



Savings | Choice | Service

## WEBINAR

INTEGRATING ACCESSIBILITY NEEDS WITH CAPITAL PLANS



## AGENDA





Introduction



**Accessibility Data Overview & Transformation** 



Integration of Multi-Variable Prioritization (MVP) in Capital Plan



**Mohawk College Case Study** 



**Next Steps to Consider** 



## INTRODUCTION



#### **Ayden Townsend**

- Leader of the Data Management Practice at Roth IAMS
- 19 years of experience dealing with Facility Condition Assessment data, management and capital planning
- Responsible for creating methodology and approach for ETL, data analysis and facility asset planning at Roth IAMS

This presentation was supported by Mia McNaughton



## INTRODUCTION TO ROTH IAMS

#### **Company Overview**

- Over 100 full-time staff across Canada and the US
- Architects, Accessibility
   Practitioners, Engineers,
   Technologists, etc.
- Collaborative Procurement
  - OECM
  - Canoe/Sourcewell

#### We Provide

- Integrated solutions
- Consistent & defensible data

#### **Asset Management**

- Asset Management Planning
- Capital Renewal Planning
- Asset Management Database Maintenance
- Asset Management Software
- Data Mining and Analytics

#### **Facilities Management**

- Preventative Maintenance Planning
- Facilities Management Plans and Consulting
- Green Building Strategies, Policies and Procedures

#### **Asset Data Collection**

- Facility Condition Assessments
- Infrastructure Condition Assessments
- Structural Assessments
- Accessibility/ADA Assessments
- Energy Auditing and Consulting
- Asset Inventory and Tagging

#### **Building Performance**

- Building Performance Check-Up
- Commissioning
- Re/Retro-commissioning





## OUTLINE

Today, more than ever, there is a growing need to make the built environment more accessible for people with disabilities, whether this is driven by legislation or organizational initiatives.

Understanding how to integrate accessibility needs with capital planning is often a challenge for facilities.





# ACCESSIBILITY DATA OVERVIEW & TRANSFORMATION

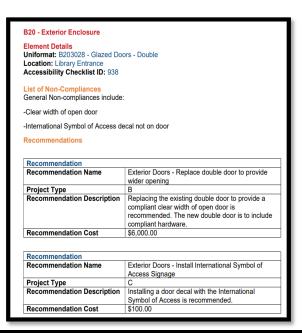
- UNDERSTANDING DIFFERENT TYPES OF ACCESSIBILITY DATA
- EASY WAYS TO MAKE CONSULTANT DATA WORK FOR YOU

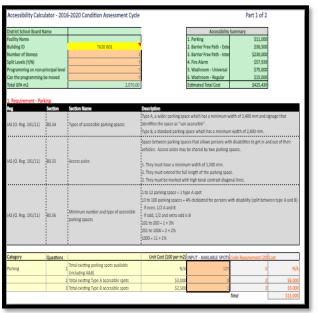


## OVERVIEW OF YOUR DATA

Data from
Accessibility Audits
comes in many forms

- PDF reports
- Excel reports









Missing colour Typical Stair

#### Areas of Rescue Assistance

contrast and TAI

Accessible emergency egress has been identified as a gap in the built environment by Accessibility Standards Canada. Areas of rescue assistance are fire protected and safe areas for persons with disabilities, and others who are unable to use exit staircases to egress out of the building. Its application will provide a safe space to wait for assistance to evacuate in the event of an emergency. Although not required to be provided per the Ontario Building Code, safe areas of rescue assistance should be provided on floors without an exit to the exterior.

Areas of rescue assistance have not been identified within the building. One clear floor space can fit within each of the basement floor stair landing. Additional information is required to determine if these exit staircases can be designated as an area of rescue assistance. Further investigation is required by the University to ensure they are coordinated with building evacuation procedures.

All evacuation plans were mounted too high and missing tactile elements.

	ITEM F	ISCA C	ampus ode	Facility Name	Floor ID	Room #	Correction Type	Facility Area	Element	Category - KG	Design Requirement	Assessment Results	Corrective Action Plan	Standard Met	Priority Level	CATEGORY	FADS Ref.	OBC/DOPSS Ref.	FADS Cost
A	x1 2	2/23 A	viation	Aviation	3	306	Accessibility	Classroom - 306	Working Space	FOLLOW UP	FADS - At least one blackboard, pin board or other display system shall be located on an accessible route complying with 4.1.1. and have its lowest edge located no higher than 760 mm from the floor.		Reposition whiteboard or install new one so that its lowest edge is not more than 760 mm from the floor when accommodating staff.	Not Compliant	3	INTERNAL			\$350.00
4	12	A	viation	Aviation	1		Accessibility	Elevator 1	Audio Cues in Elevator	ELEVATOR	FADS - As the car stops at a floor, the floor and direction of travel shall be announced using voice-annunciation technology.	No voice annunciation	Install an annunciator panel with voice announcement of direction and floor	Not Compliant	2	ALARMS	4.1.14 - Elevators	N/A	\$77,000.00
A	.3 2	2/23 A	viation	Aviation	1			Entrance			OBC - When used to indicate the location of ramp - attention patterns should be set back between 300-500 mm from the top and the bottom of ramp.	No warning surface installed	Install detectable warning surface at top of ramp. Surface shall be constructed in accordance with ISO 23599 Tactile Walking Surface Indicators including colour contrasting, truncated domes set back 300-500 mm from start of ramp.	Not Compliant	2	CONSTRUCTIO N	4.4.8 - Detectable Warning Surfaces	Div. B / 3.8.3.18 - ISO 23599 Tactile Walking Surface Indicators	\$1,600.00

### TRANSFORMING DATA

#### Data analysis / QA / QC

How do you deal with missing / incomplete data?

Room #	Facility Area	Element	Design Requirement	FADS Ref.	OBC/DOP\$\$ Ref.	Correction Type	FADS Cost
308	Classroom - 308	Working Space	FADS - At least one blackboard, pin board or other display system shall be located on an accessible route complying with 4.1.1. and have its lowest edge located no higher than 760 mm from the floor.			Accessibility	\$350.00
	Elevator 1	Audio Cues in Elevator	FADS - As the car stops at a floor, the floor and direction of travel shall be announced using voice-annunciation technology.	4.1.14 - Elevators	N/A	Accessibility	\$77,000.00
	Entrance		OBC - When used to indicate the location of ramp - attention patterns should be set back between 300-500 mm from the top and the bottom of ramp.	4.4.8 - Detectable Warning Surfaces	Div. B / 3.8.3.18 - ISO 23599 Tactile Walking Surface Indicators		\$1,600.00
	Entrance	Ramps	FADS - The minimum width of a ramp between handrails shall be 950 mm (37-1/2 in.).  OBC - Ramps located in a barrier-free path of travel shall have a minimum width of 1100 mm between handrails			Building Code	\$8,250.00
	Entrance	Door - Clear	FADS - The minimum clear opening of doorways shall be 950 mm (37-1/2 in.),	4.1.6 - Doors	Div. B / 3.8.3.3 Doors and Doorways	Maintenance	\$8,200.00

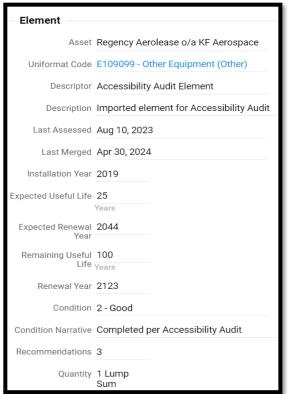


## TRANSFORMING REPORTS INTO USABLE DATA

#### **Concepts to consider**

- Where do your recommendations get attached to if no existing building element?
  - Create a new element?
- How are your recommendations broken down?
  - Individual or several lumped together in one?

Reco	mmendations				♣ New
Status	Descriptor	Year	Туре	Qty	Cost
A	Storage Shelving	2022	Accessibility	0	\$350.00
Α	Storage Shelving	2022	Accessibility	0	\$700.00
Α	Wall Mounted Fixtures	2022	Accessibility	0	\$700.00







## INTEGRATION OF MULTI-VARIABLE PRIORITIZATION (MVP) IN CAPITAL PLAN

 APPROACH FOR TACKLING THE IMPROVEMENT RECOMMENDATIONS



## MULTI-VARIABLE PRIORITIZATION (MVP)

- MVP can be customized that can provide prioritization across a portfolio (multiple buildings)
- Some factors to consider in MVP:
- Building Size or Occupancy Frequency
  - More worthwhile to complete a project within a highoccupancy building
- Facility Type
  - Some facilities may be prioritized over others (e.g. classrooms/academic vs. maintenance)
- Direct and Immediate Need (Timeline)
  - May need to consider addressing current needs requested by students/faculty



## MULTI-VARIABLE PRIORITIZATION (MVP)

Example:

		_
Priority Categories	Definition	Weight
Residence Type	Total number of residential units at the subject facility	30%
Barrier Location	Location where the barrier was identified (site exterior, common areas, or within the residential unit)	30%
Deferral Consequence	Consequence when a barrier is not addressed	25%
Barrier-free Design Standard/Guideline Improvement	Improvements to OBC, Section 3.8 Barrier-free Design Standard and/or CMHC guidelines	15%
Total		100%

	Barrier Location (30%)	
Site Exterior	Accessible improvement to site components, such as parking spaces, exterior paths of travel (ramps, exterior stairs, etc.)	10
Common Area	Improvements to common areas such as corridors, laundry rooms, lounges, etc. Example elements include exterior doors, interior paths of travel, common area washroom fixtures and accessories, amenities, etc.	7
Unit	Improvements in the designated barrier-free unit (e.g. unit entrance door, interior path of travel, washroom, kitchen, etc.)	3

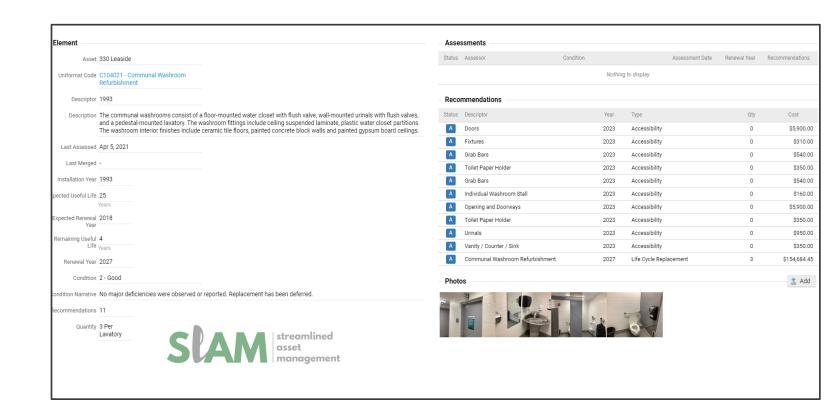
Table 5 – Pri	ority & Score Ranges
Priority	Overall Priority Score
Low	0-24
Medium	25-60
High	61-100



### INTEGRATION WITH CAPITAL PLAN

Incorporate recommendations and MVP into capital plan

- Advantages:
  - Centralized data
  - Consistent data
  - Analyze data based on multiple scenarios
  - Systematically plan capital renewals







## MOHAWK COLLEGE CASE STUDY

SHOWCASING A GREAT REAL-LIFE EXAMPLE
 OF INTEGRATING ACCESSIBILITY NEEDS WITH CAPITAL
 PLAN

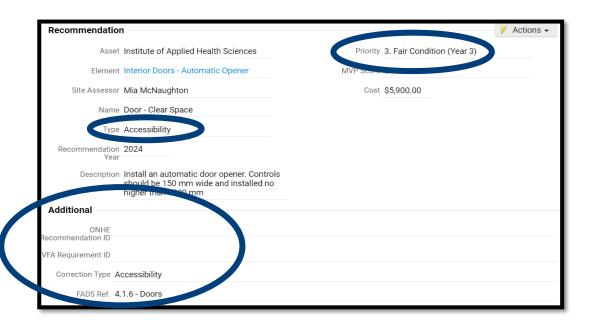


#### PRESENTING DATA IN A MEANINGFUL WAY

Determined components of the assessment report which needed to

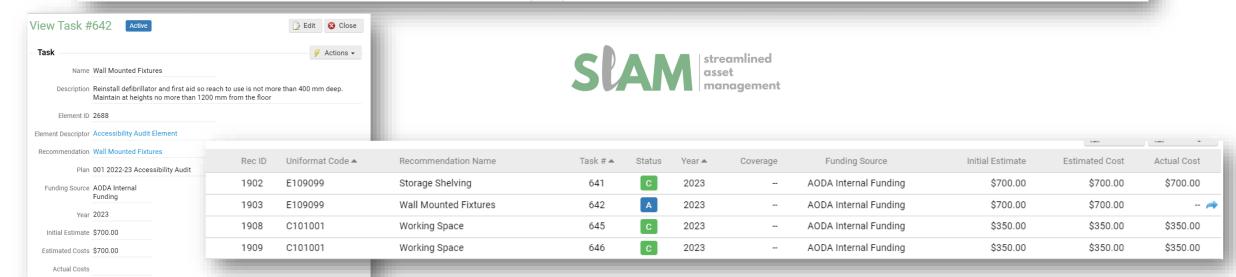
be captured in the data transfer

- Identified how the data needed to be presented and located in the recommendation
- Categorized what naming conventions and additional fields need to be used





2022-23 Accessibility Audit       Medium       174       Mar 31, 2023       \$586,802.00       \$586,802.00       \$239,660.00         2023-24 Accessibility Audit       Medium       1       Mar 31, 2024       \$5,900.00       \$5,900.00       \$5,900.00         2024-25 Accessibility Audit       Medium       478       Mar 31, 2025       \$1,979,948.00       \$1,979,948.00       \$291,841.00         2025-26 Accessibility Audit       Medium       0       May 31, 2026       \$0.00       \$0.00       \$0.00
2024-25 Accessibility Audit Medium 478 Mar 31, 2025 \$1,979,948.00 \$1,979,948.00 \$291,841.00
2025-26 Accessibility Audit
2020 207/0000000000000000000000000000000
2026-27 Accessibility Audit 79 May 31, 2027 \$627,754.00 \$627,754.00 \$7,200.00

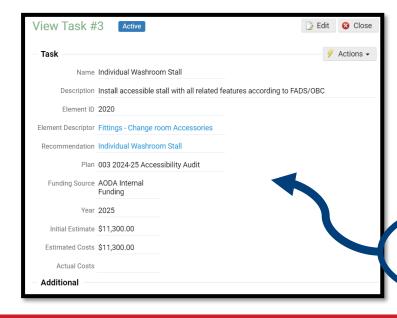


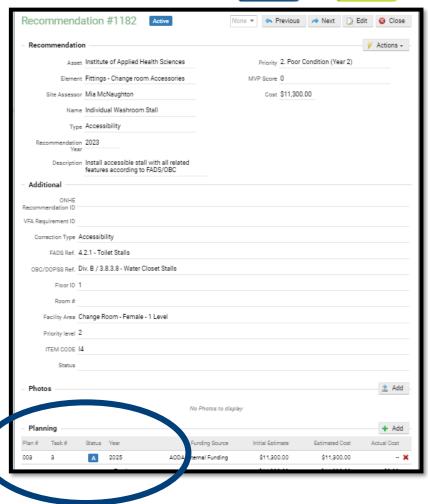


 Recommendations had individual tasks attached for breaking down planning and

tracking purposes

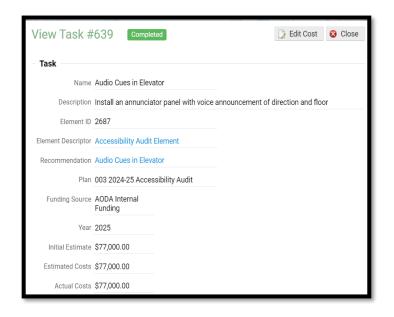
 Tasks were updated with completed status for tracking spending and updating what is let to address







- Tasks were bundled into plans by fiscal year
- Spending allowances and tracking can occur for the plans

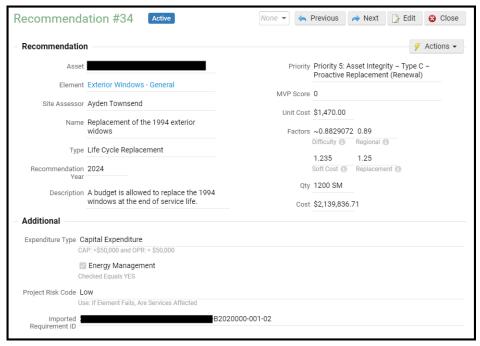


Plan Number 📤	Status	Name	Priority	Tasks	Est. Completion Date	Initial Est. Total Cost	Est. Total Cost	Actual Cost to Date
001	N	2022-23 Accessibility Audit	Medium	174	Mar 31, 2023	\$586,802.00	\$586,802.00	\$239,660.00
002	N	2023-24 Accessibility Audit	Medium	1	Mar 31, 2024	\$5,900.00	\$5,900.00	\$5,900.00
003	N	2024-25 Accessibility Audit	Medium	478	Mar 31, 2025	\$1,979,948.00	\$1,979,948.00	\$291,841.00



## INTEGRATION OF OTHER DATA

 Incorporate other factors like energy data into integration strategies.



Uniformat Code 🔺	Uniformat Name	Descriptor	Installation Year	Remaining Useful Life	Renewal Year	Condition	Quantity	Element Cos
D201003	Lavatories	Ground Floor	2016	27	2051	1 - Good	1 Each	\$1,651.0
D201015	Drinking Water Fountains (Refrigerated)	DF-101 - RM 101	2016	7	2031	1 - Good	1 Each	\$6,604.0
D201031	Eyewash Stations	EWS-K106-1 - RM K106	2016	17	2041	1 - Good	1 Each	\$1,580.8
D201031	Eyewash Stations	EWS-K106-2 - RM K106	2016	17	2041	1 - Good	1 Each	\$1,580.
D201033	Emergency Shower / Eyewash Station Combos	ESE-101 - RM 101	2016	17	2041	1 - Good	1 Each	\$2,371.:
D201043	Commercial Kitchen Sinks	Ground Floor	2016	22	2046	1 - Good	2 Each	\$9,482.

 Integrate equipment inventory and tagging into capital planning processes.





## NEXT STEPS TO CONSIDER

 SIMPLE STEPS TO PUT ACCESSIBILITY IMPROVEMENT PLANS INTO ACTION



## YOUR NEXT STEPS TO CONSIDER

#### **BEFORE DIVING IN:**

- Identify the source of accessibility reports
- Determine how to categorize the needs reported
- Review the data for accuracy
- Figure out what to do about missing information
- Determine how you want to present the data
  - Do you need to report on completion of work, dollars spent, etc.
- Prioritize the work (based on years, dollars available, urgency of need, etc.)
- Build plans, possibly incorporating of needs (FCA work) at the same time





### WE CAN HELP!

#### We can help you with the process from the beginning to end

#### **Data Extraction**

Compile, sort and review accessibility data

#### **Data Transformation**

QA/QC Analysis of accessibility data

#### **Data Loading**

Integration of accessibility data into SLAM CAP

#### Multi-variable Prioritization (MVP) / Asset Management

- Integration of accessibility improvement recommendations into capital or asset management plan
- Collaborate and determine MVP factors
- Apply priority ratings with recommendations

#### **Planning**

Determining how and when to do the work

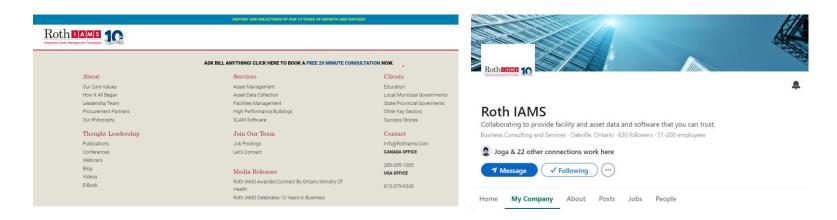






#### THANK YOU FOR ATTENDING

- ► Visit our website at rothiams.com
- Follow us on LinkedIn
- Connect with us directly through email at <a href="mailto:ayden.townsend@rothiams.com">ayden.townsend@rothiams.com</a> or info@rothiams.com





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## QUESTIONS/INQUIRIES

If you have any further inquiries about data management, planning or any of our services, please contact us!

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  - Webpage: www.rothiams.com

