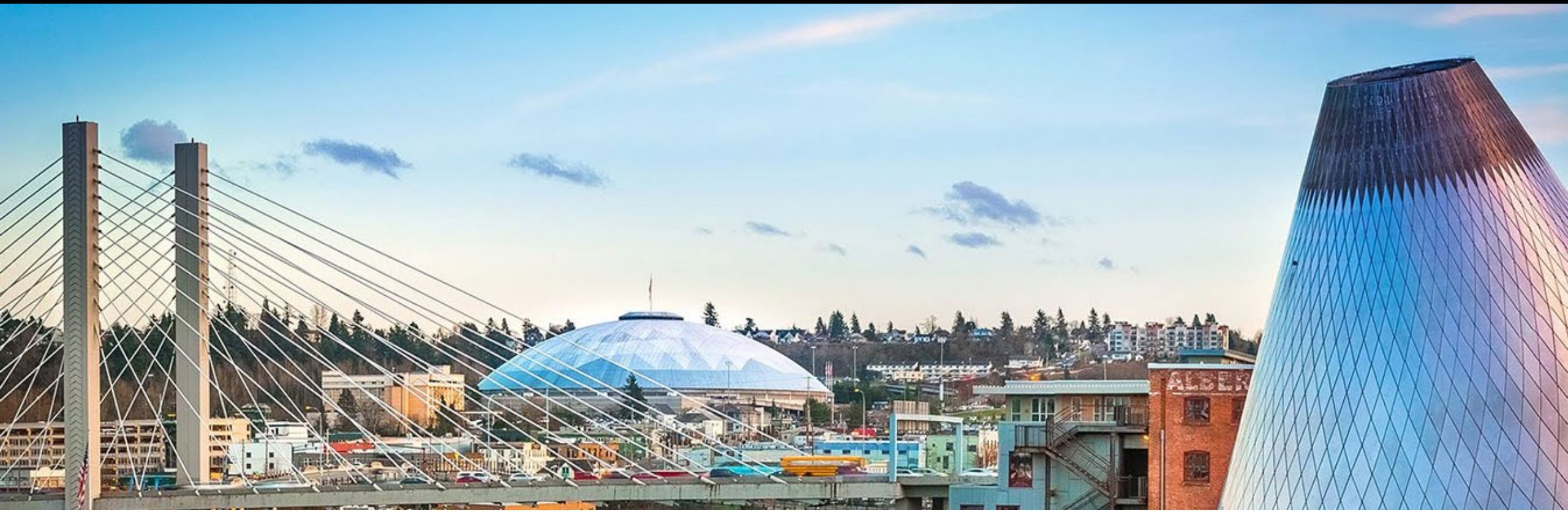
Utility Modernization Strategy

Smart Water



Corey Bedient
Asst. Division Mgr. of Water Distribution Capital Engineering

TACOMA WATER
TACOMA PUBLIC UTILITIES

Smart water uses sensor technology, automation, & real-time control to improve the efficiency & reliability of water operations

- Enhances resiliency
- Improves service quality
- Delivers cost savings

Smart water builds off new & existing water utility technologies

Advanced meters

Communications networks

sensus
a xylem brand

Utility geospatial platforms

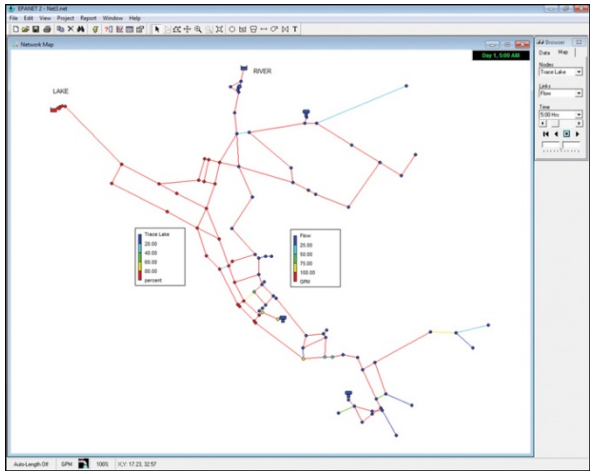
esri

Water SCADA systems

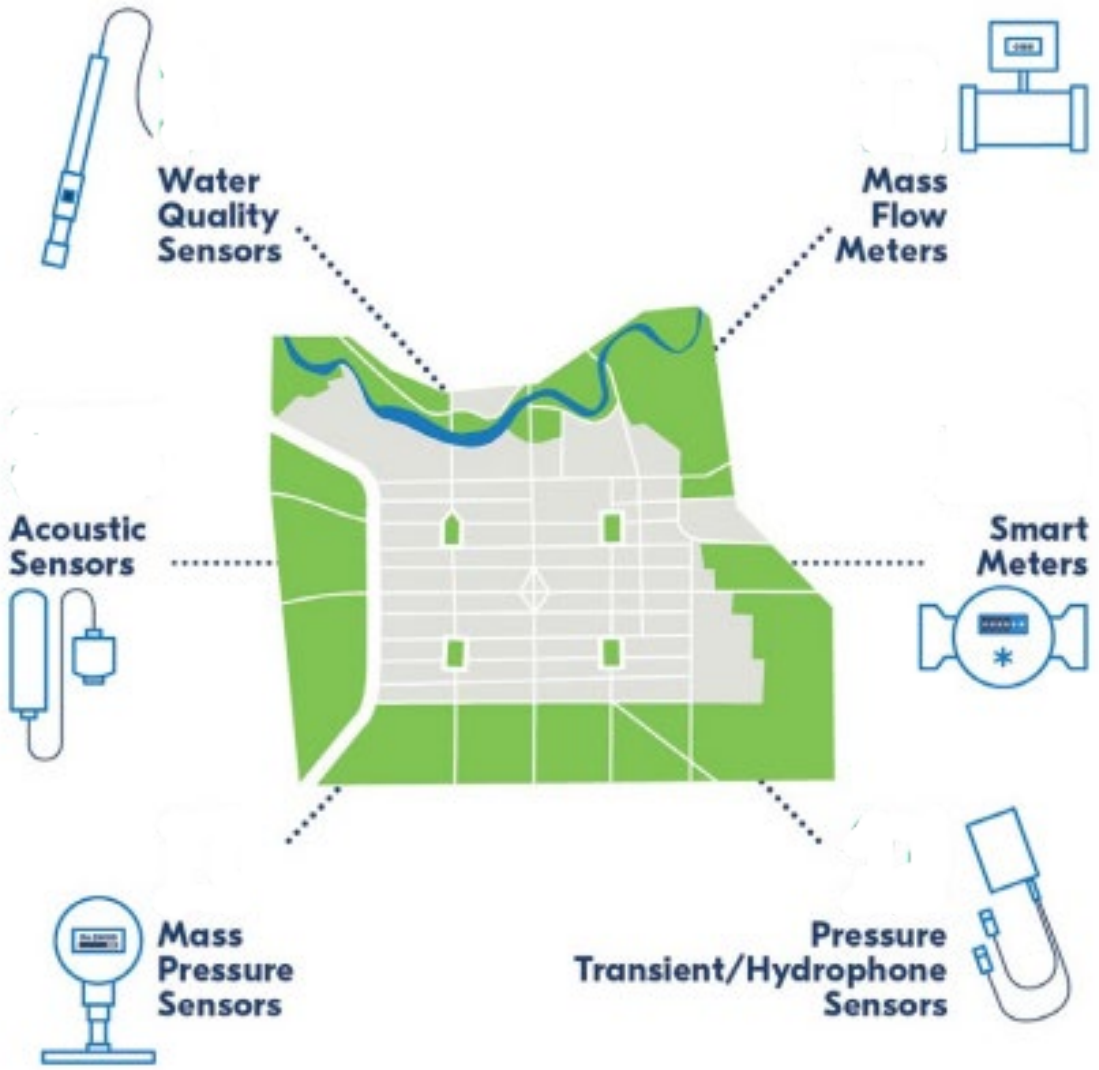
Asset management

SAP®

Water system hydraulic model



Smart water network



Emerging smart water industry examples

Leak detection

Pressure regulation

Asset management

Smart water enables utility modernization objectives

Equitable customer service

Environmental leadership

Economic development

Reliability & resiliency

Advanced meters enable future smart water capability for TPU

Advanced Meters Customer Benefits Roadmap

Updated September 2019

Customer Benefits Key

Reliability & Resiliency | Billing & Payment | Convenience

Phase 1 Functionality

To be completed by mid 2022

1. Basic meter to bill
2. Basic meter data reporting
3. Monthly billing
4. Customer meter options policy
5. Support for existing manual prepay process

1. Enhanced customer portal
2. Consumption data available via new portal
3. Enhanced outage notifications
4. Abnormal consumption notifications
5. Emergency water leak notifications

1. Remote meter reading
2. Remote disconnect/reconnect for power
3. Automated service order creation

Phase 1 Dependencies

1. Deploy AMI Network & Meters
2. SAP Integration
3. MDMS Implementation
4. New Customer Portal Deployment & Integration
5. New SAP Functionality for Fees

Phase 2 Functionality

To be rolled out between 2021 and 2023

1. Enhanced prepay functionality (via portal)

1. Asset analytics use cases
2. Engineering analysis & systems planning
3. Enhanced voltage monitoring
4. Revenue protection

Phase 2 Dependencies

1. Data Lake Integration
2. webMethods ESB Integrations
3. AMI Stabilization Work

Enabled Functionality

Features enabled by AMI not in program scope
To be prioritized after 2023

1. New real-time rate models
2. Support for multi-service prepay (water, sewer, trash)

1. Enhanced SAP contact center tools via CIC upgrade
2. Enhanced demand & load forecasting
3. Enhanced grid & outage mgmt. operations
4. Distribution automation
5. Smart water capability
6. Smart City integration

Future Dependencies

1. SAP Customer Interaction Center Replacement
2. OMS & ESRI GIS Integration
3. Energy Management System Integration
4. SAP Configuration for New Rates
5. Embedded Taxes in Rates Removed from SAP

2020 | 2021 | 2022 | 2023 | 2024 and beyond…