



DURHAM | FIFTY
REGION | YEARS

Data Driven Excellence

Featuring: Corporate Services – IT and Durham Region Transit

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September 2024

Agenda

- What is Data Analytics?
- Data Analytics Program Goals
- Program Evolution
- Durham Region Transit's Analytics Journey
- Video Overview of Durham Region Transit's Reporting Tools

What is Data Analytics?



Data Analytics is a **broad umbrella term for finding insights in data. It is the foundation for data informed decision making.**



Data Analysis is “**Procedures for analyzing data, techniques for interpreting the results of such procedures, ways of planning the gathering of data to make its analysis easier, more precise or more accurate, and all the machinery and results of (mathematical) statistics which apply to analyzing data.**”

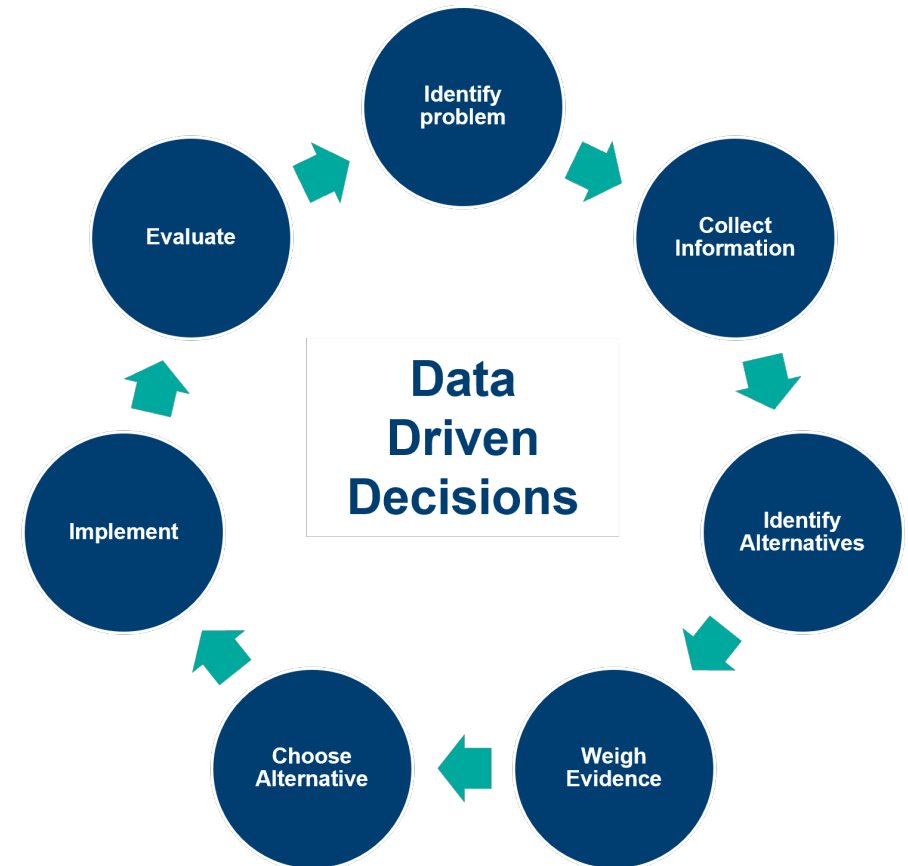


BI or Business Intelligence **focuses on descriptive analytics, or identifying operational insights.**

Why Data Analytics at the Region?

Data Driven Excellence

- Quality data driven decision making.
- Have data readily available for our stakeholders.
- View the Region's data as a whole, removing silos.
- Support Business functions to design better service and programs.
- Support for evaluation and monitoring.



Data Analytics Program Goals

- Provision and support a robust enterprise platform
- Integrate with all types of Regional data
- Engineer simplified access to data
- Integrate with Regional software applications
- Ensure security and privacy
- Provide analysis tools
- Develop Governance
- Empower end-users

Program Evolution

2019/20

- Dashboards Developed Using Power BI
- COVID Data Tracker

2021/22

- Built and implemented Enterprise Platform
- DRT On-Time Performance Dashboard, Internal Operational Dashboard and Community Strategic Plan Dashboard

2023/24

- Program expansion
- Provided opportunities to build data literacy

2025 & Beyond

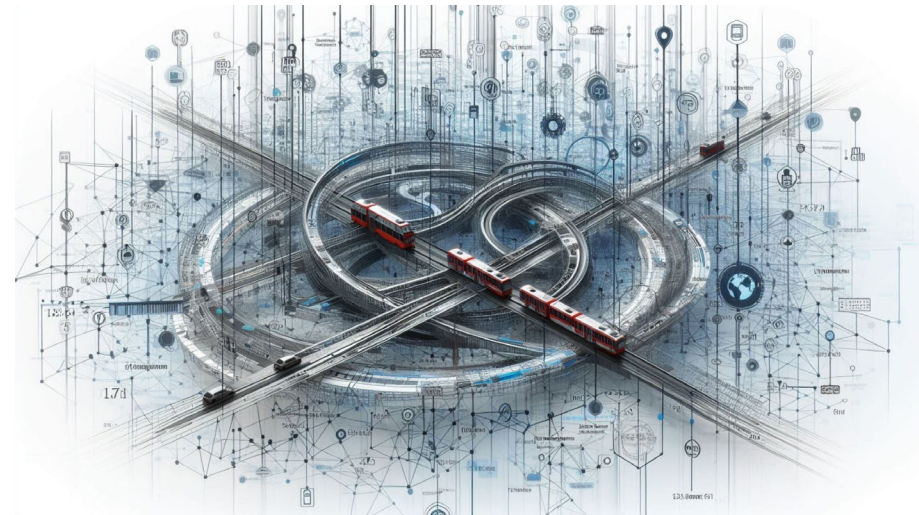
- Data and Analytics Strategy



Durham Region Transit's Analytics Journey

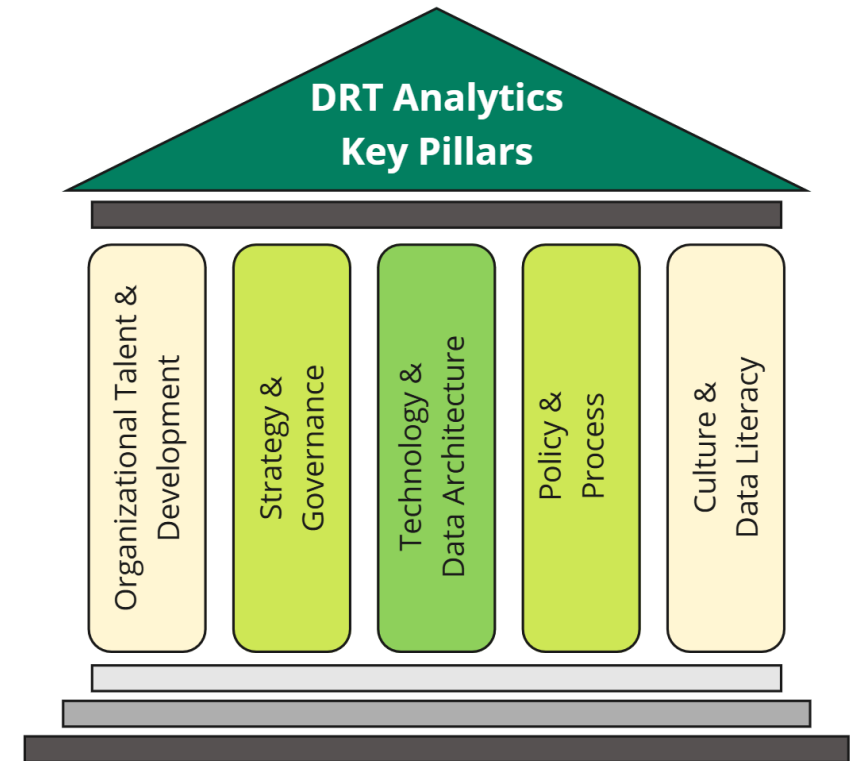
Durham Region Transit - Data Challenges

- DRT collects and tracks a vast volume of data across many different applications and business functions
- Processing and analyzing all this data consumed rapidly growing amounts of manual labour and time
- Insights and value from data was not broadly accessible, timely or of high quality



DRT Analytics Program Objectives

- Established in 2018 with the mandate to:
 - Provide DRT teams with accessible and intuitive reporting tools
 - Provide real-time monitoring and reporting of key performance indicators and service metrics, where possible
 - Significantly reduce manual and administrative time and effort required in reporting and analytics tasks through automation & scalable processes

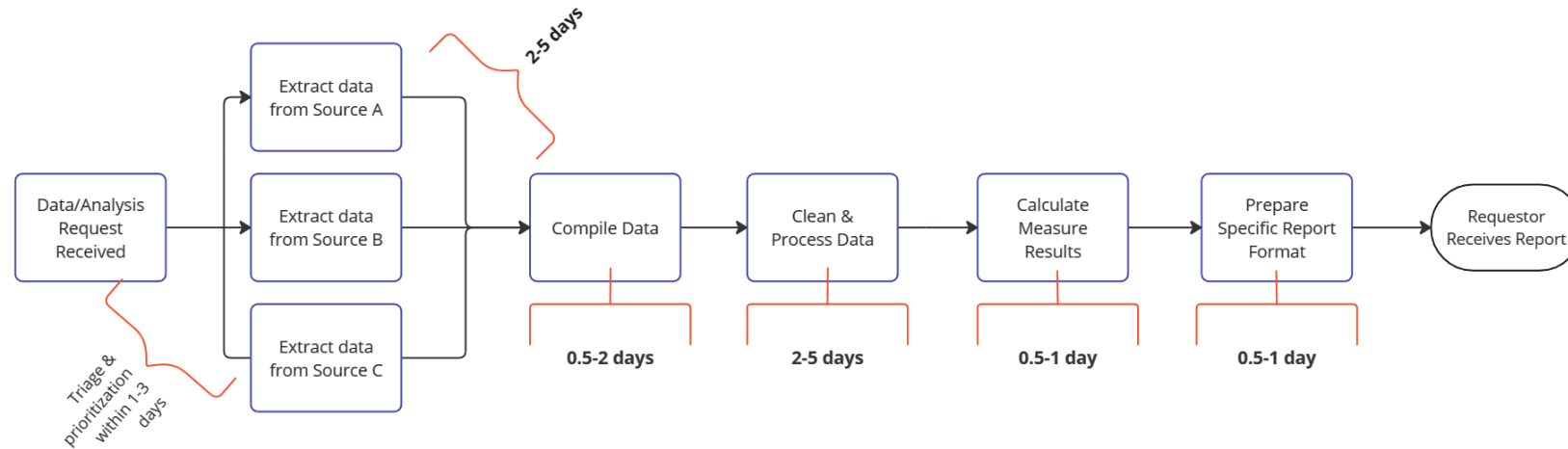


DRT Analytics Program Strategy & Approach

- Develop interactive and visual reporting tools connected to a central data repository
- Power reports with automated data extract, load and transformation/enrichment processes to improve data quality and reduce margin of error from 2%-15% to under 1%
- Build additional custom tools for the unique needs of each DRT business function
- Utilize an iterative approach that prizes progress over perfection
- Actively apply lessons learned as part of continuous improvement
- Improve data literacy and promote direct staff engagement in analytics outcomes

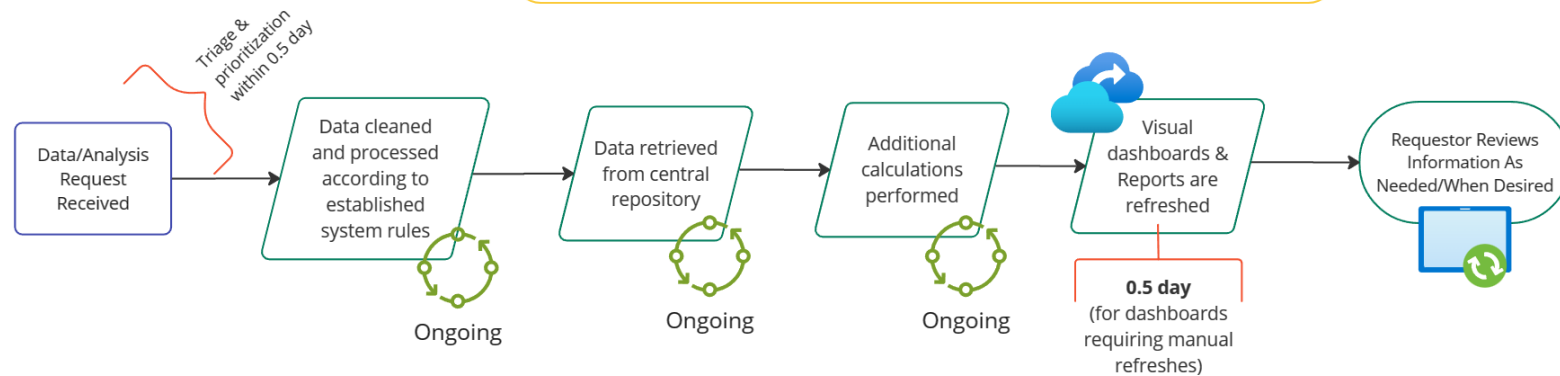
Outcomes

Typical Reporting Process Before Analytics Program



Improved Reporting Process

From an average of 15 days to 2 days = Over **80%** reduction/improvement of time-to-report



Cuing up the video ...



Driver Performance Trends

Latest Data Available : 27 May 2024

So that we c

Day Of Week

All

DATE: 8/1/2023 5/25/2024

Time of Day

All

Search

- Select all
- (Blank)
- Early Morning
- AM Peak
- Morning
- Midday
- PM Peak
- Afternoon
- Early Evening
- Late Evening

All

Trip Name

All

Direction

All

Stop

All

Total Drivers

467

Drivers with 85% or more On Time

20 (4.3%)

Drivers meeting 80% On Time Target

53 (11.3%)

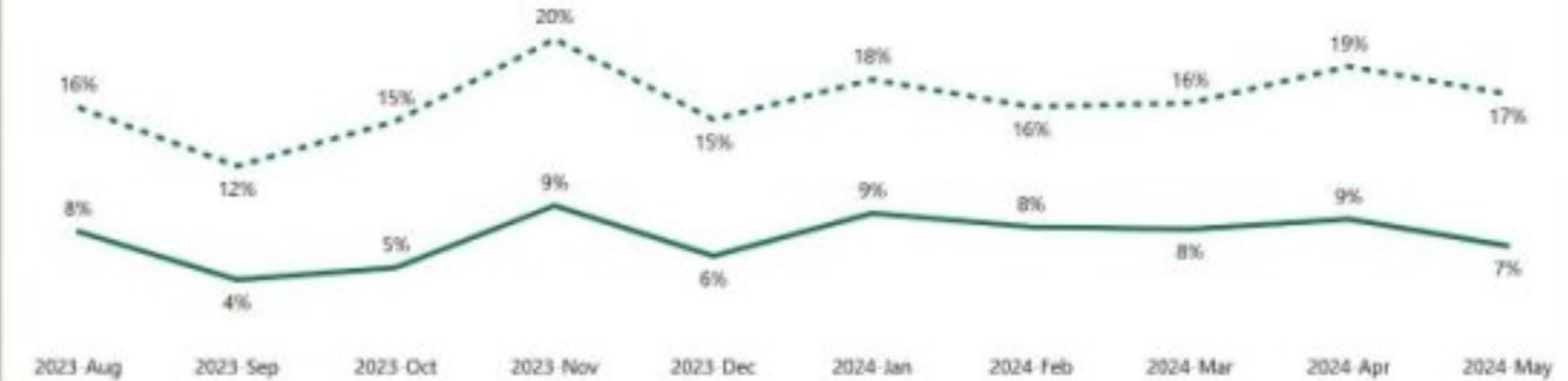
Drivers with 15% or more Total Earlys

117 (25.1%)

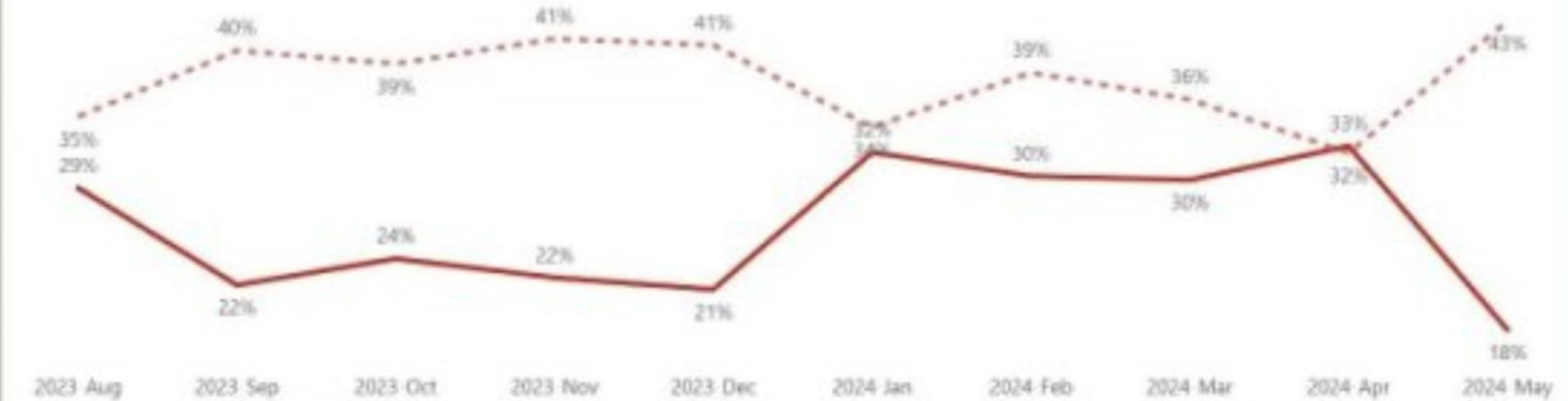
Drivers with less than 5% Total Earlys

178 (38.1%)

● % Drivers with 85% or more On Time ● % Drivers Meeting % OTP Target



● % Drivers with 15% or more Total Earlys ● % Drivers with less than 5% Total Earlys





Thank you

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Durham Region Transit

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