

Utility Asset Data Management and Visualization

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Learning Objectives

1. Understand good-practices for ensuring data quality in local government
2. Learn why data quality is needed before data integration can be done with integrity
3. Distinguish which asset attributes are important to financial decision-making
4. Gain insight on visualizations that can simplify what is otherwise complex data

Our Viewpoint



Who we are:

- Data Management & Visualization professionals
- Started as a GIS company
- We work at the intersection of department information systems

Who we are not:

- Financial experts
- Public Works or engineering experts

What Types of Assets Are We Discussing

These



Not These

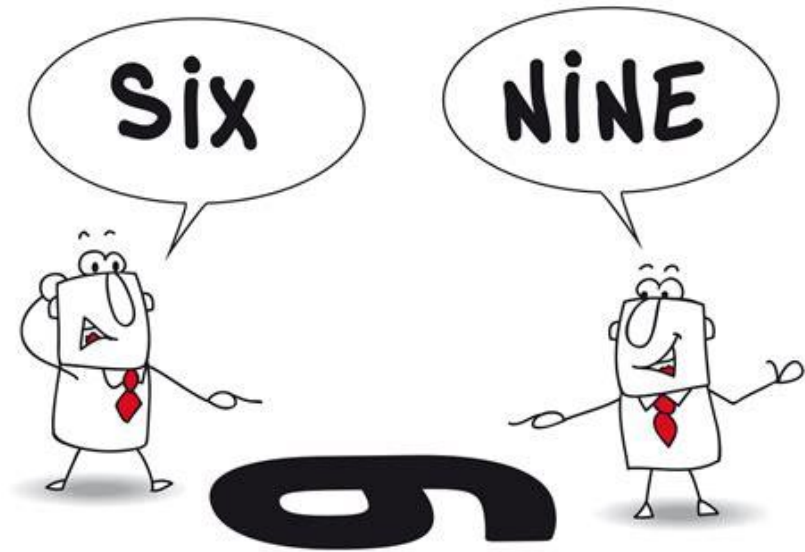


Observations

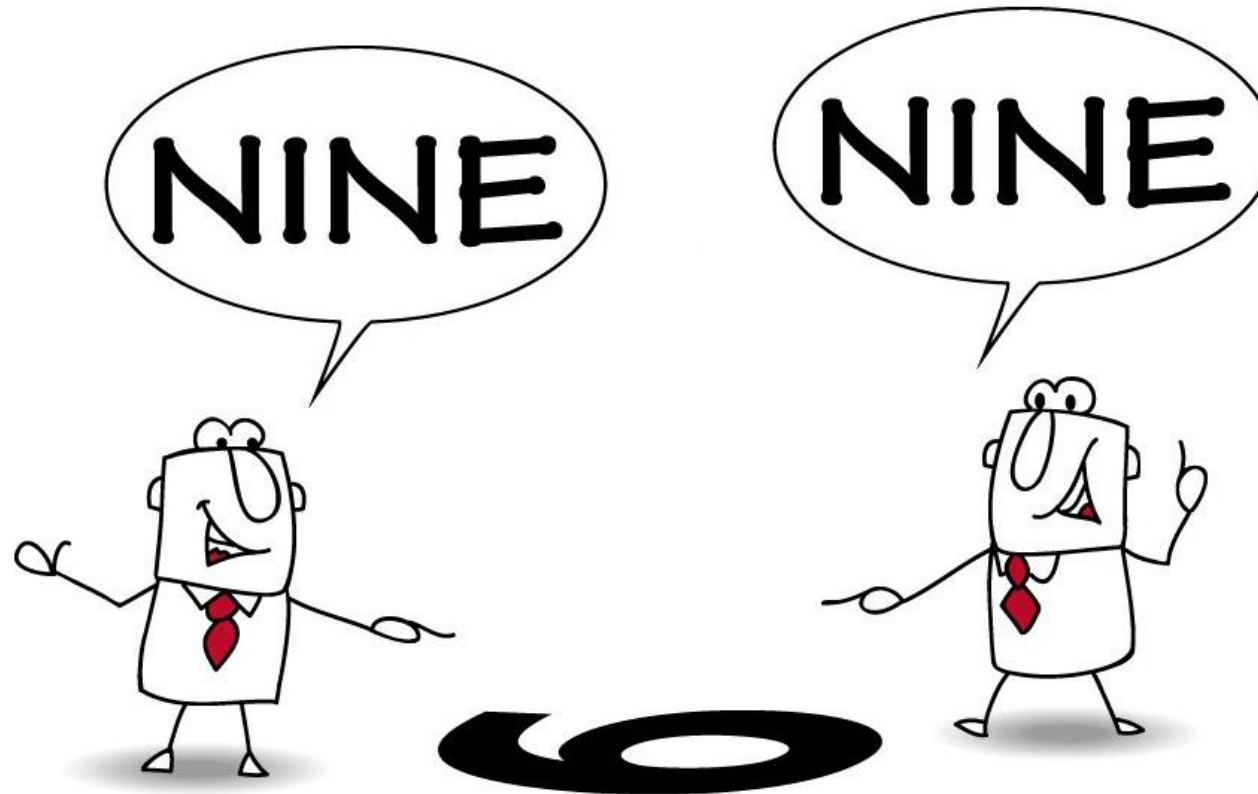
Multiple methods for calculating asset inventory and value

Lots of estimating going on

Lack of confidence that data could be accurate



Proposition – One Source



What Stops Us



Local government can be complex

Recognition that data management is a core business of government

Overcoming common paradigms

Automation without integration

Data Quality

Leadership alignment and commitment

Organizational clarity and reinforcement

Imbed in all human systems

Mistake proofing



Purpose Driven Integration

Reduce and eliminate data duplication

Determine your primary-keys and mandate consistency

Reinforce stakeholder teams for enterprise datasets

Build only the data you need



Attributes That Make a Difference

Water Main

Install Date
Material
Dimension
Length

Gravity Main

Install Date
Material
Dimension
Length

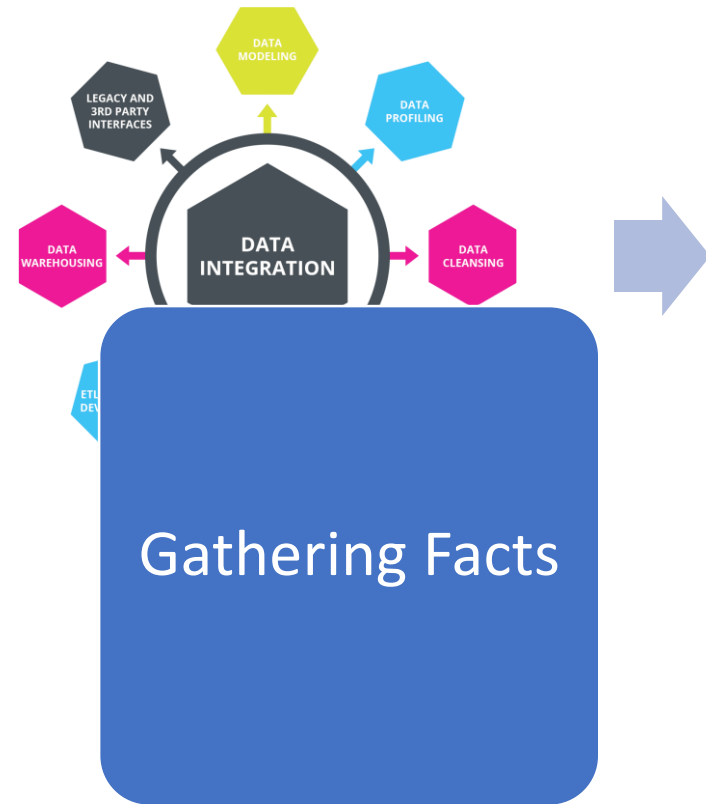
Lining Type
Lining Date

Roadway

Install Date
Material
Dimension
Length

Curb/Gutter
Resurface Type
Resurface Date
Condition

Simplify the Complex



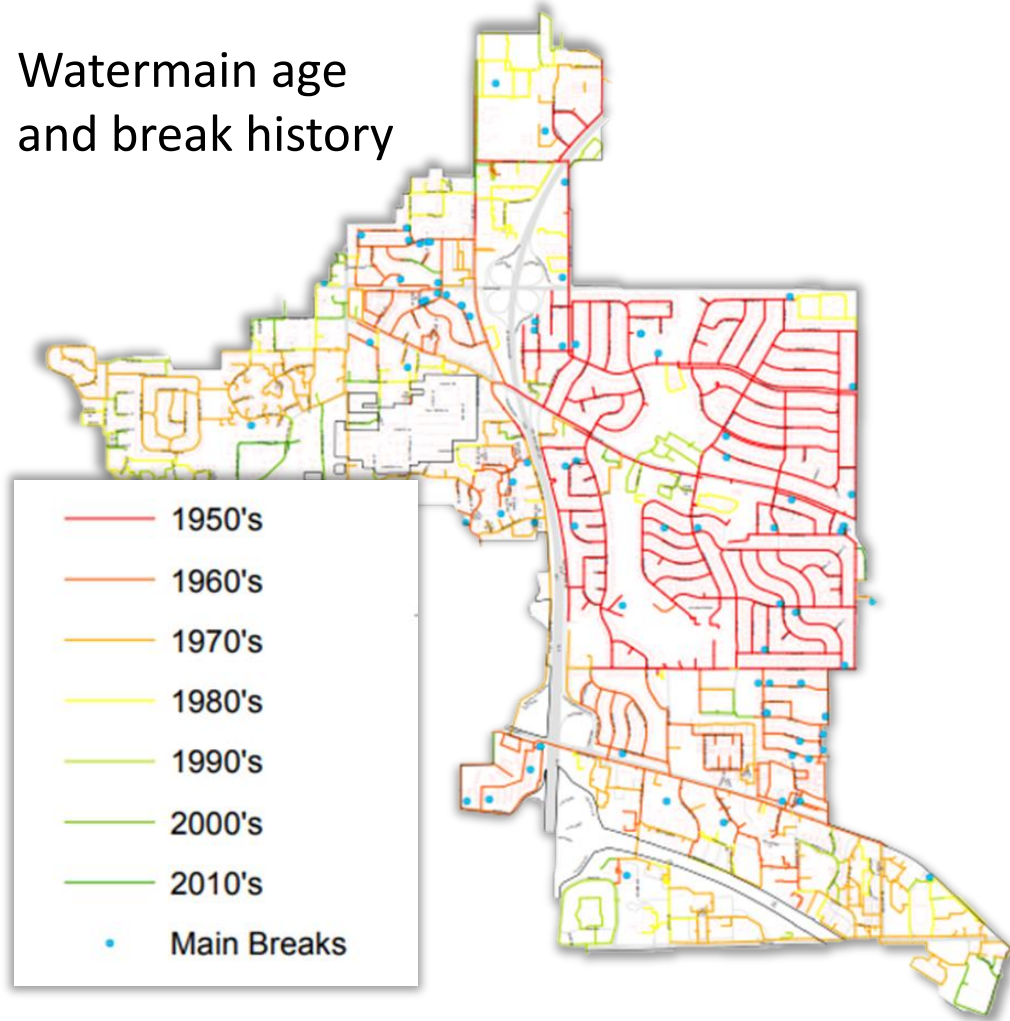
Decision
Process



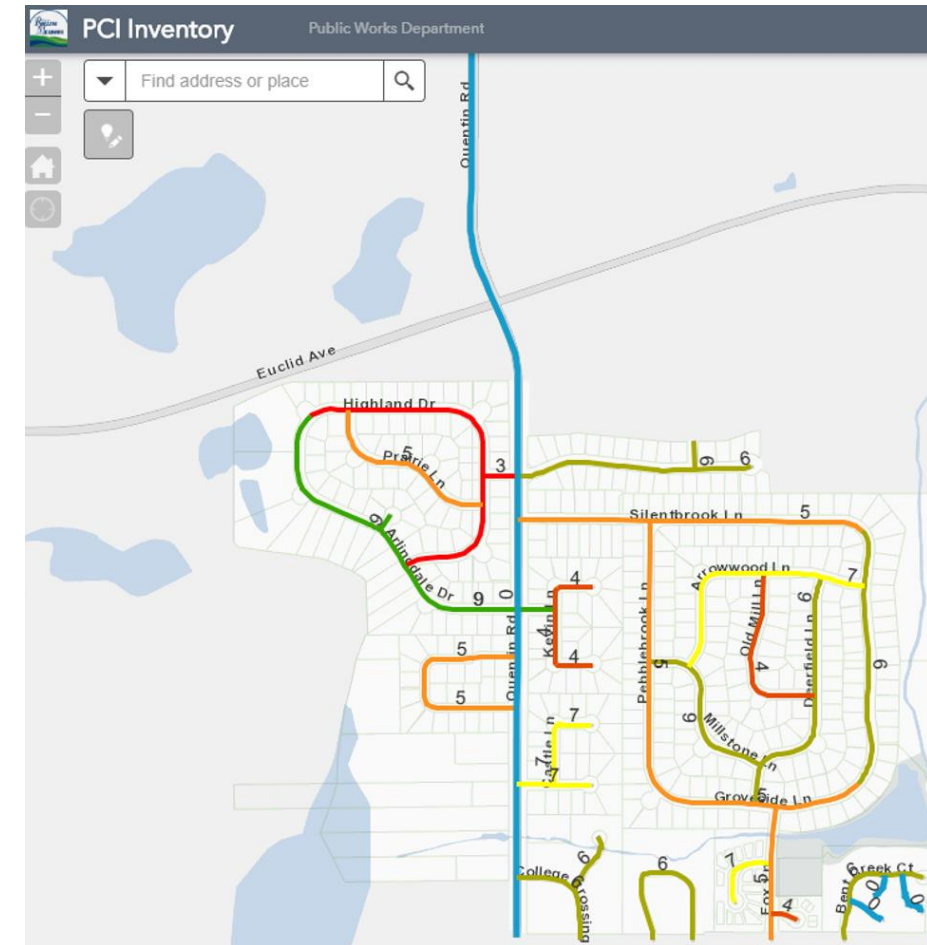
Communicating
Decisions

Gathering Facts

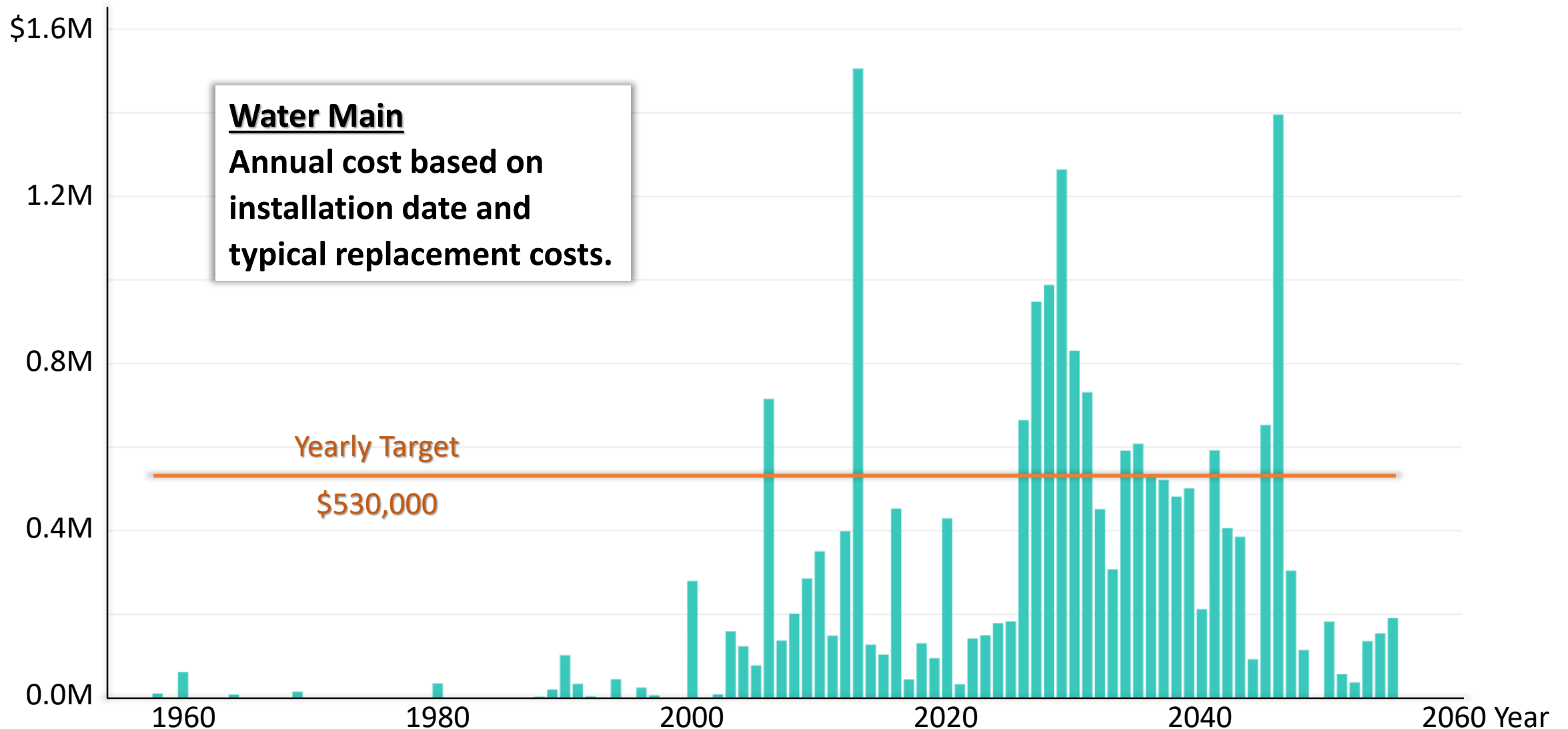
Watermain age
and break history



Road condition and history



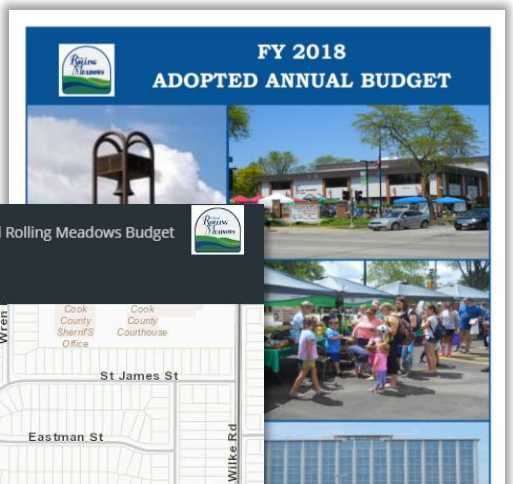
Decision Process - Forecasting Using Data



Communicating Decisions

323 Pages

7 Web Pages



2018 Rolling Meadows Capital Projects

[Roadway Projects](#)[Water Projects](#)[Sanitary and Storm Sewer Projects](#)[City Hall Projects](#)[Police Department Projects](#)[Fire Department Projects](#)[Public Works Improvements](#)

A Story Map

Roadway Projects

Roadway Resurfacing

Capital Improvement Program

Project Information Form
FY 2017 - 2022

Project Name: ROADWAY RESURFACING PROJECT - GRANT A
Location: KIRCHOFF - WILKE TO HICKS C & E
Department: Public Works Division: Streets
Account Number: 610743000020 Project Code: LR000281 Fund: Local Road
Project Purpose:
70% Federal STP grant funding requested to patch and resurface Kirchhoff Road from New Wilke Road to Hicks Road. Project costs include engineering. Grant amount for this project will be \$1,600,000, which will be paid by other agency. City will be invoiced for its share, which is reflected below.

Five Year Cost:	\$500,000.00	Remaining Cost	\$500,000.00			
Outside Funding Source:	\$0					
Project Begin Date: 1/1/2018	Projected cost per year					
Project End Date: 12/31/2018	2017	2018	2019	2020	2021	2022
	\$0	\$500,000	\$0	\$0	\$0	\$0

Priority: 3 - Near Term Project Status: 1 - No Work to Date

Justification (The item checked best indicates the need):

☐ Productivity Improvement ☒ Appearance Improvement ☒ Service Improvement ☒ Safety Enhancement

Key Takeaways

We are in the data management business

We need leadership to change old paradigms

We need to reinforce stakeholder teams

We need to stop errors before they enter our systems

We need to integrate (only) what is important to the organization

