

# 2024 RMA Las Cruces, NM

**Jennifer Meneses**

Analyst, Infrastructure Planning  
University of Saskatchewan

**Bill Roth**

President & CEO of Roth IAMS Ltd.  
Co-Founder of SLAM Technologies

## ASSET MANAGEMENT TECHNOLOGIES

A 25-Year Journey of Facility  
Condition Assessment



UNIVERSITY OF  
SASKATCHEWAN

Roth IAMS  
Integrated Asset Management Strategies



SLAM  
streamlined asset management

# Introductions



## **Jennifer Meneses** **Analyst, Infrastructure Planning Campus** **Planning and Real Estate Group, USask**

- CAD/CAM Engineering Technologist with experience in mining exploration data and municipal drafting.
- Joined the University of Saskatchewan (USask) in 2001, managing the condition assessment database and assessment process.
- USask roles in Facilities Management, Operations and Maintenance, Finance, and Facilities Sustainability, before joining Campus Planning and Real Estate in 2020.
- Currently, **Analyst, Infrastructure Planning Campus Planning and Real Estate Group, USask**, responsible for the SLAM-CAP database, building/infrastructure assessments, and space management.



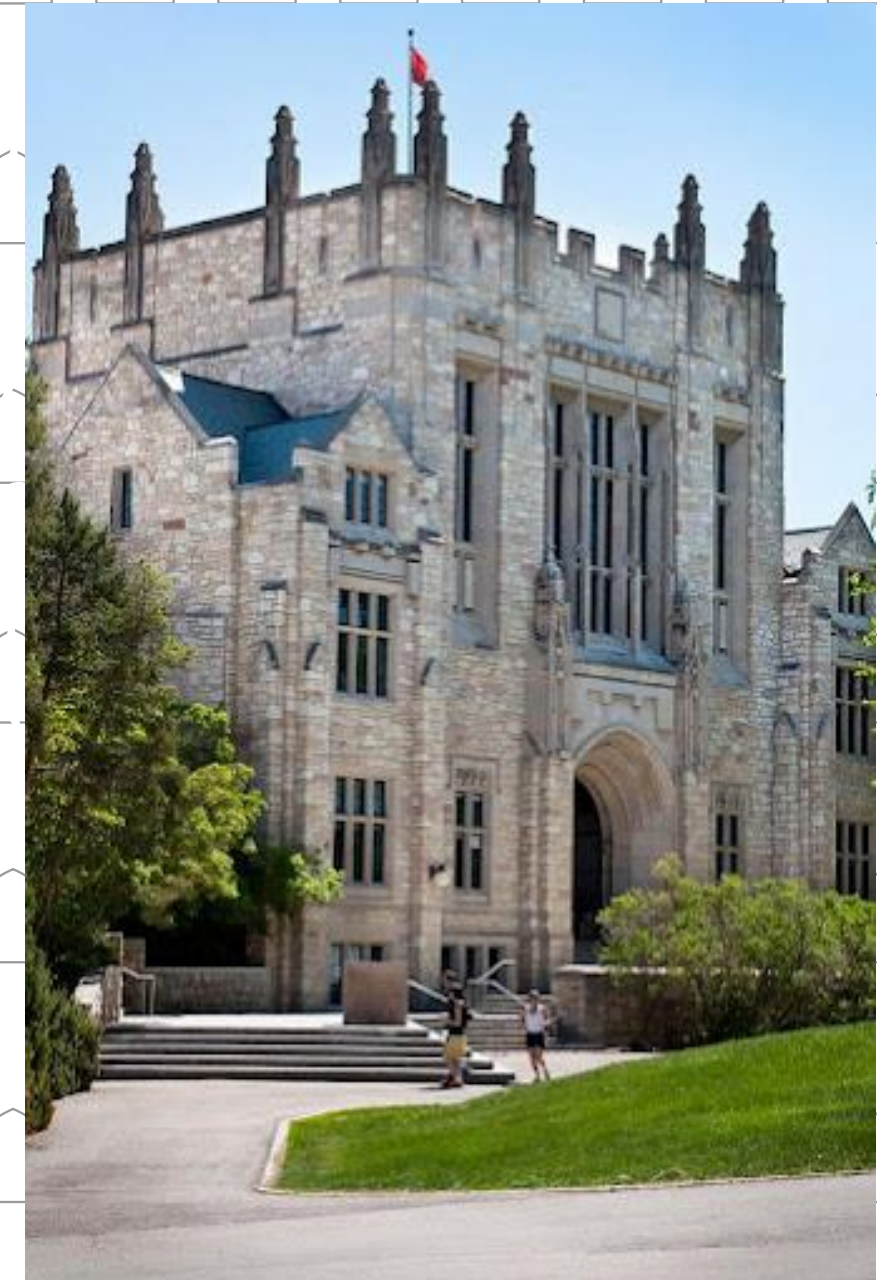
## **Bill Roth** **President & CEO of Roth IAMS** **Co-Founder of SLAM Technologies**

- Nearly 30 years of experience collaborating with higher education institutions across North America on all aspects of facility and infrastructure asset management
- Active member of APPA at the national, regional and local levels

# Presentation Purpose

In this presentation we provide a comprehensive overview of the University of Saskatchewan's (USask) Facility Condition Assessment (FCA) Program, which has evolved significantly over the past 25 years under the leadership of Jennifer Meneses. We will explore the program's progression, from its inception in 2001 to its current state, covering the assessment of nearly 8 million square feet of buildings and infrastructure.

The presentation will also showcase the integration of ArcGIS with the Capital Asset Management System (SLAM CAP), highlighting how these advancements have enhanced infrastructure management at USask. Additionally, we will offer insights into the university's vision for the future of its FCA Program.



ASSET MANAGEMENT TECHNOLOGIES

# Agenda

USask Background

Organization Timeline

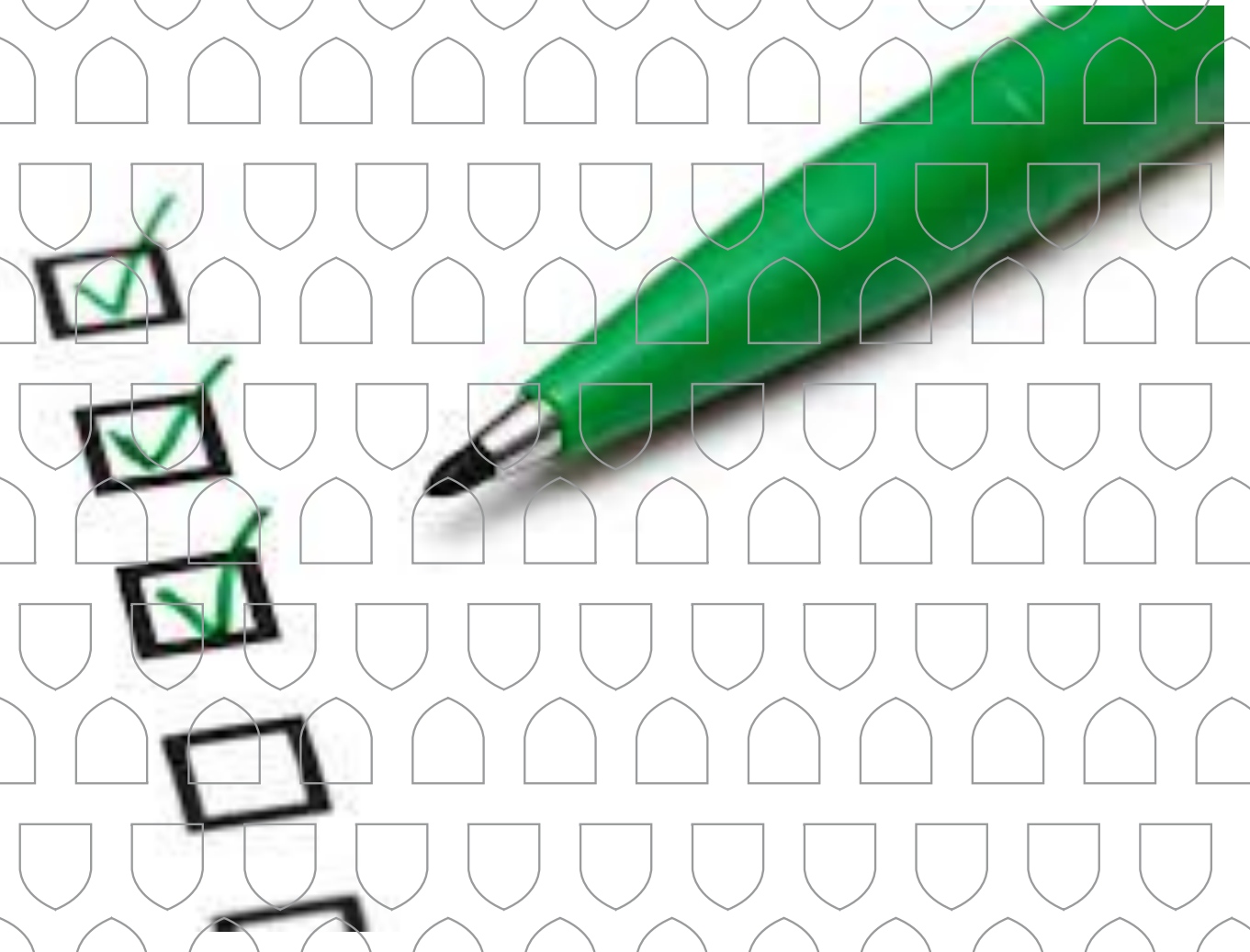
Organization Evolution

Data Collection

Integrating Capital Planning and GIS

Looking to the Future

Q & A



# USask Background

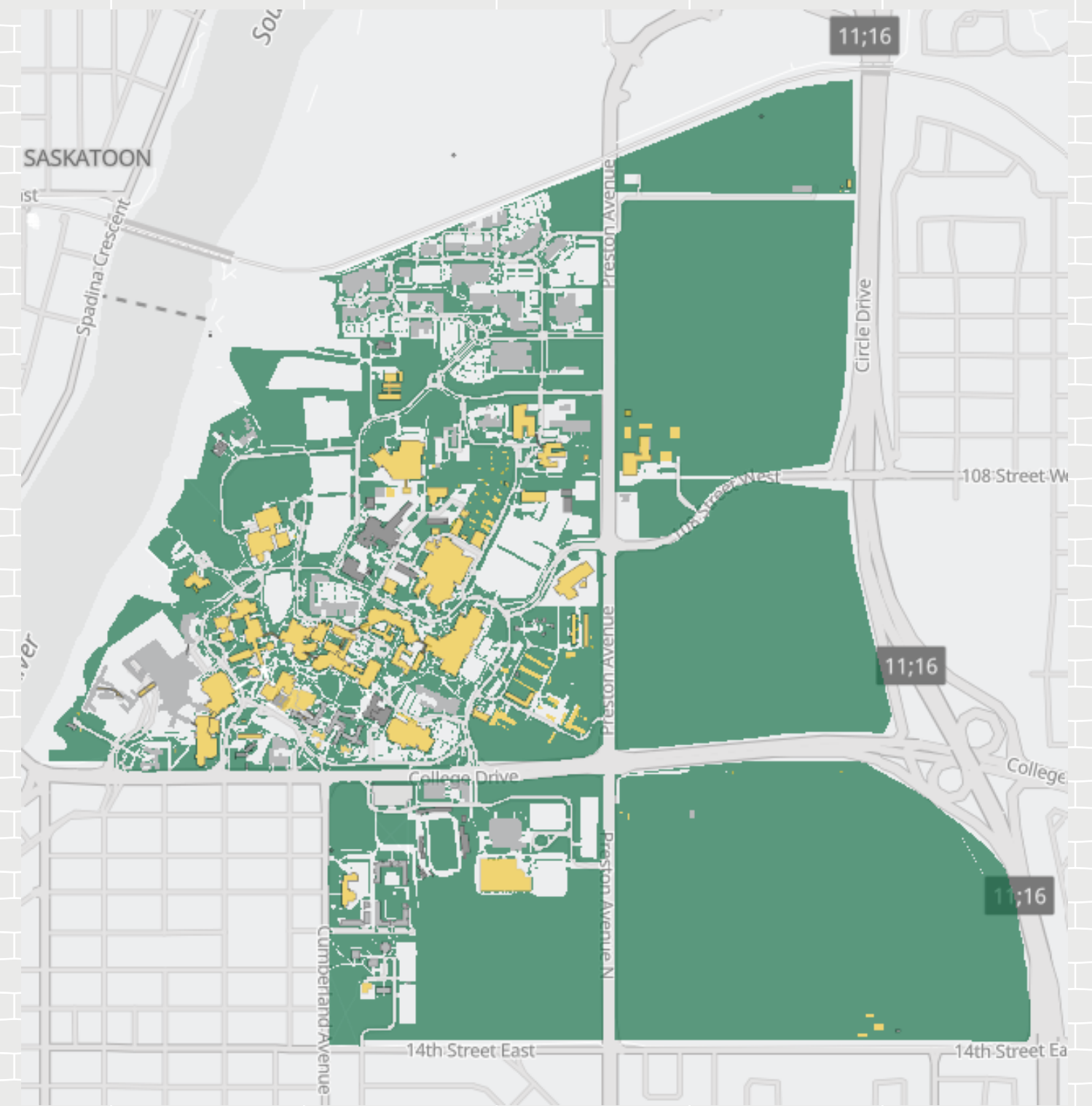


# USask

- A world leader in water and food security, vaccine development and infectious diseases, and human, animal and environmental health.
- A member of the U15 Group of Canadian research-intensive universities, we aspire to be the university the world needs.

# USask

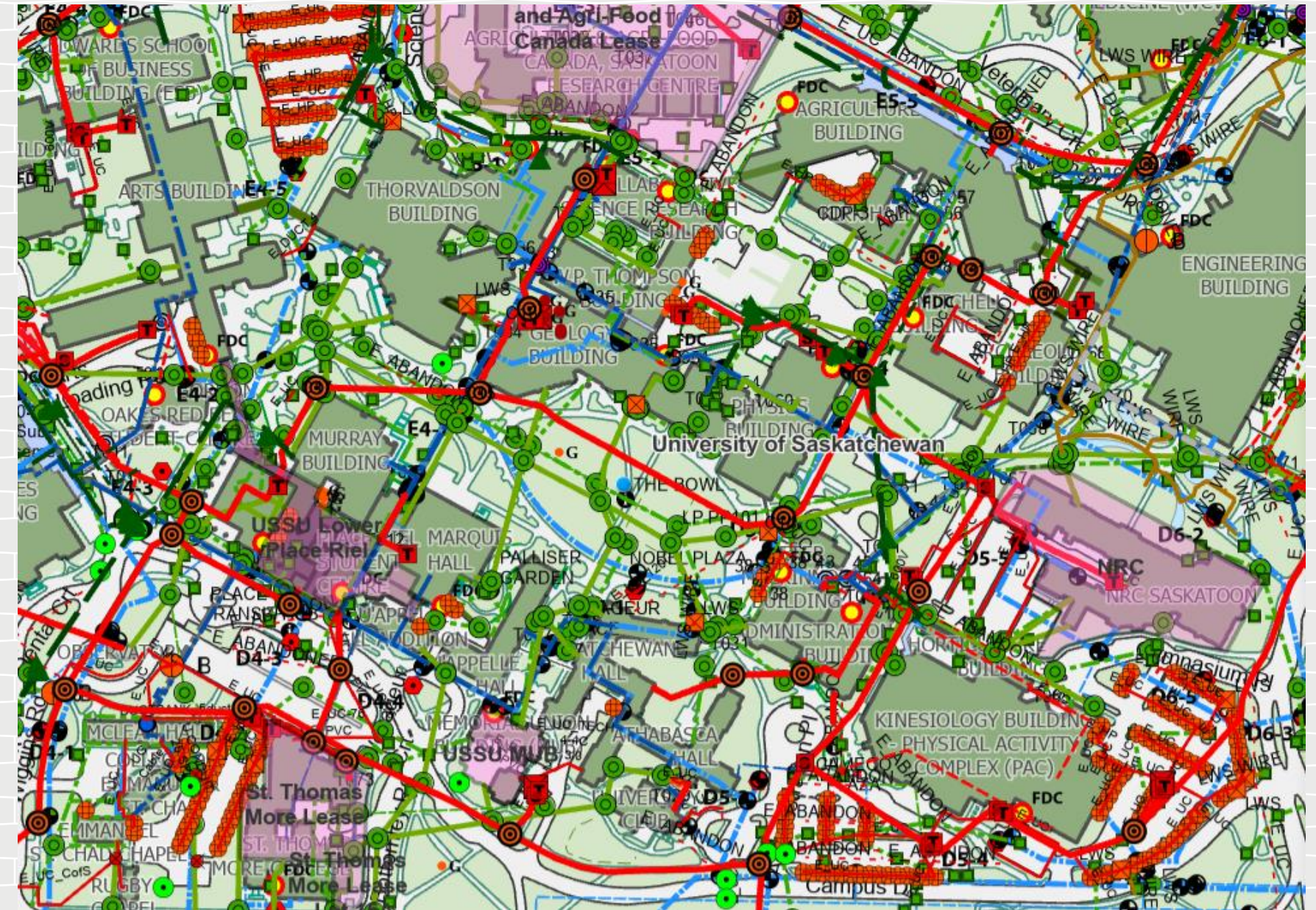
- Founded in 1907 on banks of South Saskatchewan River in Saskatoon, Saskatchewan
- Main Campus over 1,800 acres
- Over 8 million square feet
- 26,100+ students
- 5,400 employees



USask Campus Map

# USask Infrastructure

- Chilled water lines over 5 km
- Sanitary sewer lines over 20 km
- Storm sewer lines over 30 km
- Steam lines 10 km

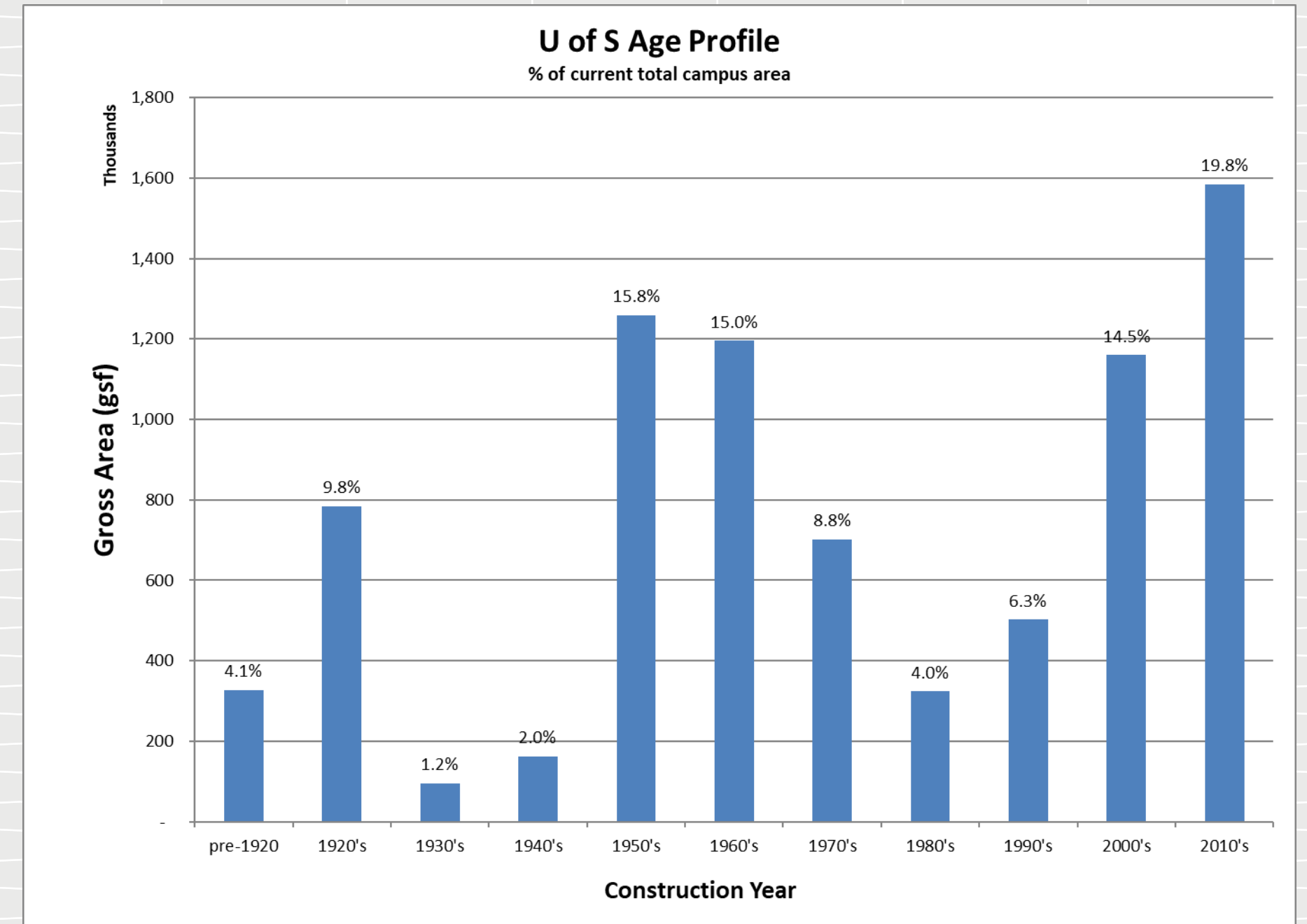


USask GIS Infrastructure



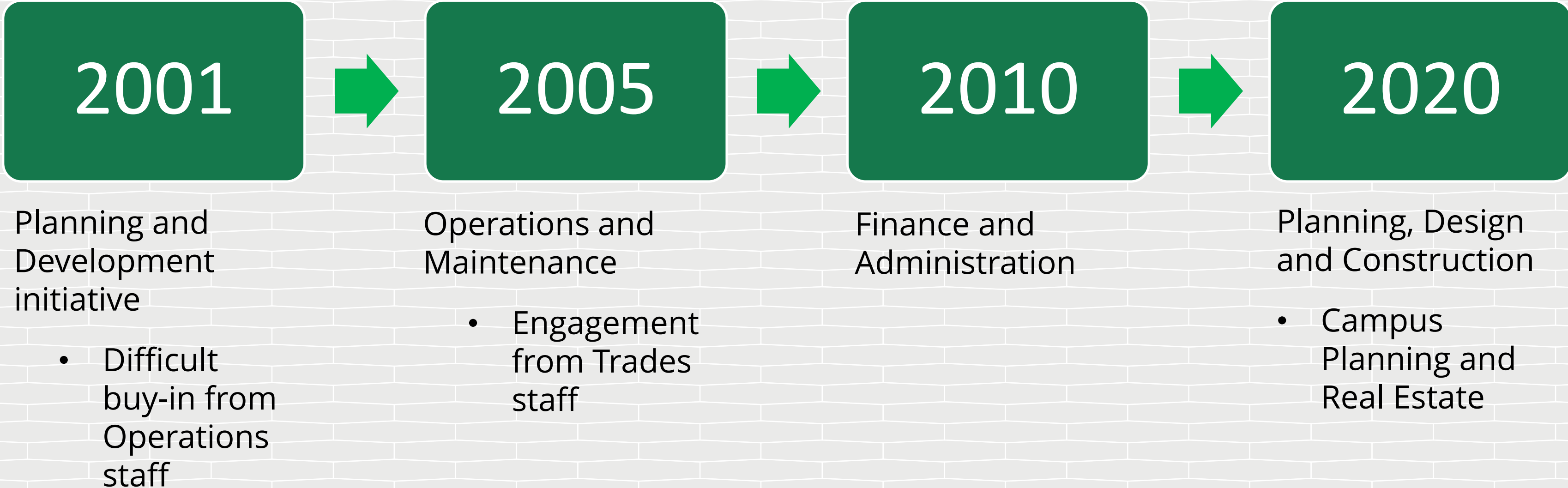
# Assessment History

- 2001 Implemented ReCAPP condition assessment database
- 3<sup>rd</sup> party assessors for condition assessments
- 20% per year goal
- Targeted assessments for Farms, Elevators, Roofs, Residences



# Organizational Evolution

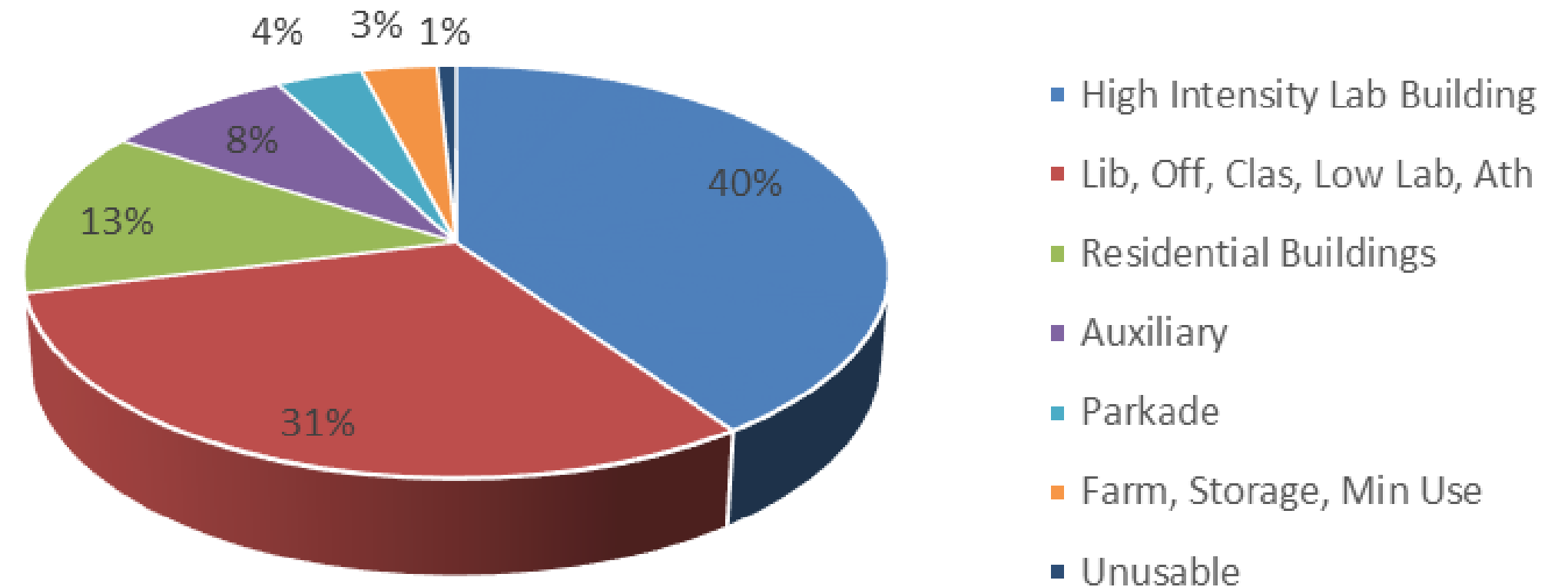
# Organizational Evolution



# Leveraging the Data

- Annual capital plans
- Strategic funding requests
- Reporting
- Deferred Capital Renewal and Current Replacement Value
- Reference point for major renovation projects

Building Area by Building Type



# Data Collection

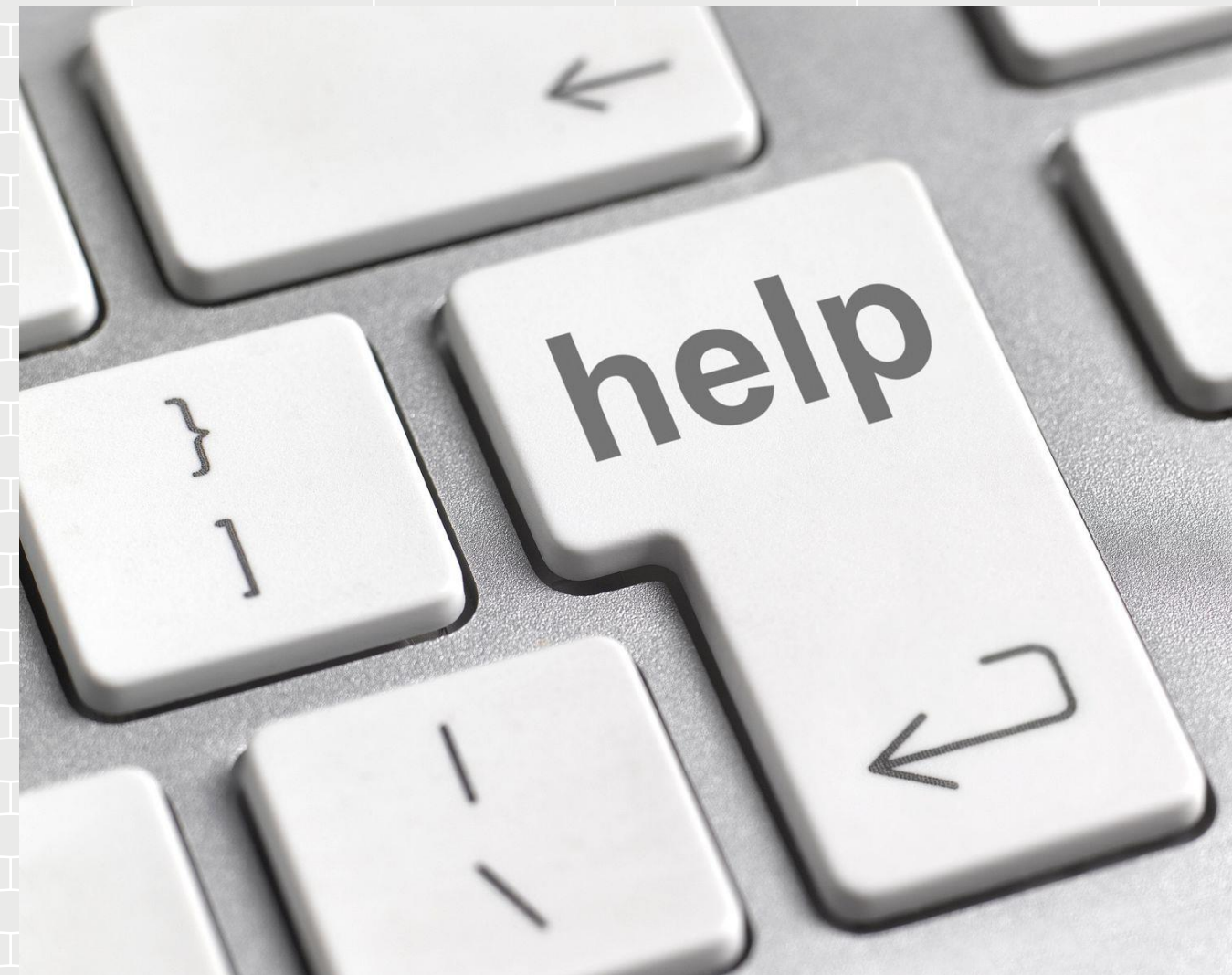
# Latest Round of FCAs

- 2019 Engaged Roth IAMS for Facility Condition Assessment (FCA) blitz
  - Completed 90% of campus buildings over 3- year period
  - Remote farm sites
  - Farm structures and animal shelters

Row Labels	Count of Asset Name
Farm, Storage, Min Use	142
Lib, Off, Clas, Low Lab, Ath	40
Residential Buildings	30
Auxiliary	24
High Intensity Lab Building	17
Unusable	16
Parkade	1
Grand Total	270

# Latest Round of FCAs

- Phase 1 Challenge
  - ReCAPP software was no longer being supported
  - AVS (Asset Validation Survey Tool) was crashing prior to import
  - Corrupted files resulted in loss of reports and rework



# Technology

- Due to Phase 1 Issues with ReCAPP, USask decided to license SLAM CAP
- 2020 Imported ReCAPP assessment data into new SLAM CAP database
- Continued with Phases 2 and 3 in 2020 and 2021
- Developing Multivariable Prioritization (MVP) to help prioritize capital plans within SLAM CAP

Presets  
None

Filters

- Infrastructure
- Facility (AiM)
- Asset Type Filter Tag
- High Intensity Lab Buildings
- Flags
- Status
- Active

Apply

Save    Clear

## Assets

	Facility No	Name ▲	Area	Year Constructed	FCAD	Asset Type	Building Use	Occupant Needs
	030	Agriculture Building	40028	1991	Jul 12, 2023	High Intensity Lab Building	High 5 - Core Asset	1 - meets
	056	Agriculture Greenhouse	3523	1994	Jul 11, 2023	High Intensity Lab Building	High 5 - Core Asset	3 - partially meets
	069	Canadian Light Source	20963	1964	Feb 22, 2021	High Intensity Lab Building	High 5 - Core Asset	1 - meets
	139	Collaborati... Science Research Building	7368	2018	Dec 17, 2020	High Intensity Lab Building	High 5 - Core Asset	1 - meets
	048	Dental Clinic	4924	1978	Feb 17, 2021	High Intensity Lab Building	High 5 - Core Asset	5 - does not meet
	001	Engineering Building	34187	1925	Jan 1, 2019	High Intensity Lab Building	High 5 - Core Asset	3 - partially meets
	028	Geology Building	12727	1986	Jul 10, 2023	High Intensity Lab Building	High 5 - Core Asset	1 - meets



# SLAM Differences and Benefits

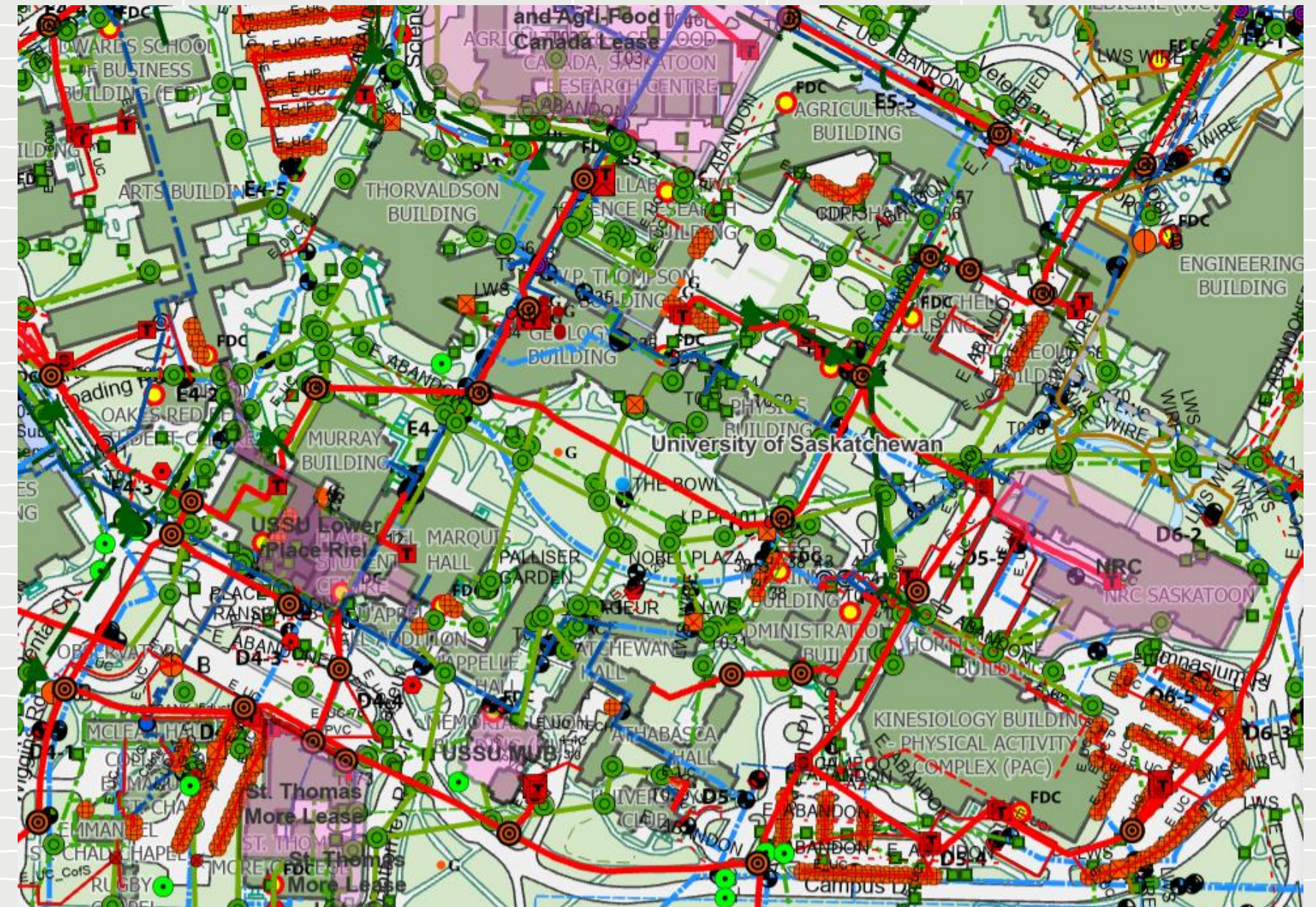
- Ease of operability for end users
- Assessor data does need to be exported to a separate database
- Assessment data easily reviewed on-line and flagged for follow-up
- KPIs provide easy visualization of data to tell our story
- Streamlined data wizards make data updates easy

Cap 

# Integrating Capital Planning and GIS for Infrastructure

# Integrating GIS and SLAM CAP

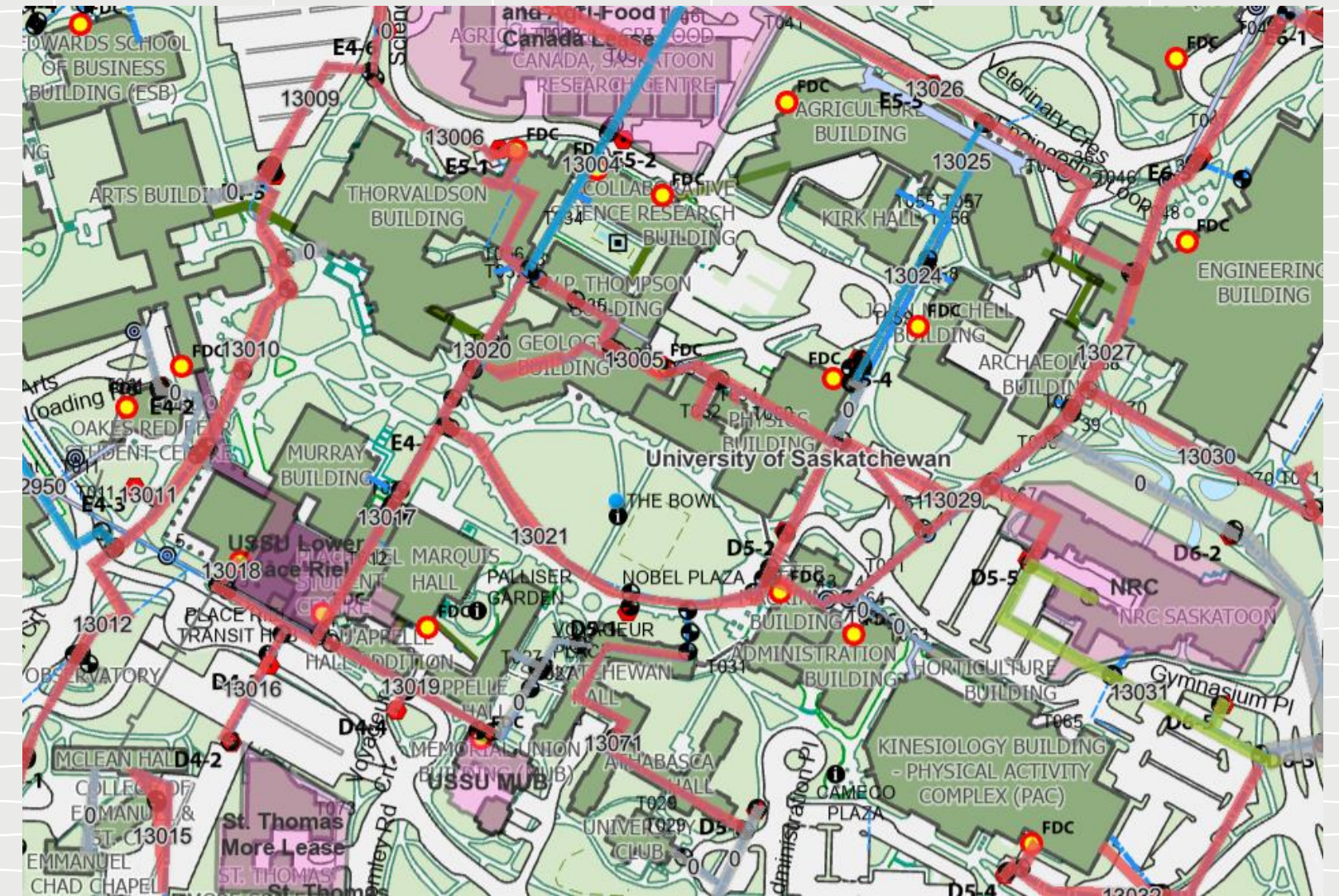
- Infrastructure assets in GIS
- Robust process for buildings
- Uniform II structure
- How can we include these in SLAM?



USask GIS Infrastructure

# Getting Started

- Not practical to include each segment as an asset
- Not practical to have long runs of pipe
- How can segments be grouped together?
- How can campus be zoned?
- Naming convention
- Considerations: type; material; size; age; condition;



USask SLAM GIS Water Distribution Infrastructure

# SLAM & GIS Integration

Element #13021 88 / 143

None Previous Next

## Element

Edit Actions

Asset Water Distribution

Uniformat Code [G301029 - Water Supply - 200mm](#)

Descriptor Water 101

Description The underground water supply line is assumed to be equivalent to 8 inch ductile iron piping in 8 foot trench. The water run includes Piping Segments: G3010-1074, G3010-1072, G3010-1073, G3010-1075

Last Assessed Aug 20, 2021

Last Merged Aug 23, 2021

Installation Year 1967

Expected Useful Life 50 Years

Expected Renewal Year 2017

Remaining Useful Life 0 Years

Renewal Year 2022

Condition 3 - Poor

Condition Narrative The component has exceeded its expected useful life. No major deficiencies were observed or reported however plans should be put in place for replacement of the piping.

## Assessments

Status	Assessor	Condition	Assessment Date	Renewal Year	Recc
M	Curtis Loblick	3 - Poor	Aug 20, 2021		

## Recommendations

Status	Descriptor	Year	Type
A	Water Supply 200mm (8")	2023	Life Cycle Replacement

## Photos

No Photos to display

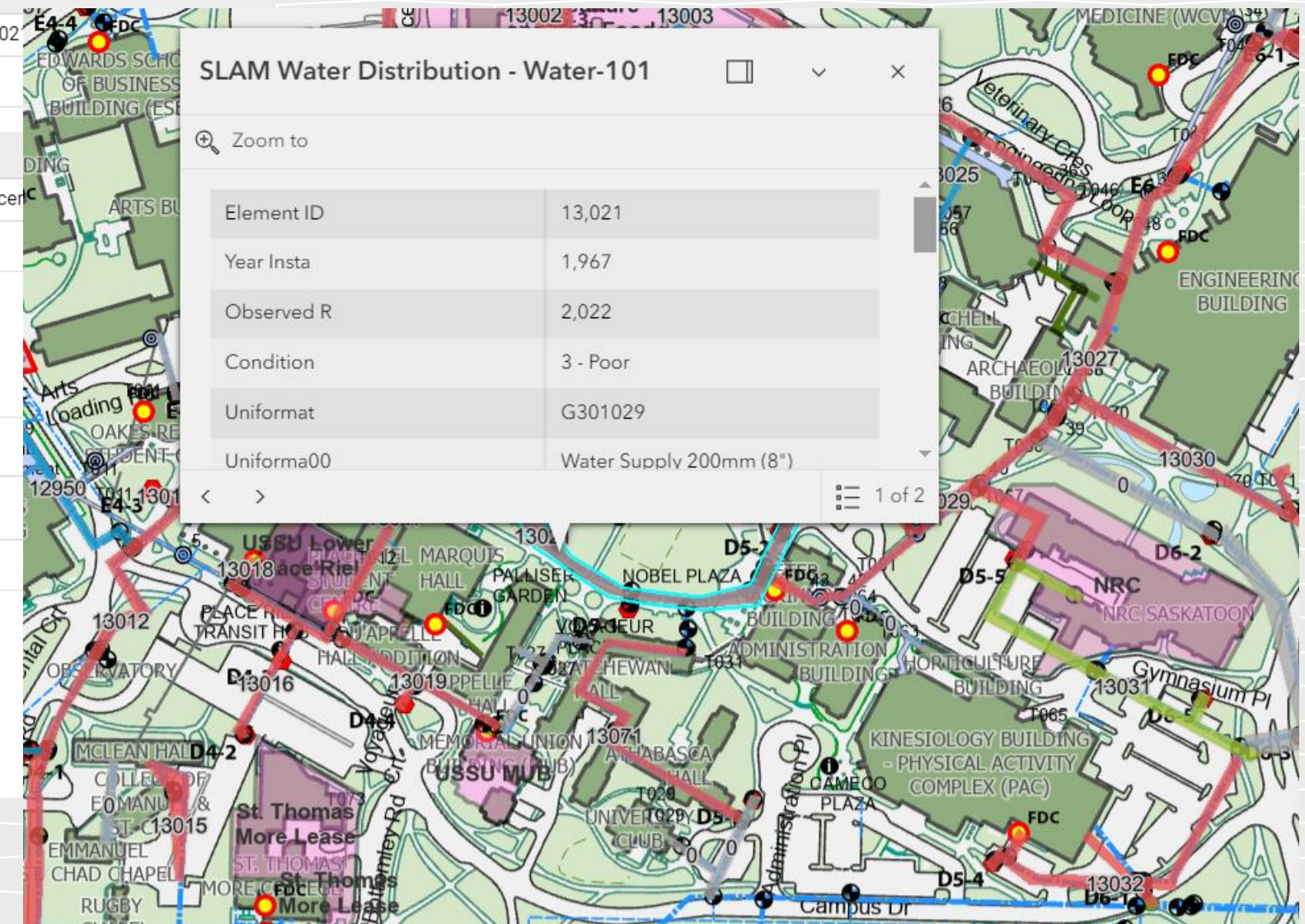
## Files

Filename
Nothing to display

## History

Curtis Loblick · Aug 23, 2021 - 12:36 pm  
Element created

Curtis Loblick · Aug 23, 2021 - 12:36 pm  
Assessment Merged



# Whitepaper

The screenshot shows the Esri Canada website navigation menu with 'Blog' selected. The breadcrumb trail is 'Home > News & Updates > USask unites SLAM and ArcGIS to create self-serve asset condition maps'. The article title is 'USask unites SLAM and ArcGIS to create self-serve asset condition maps', dated 'OCTOBER 30, 2023' by 'DANI PACEY'. The article text discusses how the University of Saskatchewan (USask) is using Roth IAMS's SLAM CAP software and Esri's ArcGIS suite for asset management. A footer note states: 'The University of Saskatchewan (USask) is one of Canada's leading research-intensive universities.'

[Improving campus asset management using SLAM and ArcGIS \(esri.ca\)](#)



ASSET MANAGEMENT TECHNOLOGIES

# What Does the Future Hold

# Specific Infrastructure Assessments

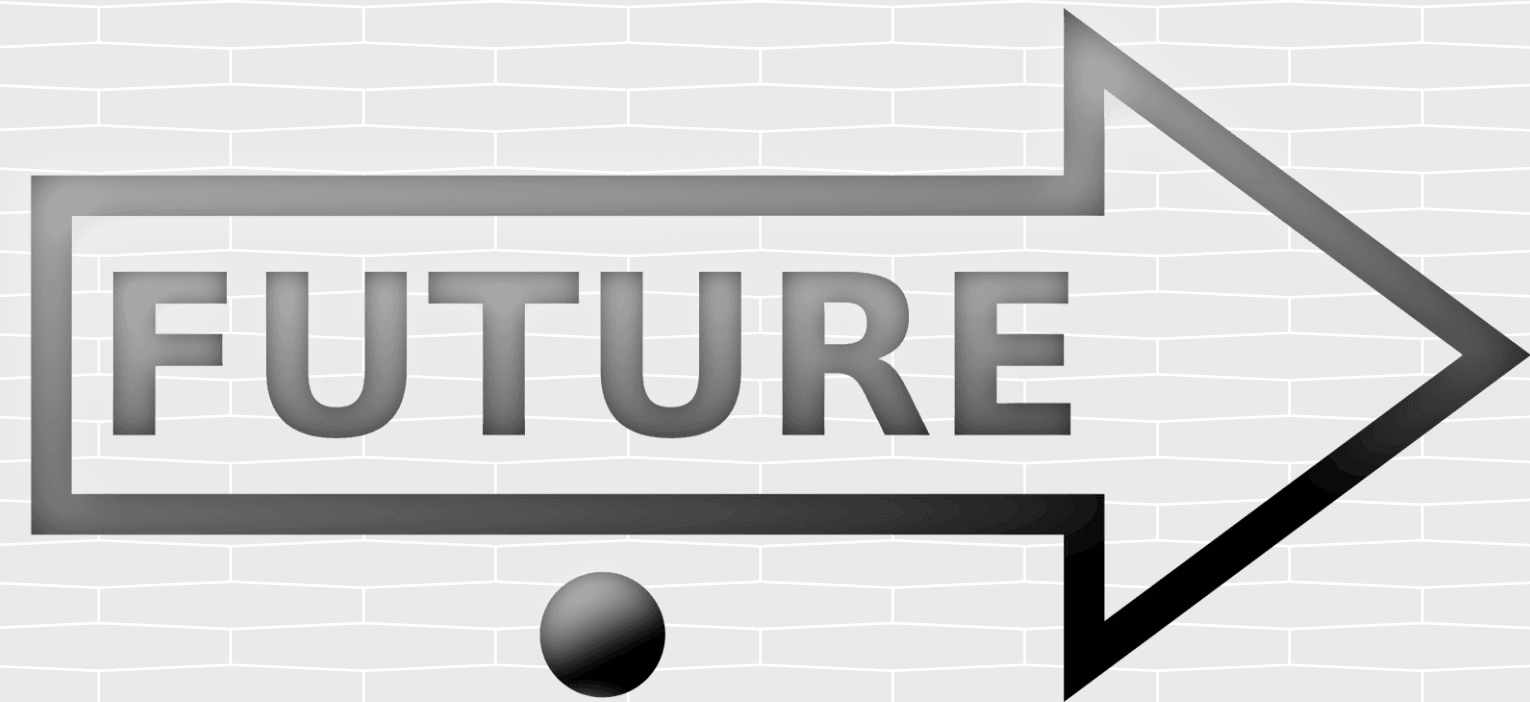
- Roads
- Sanitary Sewer
- Storm Sewer
- Annual Roof Assessments





# Where are We Going

- Complete refinement of Infrastructure replacement value
- Refine SLAM unit costs for infrastructure
- Ongoing FCAs - 20% per year goal



# A Final Thought.....



**UNCLE SAM WANTS YOU  
TO STOP SAYING  
DM.**

**DEFERRED MAINTENANCE**

Roth **IAMS** **10** YEARS  
Integrated Asset Management Strategies 2014 - 2024

This message is brought to you by Roth IAMS.  
Our vision is To Solve the World's Deferred Capital Renewal and Maintenance (DCRM) Backlog Crisis.

# Question and Answers



# Contact Us

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**(306) 966-2054**



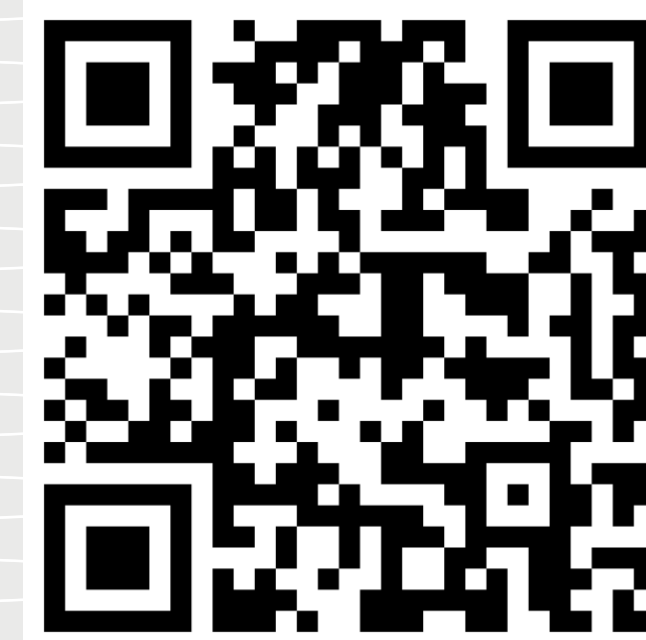
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