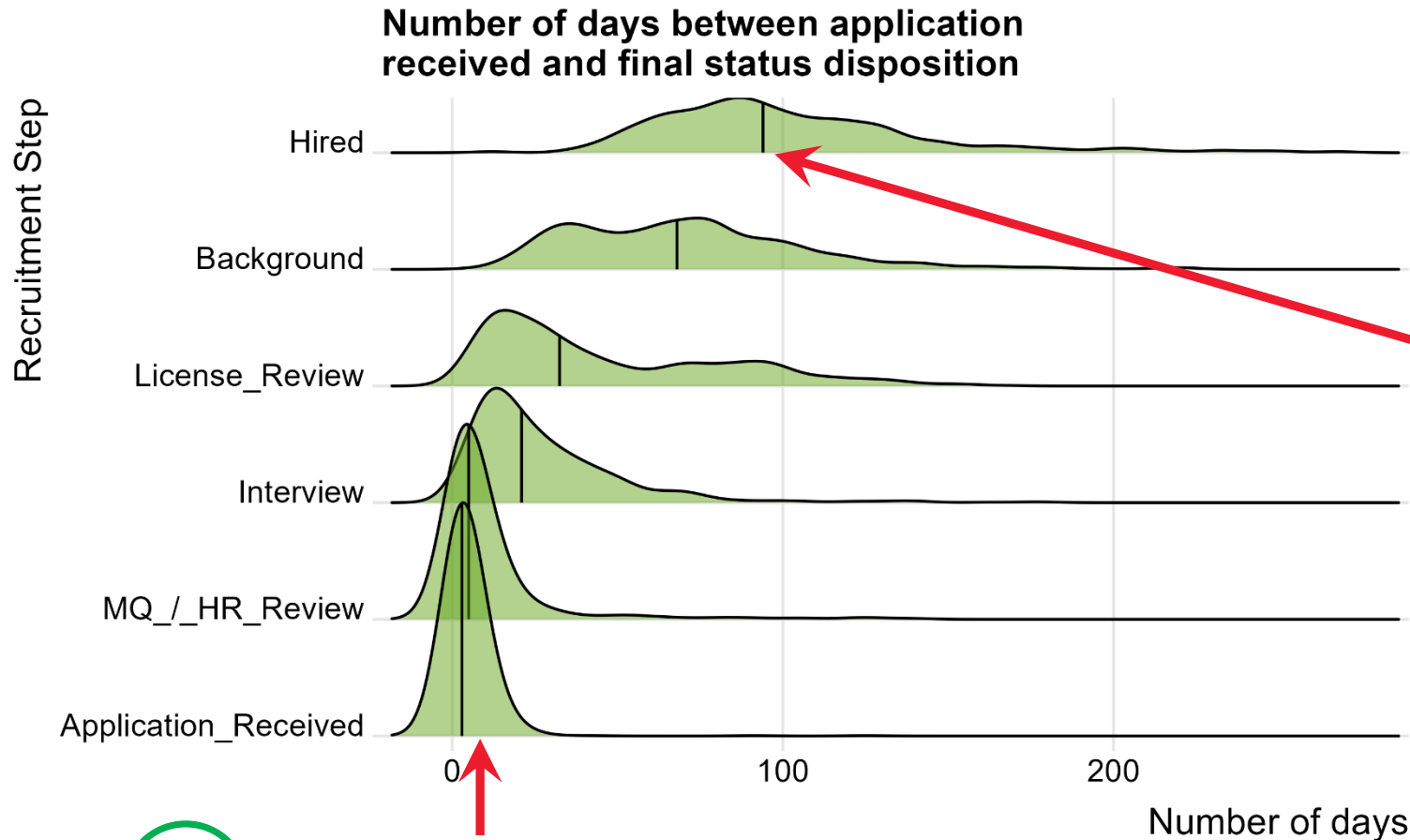





Source of Hired Applicants
Step 8 Hired, n = 249



- Employees are valuable recruiters
- Advertising campaigns are effective
- Validated by interviews with new operators

Applicant Data: Applying is easy, waiting is hard.



Stat	Value
N applicants Jan-Aug 2023	1510 
Median time to hire	92 days 
% applicants who lost interest	41%* 



HR reviews applications very quickly

* 32% of interviewed new operators nearly gave up

Treasure from a snapshot of recruiting processes

- 👁️ Raising pay is effective.
- 👁️ Marketing campaigns are effective.
- 👁️ Employees are valuable recruiters.
- 👁️ Streamlining of application process was effective.
- 😞 Post-application recruiting processes could be streamlined to reduce applicant waiting times.
- 👁️ Applicant + Interview data gave us both “what” and “why”.



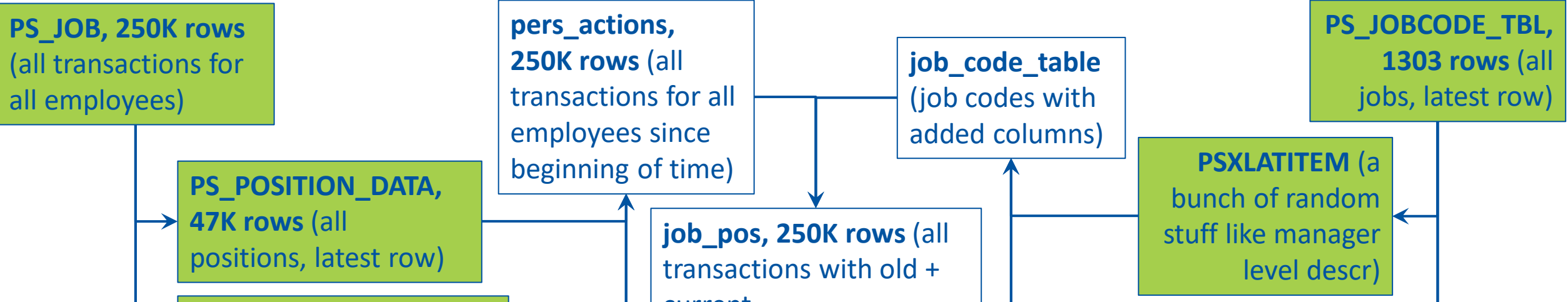


Case Study 2: Employment trends

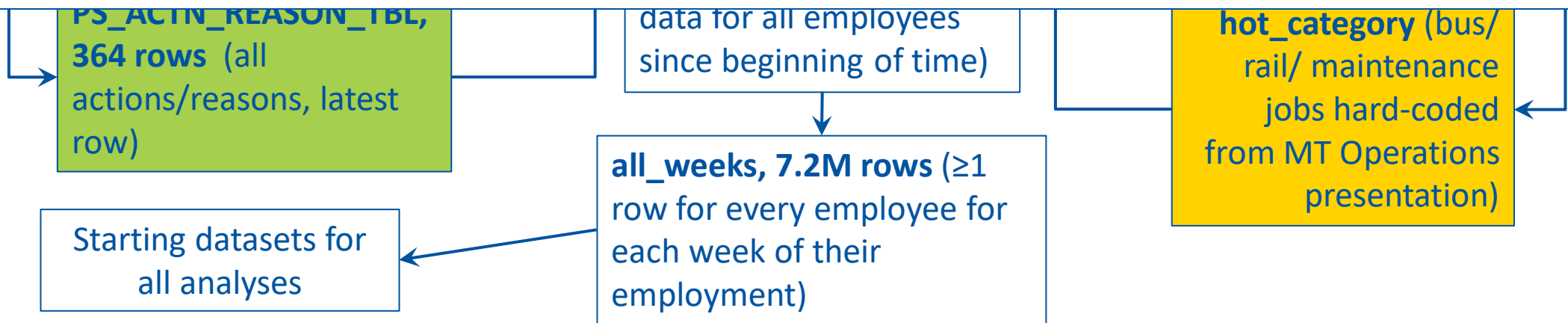
Workforce Planning and Retention

- Network now: commitment by Dec 2027 to
 - Increase service 35%
 - Bus operator workforce +280
- Develop metrics to track key employment trends
 - Hires
 - Departures
 - Promotions and transfers
 - Retention





Pulling live data from a database means analyses are **accessible, repeatable and automatable.**



Data Flow from PeopleSoft HCM

Data Governance Scorecard: How useful is our treasure?

Peoplesoft HCM Data



Accurate

Official system of record for personnel data and transactions.



Moderately accessible

Raw data are stored in a queryable database, analysts have access*, cleaned and final data are not currently stored.



Repeatable

Version controlled, reviewed, and automated data flow to get starting dataset and run analyses.



Interoperable

Standardized starting dataset could be used for many analyses links across internal systems (e.g. Finance data, HASTUS schedule data).



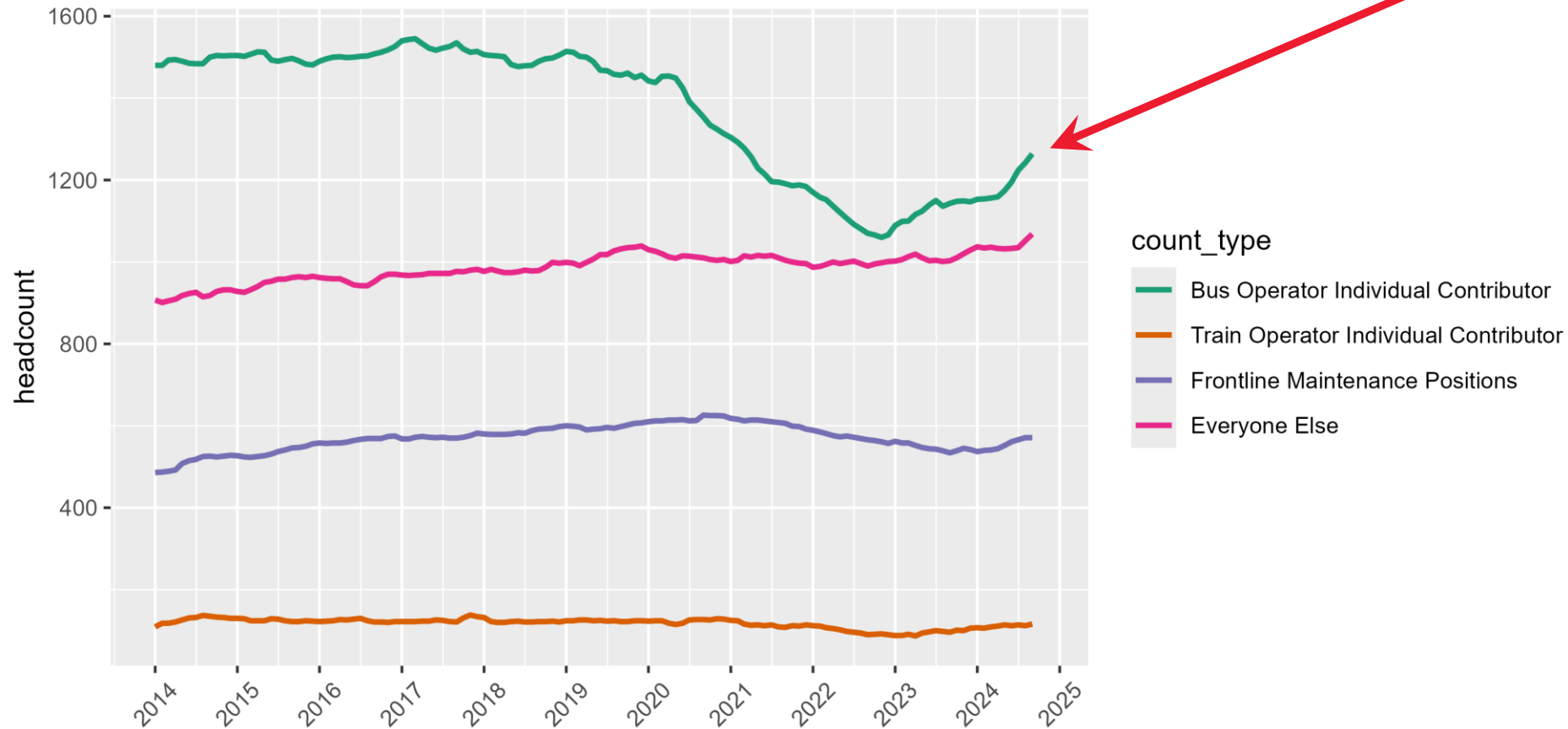
Secure

Enough* staff with access to raw data via secured systems.

* This is a recent development

Metro Transit Headcounts Over A Decade

Metro Transit 12-month rolling headcounts each month since since 2014
 Last updated 2024-10-22, data through 2024-09-30

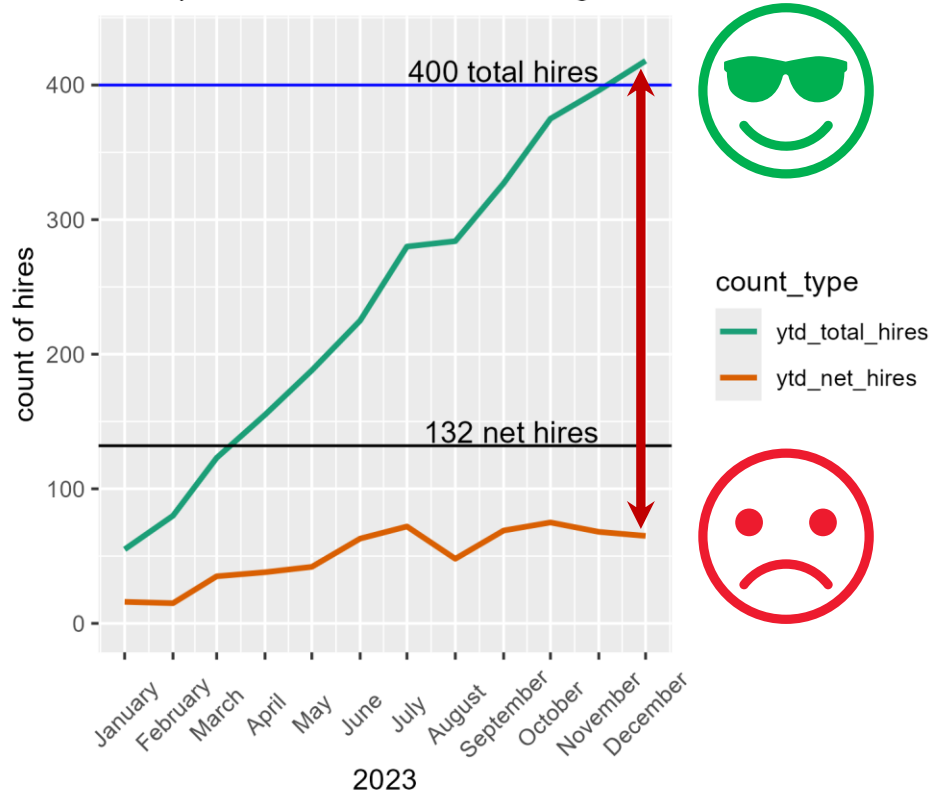


Bus Operator headcount rebounding after 30% drop 2018-2022

Bus Operator hiring faces challenges

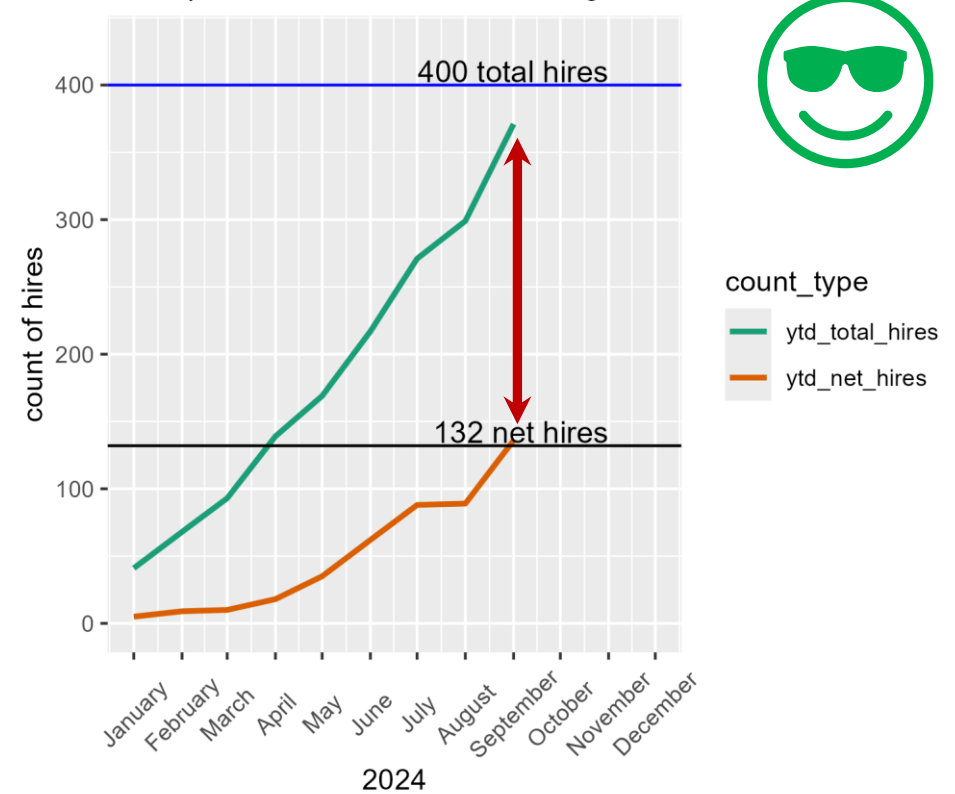
2023 Bus Operator Hires

total hires = count of hires (internal and external)
 net hires = net change in headcount
 Last updated 2024-10-22, data through 2024-09-30



2024 Bus Operator Hires

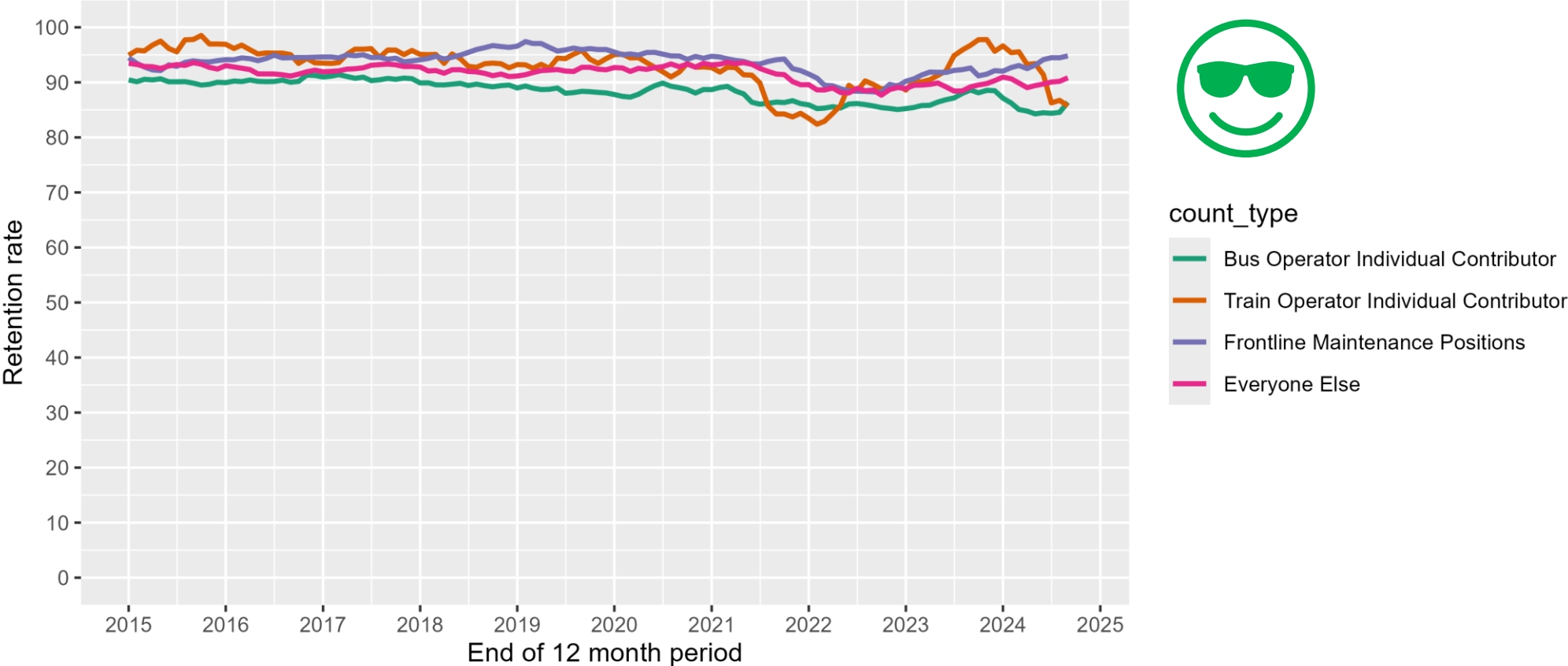
total hires = count of hires (internal and external)
 net hires = net change in headcount
 Last updated 2024-10-22, data through 2024-09-30



Overall, Metro Transit retention rates are high

12-month retention rates since 2015

Pct retention = $100 * N \text{ employees employed for last 12 months} / \text{total employees at beginning of last 12 months}$
 Last updated 2024-10-22, data through 2024-09-30



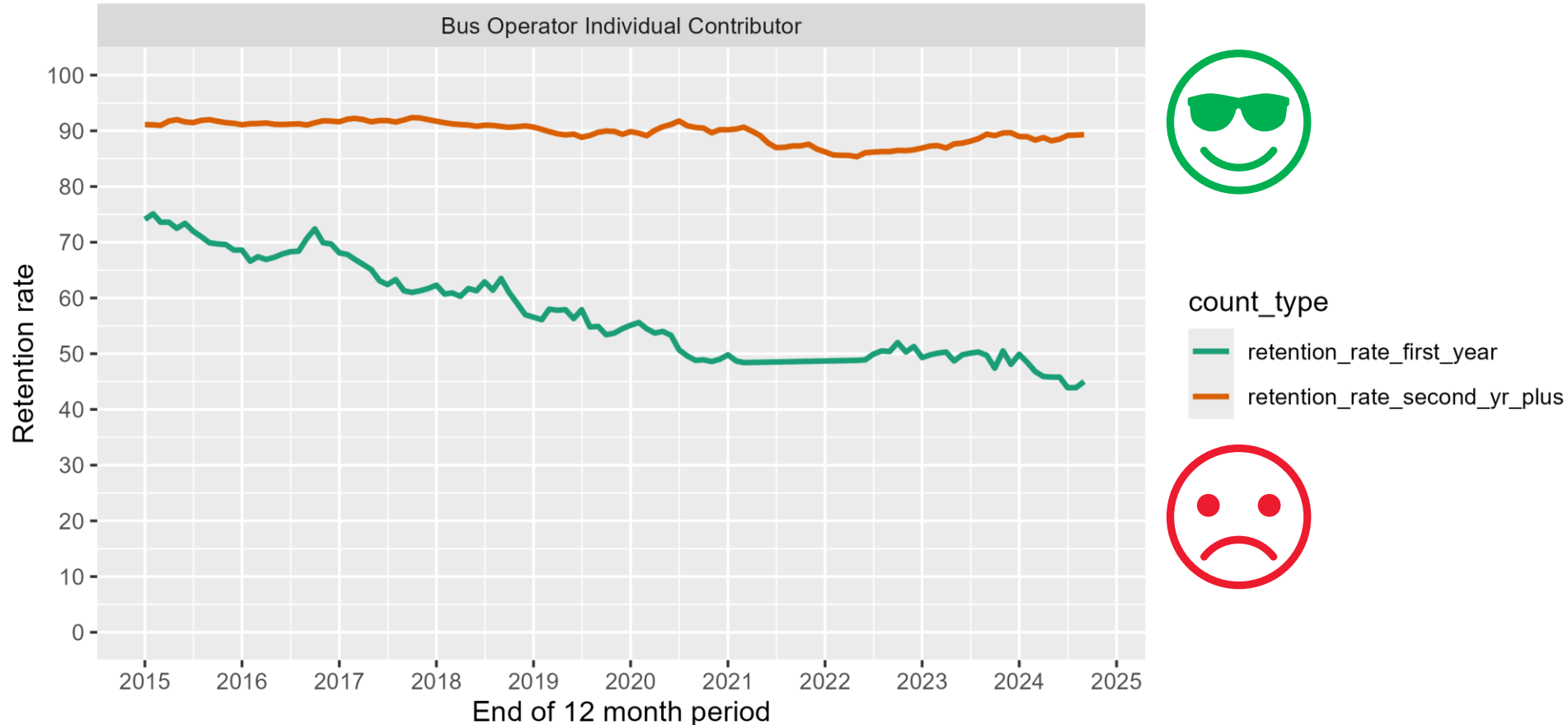
- count_type
- Bus Operator Individual Contributor
 - Train Operator Individual Contributor
 - Frontline Maintenance Positions
 - Everyone Else

First-year Bus Operator retention is low

12-month retention rates since 2015

Pct retention = $100 * N$ employees employed for last 12 months / total employees at beginning of last 12 months

Last updated 2024-10-22, data through 2024-09-30

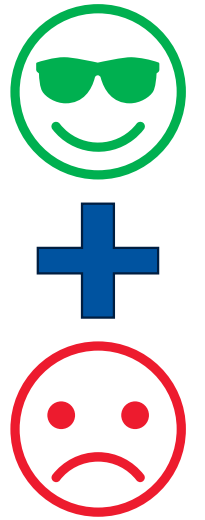
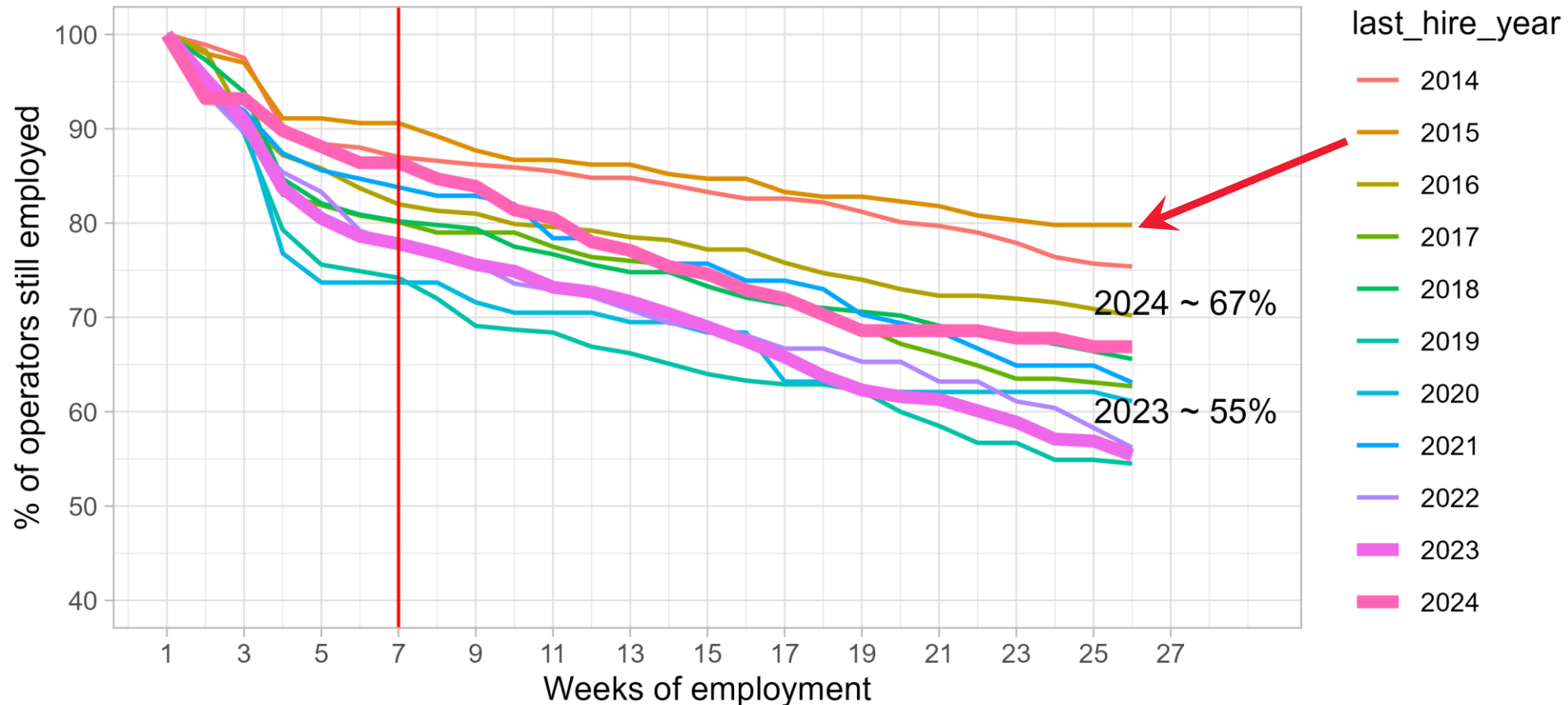


2024 early Bus Operator retention shows some improvement

Early retention of Bus Operators (6 months/26 weeks)

Percent still employed after N weeks by year

Note: current year only includes 118 employees hired in first 17 weeks of 2024



Employment trends treasure: Successes and Challenges



Overall retention is high.



Many Bus Operators leave in their first year.



Training improvements may be helping early Operator retention.



Continuing to address first year retention is critical across job classes.



We can now track these metrics automatically.

Invest in data pipelines → more treasure you can use

- What systems are in place to collect data?
- How easy is it to understand?
- Can appropriate analysts access data?
- How can I cultivate a culture of data sharing?
- Desired outcomes → metric development
- There isn't one perfect approach & everybody has a role.
- Combinations of data types and approaches can be powerful!





Thank You!

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+





- **Thank you!**