



AWWA WEBINAR SEPTEMBER 16, 2020 | 11:00 A.M. – 12:00 P.M. MT

**Free Webinar:**  
Smart Water 2020: Building a Resilient Water Future

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## WEBINAR HOST



**Jim Siriano**  
**Program Manager**  
**American Water Works**  
**Association**

Jim Siriano works for AWWA's Engineering and Technical Services Department. He provides technical support to several of the Association's volunteer groups, including the Innovation Initiative. Prior to working at AWWA, Jim managed the State of Vermont's Drinking Water Capacity Development Program, helping drinking water utilities improve their technical, managerial, and financial capabilities. He also worked on a variety of stormwater initiatives and social, economic, and environmental assessments as a consultant for Science Applications International Corporation.

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AWWA | SWAN  
**INTERNATIONAL SMART WATER SYMPOSIUM**  
VIRTUAL EVENT | NOV. 10-11, 2020

American Water Works Association  
SWAN  
THE SMART WATER NETWORKS FORUM

[www.awwa.org/Events-Education/Smart-Water](http://www.awwa.org/Events-Education/Smart-Water)

Smart Water Networks Forum – [www.swan-forum.com](http://www.swan-forum.com)

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## WEBINAR MODERATOR



**Seth Johnstone**  
**Enterprise Program Lead –**  
**Global Water Practice**  
**Esri**

Seth Johnstone is the Enterprise Program Lead for Esri's Global Water Practice and has worked with Esri's water, wastewater, and stormwater customers for the past eight years. In his current role, he leads a team of account managers who support the large utilities, authorities, investor-owned utilities, and national nonprofits in the water industry. He has more than 15 years of experience in the utilities industry.

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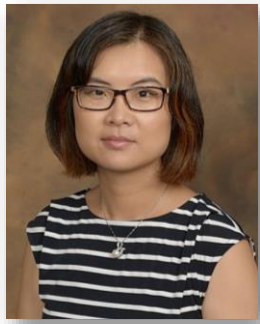
## PANEL OF EXPERTS



**Jay Krauss**  
General Manager  
Sammamish Plateau  
Water



**Ross Clark**  
IT Project Manager Sr  
City of Austin, Austin  
Water, IT Services



**Ting Lu, PhD, PE**  
Business Practice  
Leader – Digital  
Solutions  
Clean Water Services



**Michael Salas**  
SVP, Chief Information  
& Digital Officer  
SUEZ in North America

## AGENDA

- |  |               |
|--|---------------|
| I. Smart Water 2020: Building a Resilient Water Future | Jay Krauss    |
| II. Ross Clark's Presentation Title                    | Ross Clark    |
| III. Ting Lu's Presentation Title                      | Ting Lu, PhD  |
| IV. Michael Salas's Presentation Title                 | Michael Salas |

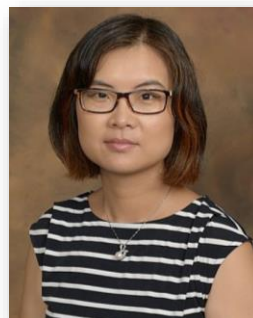
### ASK THE EXPERTS



**Jay Krauss**  
Sammamish Plateau  
Water



**Ross Clark**  
City of Austin, Austin  
Water, IT Services





**Ting Lu, PhD, PE**  
Clean Water Services



**Michael Salas**  
SUEZ in North America

Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

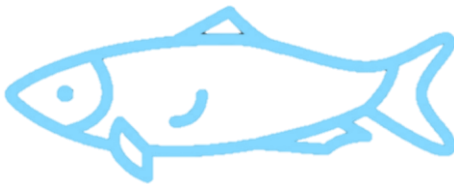
## SMART WATER 2020: BUILDING A RESILIENT WATER FUTURE

Jay Krauss  
General Manager  
Sammamish Plateau Water

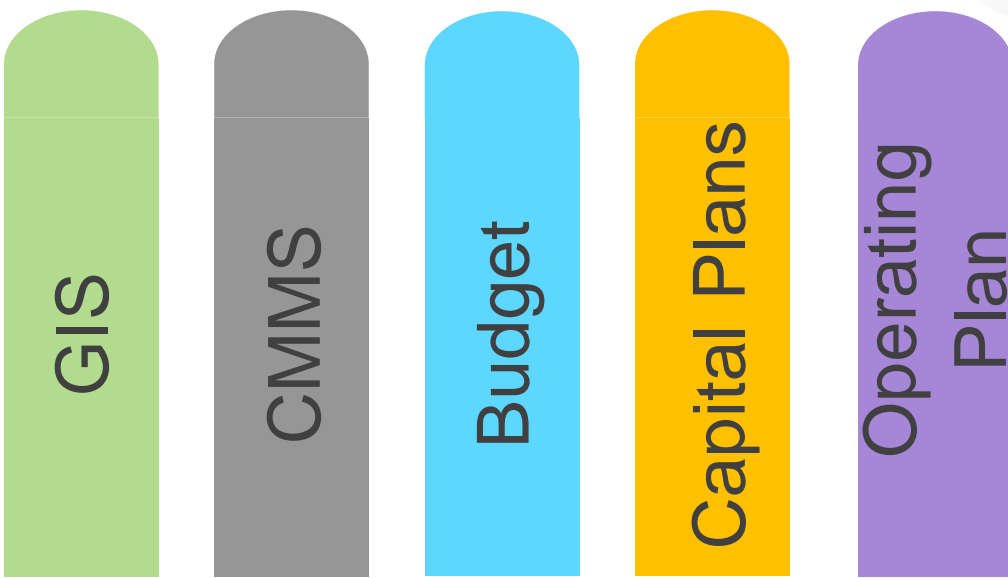


# SUSTAINABILITY (RESILIENCY) IS... ENDURANCE OF SYSTEMS & PROCESSES

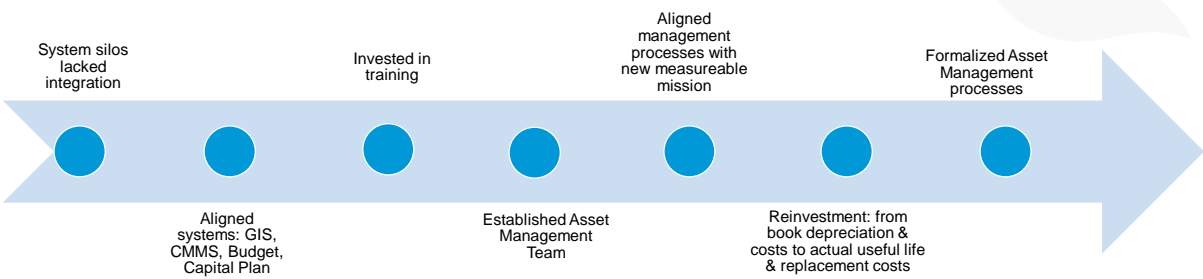
Sammamish Plateau Water will provide safe, efficient, and reliable water and sewer services by being a leader in the planning and the practice of fiscal and environmental stewardship.



# MATURATION OF SYSTEMS FOR BETTER DECISIONS (AND RESILIENCY)



# OUR JOURNEY

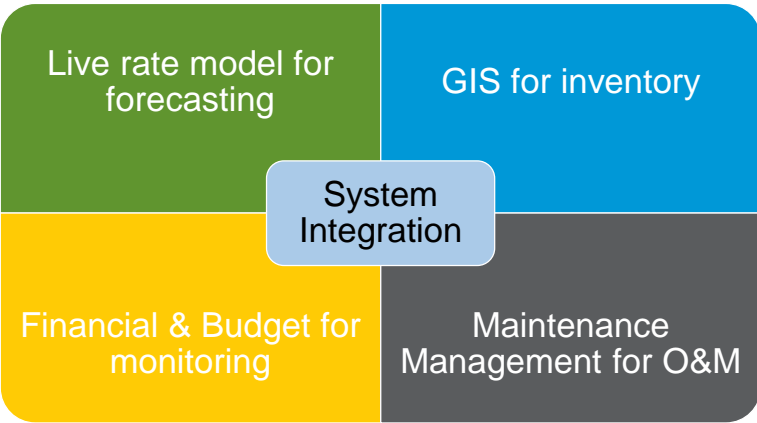


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# ASSET MANAGEMENT SYSTEM INTEGRATION



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## STEWARDSHIP AND SUSTAINABILITY

- Sustainability with Asset Management (industry best practice)
- Reserves set aside for future infrastructure replacement

### Capital Replacement Reserve Formula

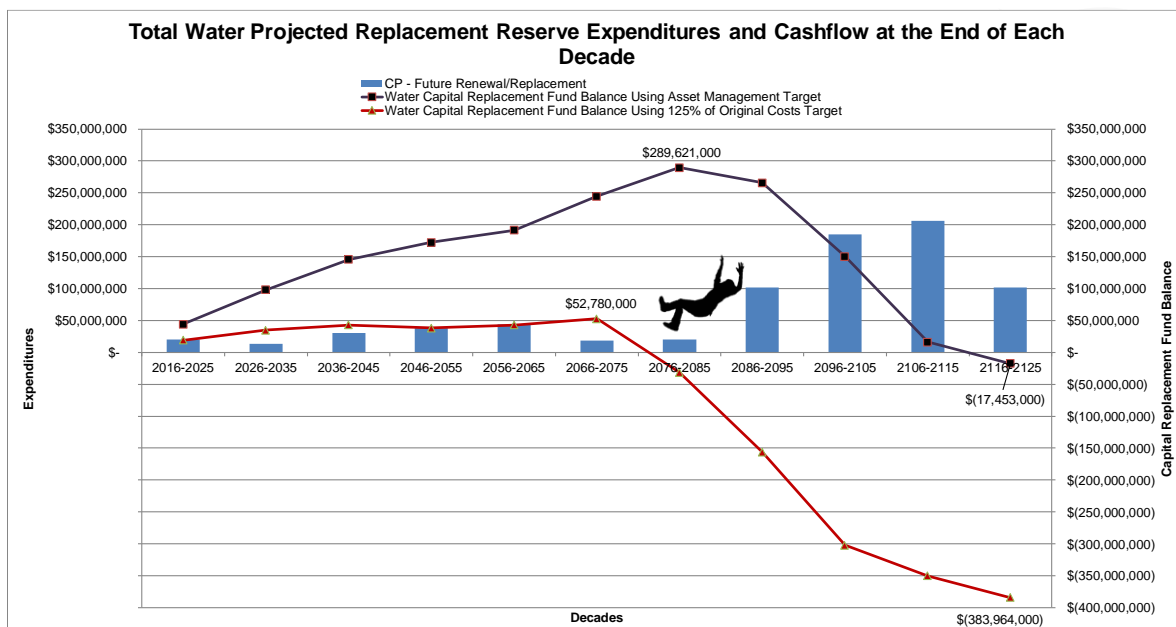
$$\begin{aligned} & \text{ASSET VALUE / USEFUL LIFE} \\ & \times \text{REPLACEMENT VALUE ASSUMPTION} \\ & = \text{ANNUAL REPLACEMENT CONTRIBUTION} \end{aligned}$$

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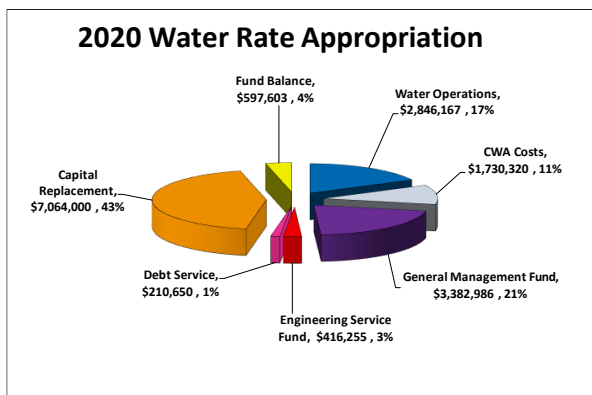
## LONG-TERM PLANNING AND FINANCING



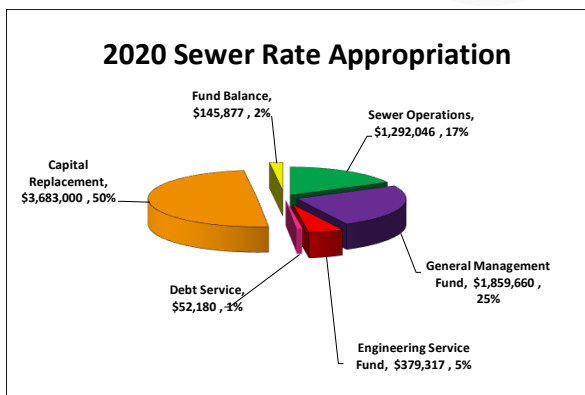
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## RATE REVENUE APPROPRIATIONS



2020 Total Water Rate Revenue: **\$16,247,980**



2020 Total Sewer Rate Revenue: **\$7,412,080**

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## OPERATIONS DASHBOARD

- Real time data from CMMS and GIS
- PM progress in relation to operations plan
- Allows for tracking labor hours spent in different work Order types (Planned vs. Reactive)
- Establishes baselines for future planning

2019 Water Operations Plan Summary		Budgeted Hours	Total PM Hours	Reactive Work Hours (R & OC)	% Reactive (R + OC) Target less than 25%	YTD Labor Hours	FTE Count	Budget Hrs Utilization
Water Admin	Total	9,230	4,939	220	3%	8,448	4.1	92%
Wells and Production	Total	1,345	1,257	107	8%	1,363	0.7	101%
Water Treatment	Total	3,035	2,575	1,231	32%	3,806	1.8	125%
Booster Stations	Total	679	665	25	4%	690	0.3	102%
Storage	Total	480	88	62	34%	183	0.1	38%
Water Mains and Appurtenances	Total	8,795	2,128	1,974	27%	7,395	3.6	84%
Meters	Total	1,350	12	187	29%	649	0.3	48%
Water SCADA	Total	46	2	51	96%	53	0.0	116%
<b>Total</b>	<b>Total</b>	<b>24,960</b>	<b>11,666</b>	<b>3,856</b>	<b>17%</b>	<b>22,588</b>	<b>10.9</b>	<b>90%</b>

2019 Water Operations PM Summary		Budgeted PM Hours	Annual PM Target	Target Unit	PM Work Completed	Units Maintained per Hour	Total Planned Maintenance Hours	% PMs Complete	PM FTE Count	YTD Labor Hours
Water Admin	Total	580	117	Varies	329	Varies	549	281%	0.3	672
Wells and Production	Total	1,345	1,526	Varies	1,737	Varies	1,257	114%	0.6	1,363
Water Treatment	Total	3,035	1,512	Varies	1,455	Varies	2,575	96%	1.2	3,806
Booster Stations	Total	679	590	Varies	724	Varies	665	123%	0.3	690
Storage	Total	480	18	Varies	24	Varies	86	133%	0.0	183
Water Mains and Appurtenances	Valve Survey	1,240	2,676	Each	1993	3.75	532	74%	0.3	719
	Hydrant Survey	1,200	764	Each	604	1.22	496	79%	0.2	657
	Blowoff Survey	525	325	Each	274	1.00	275	84%	0.1	336
	Air Vac Survey	800	233	Each	190	1.2	163	82%	0.1	338
	Leak Detection	60	-	Hours	-	-	-	0%	-	16
	Water Main Flushing	310	13,000	Feet	15,772	90.1	175	121%	0.1	250
	PRV Maintenance	1,100	52	Each	144	0.4	337	277%	0.2	483
Meters	Total	5,235	17,050	Varies	18,703	Varies	1,977	110%	1.0	2,799
	Total	1,350	86	Varies	122	Varies	450	142%	0.0	649
<b>Total</b>	<b>Total</b>	<b>12,704</b>	<b>20,899</b>		<b>20,686</b>		<b>7,123</b>	<b>99%</b>	<b>3.4</b>	<b>10,161</b>

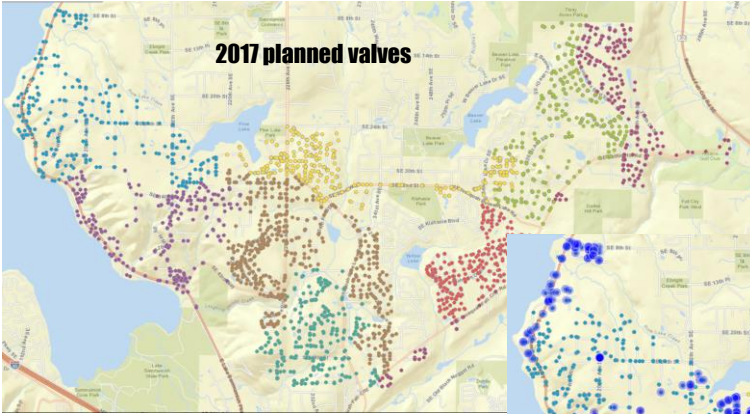
  

2019 Water Operations Reactive Work Summary		Budgeted PM Hours	Reactive Work Hours	% Reactive (R + OC) Target less than 25%	Construction and Development Work Hours	On Call Hours (OT)	Total Reactive Work Hours (R + C&D + OC)	Total Reactive FTE Count	YTD Labor Hours
Water Admin	Total	1,830	110	17%	430	105	645	0.3	1,286
Wells and Production	Total	680	89	16%	-	18	107	0.1	678
Water Treatment	Total	2,375	1,104	42%	-	126	1,230	0.6	2,938
Booster Stations	Total	227	19	14%	-	7	25	0.0	183
Storage	Total	480	39	34%	33	23	95	0.0	183
Water Mains and Appurtenances	Total	8,795	1,780	27%	3,294	194	5,268	2.5	7,395
Meters	Total	1,350	112	29%	-	75	187	0.3	649
Water SCADA	Total	46	13	96%	-	38	51	0.0	53
<b>Total</b>	<b>Total</b>	<b>15,783</b>	<b>3,265</b>	<b>24%</b>	<b>4,207</b>	<b>586</b>	<b>8,058</b>	<b>3.9</b>	<b>13,365</b>

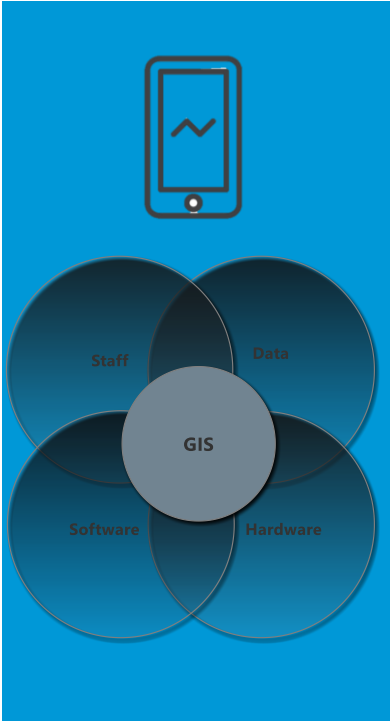
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# USING CMMS AND GIS FOR WO TRACKING - THEN



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## ENTERPRISE SYSTEM CONCEPT

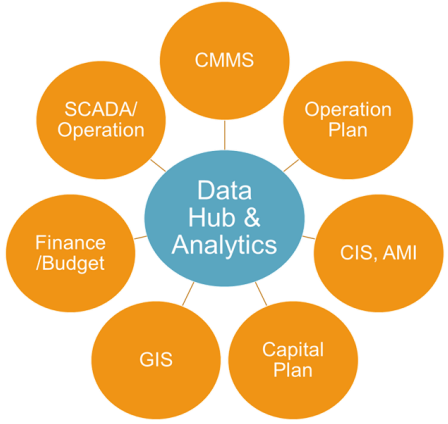
*“Technology is how we create wealth, how we cure diseases, how we’ll build an environment that’s sustainable..” – Dean Kamen*

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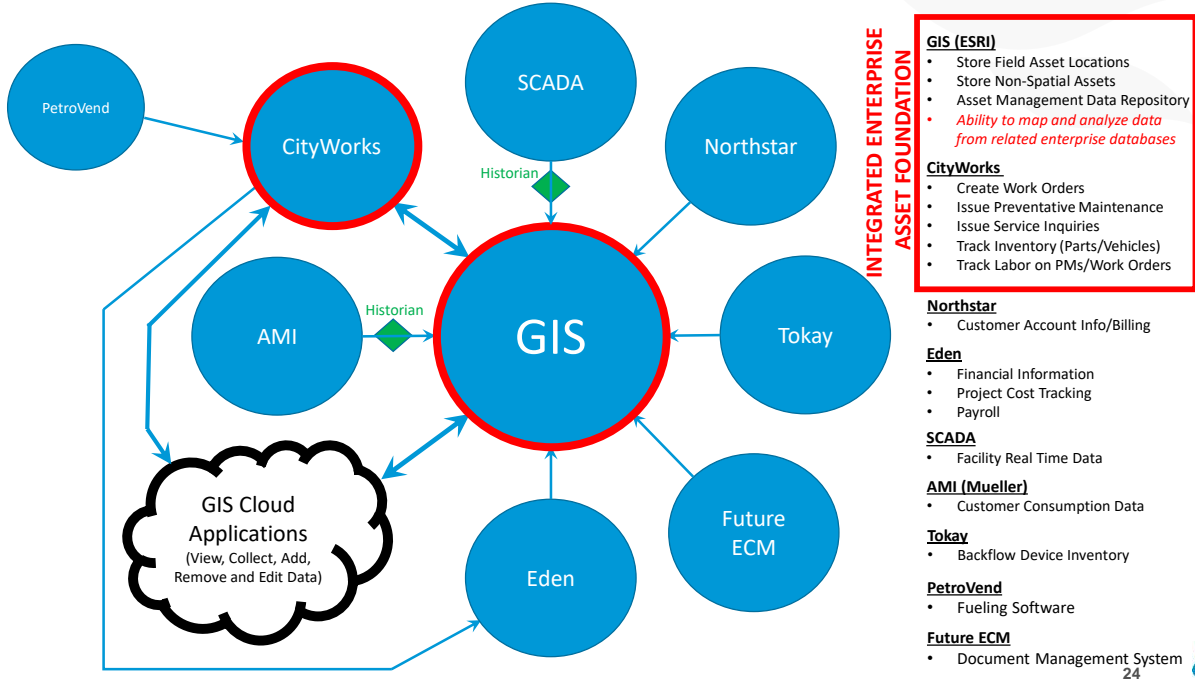


# CREATING A SUSTAINABLE (RESILIENT) UTILITY

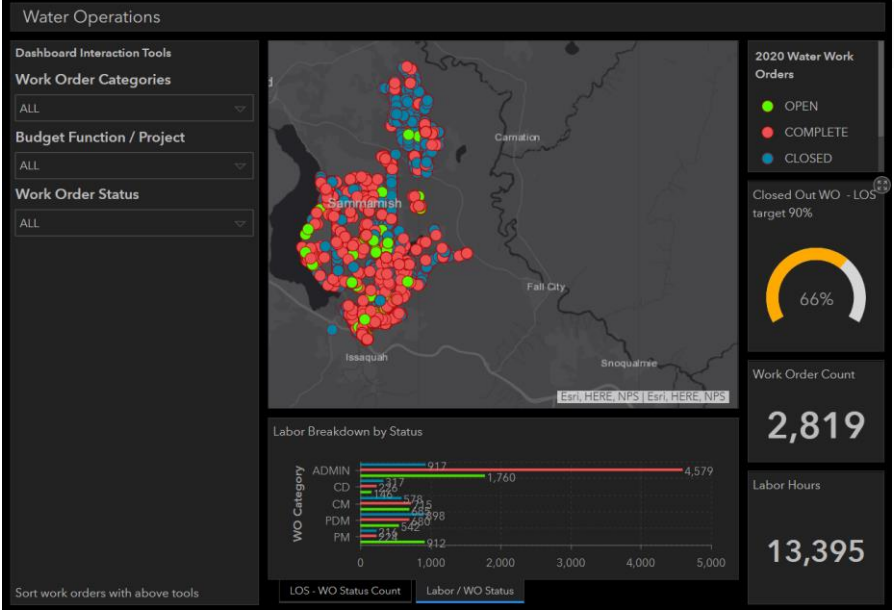


- Building excitement with Cross Functional Teams
- Enterprise Platforms
- Sustainability Policy
- Long-term Planning/Financing
- Processes vs. Plans
- Culture and Commitment - It's about the people

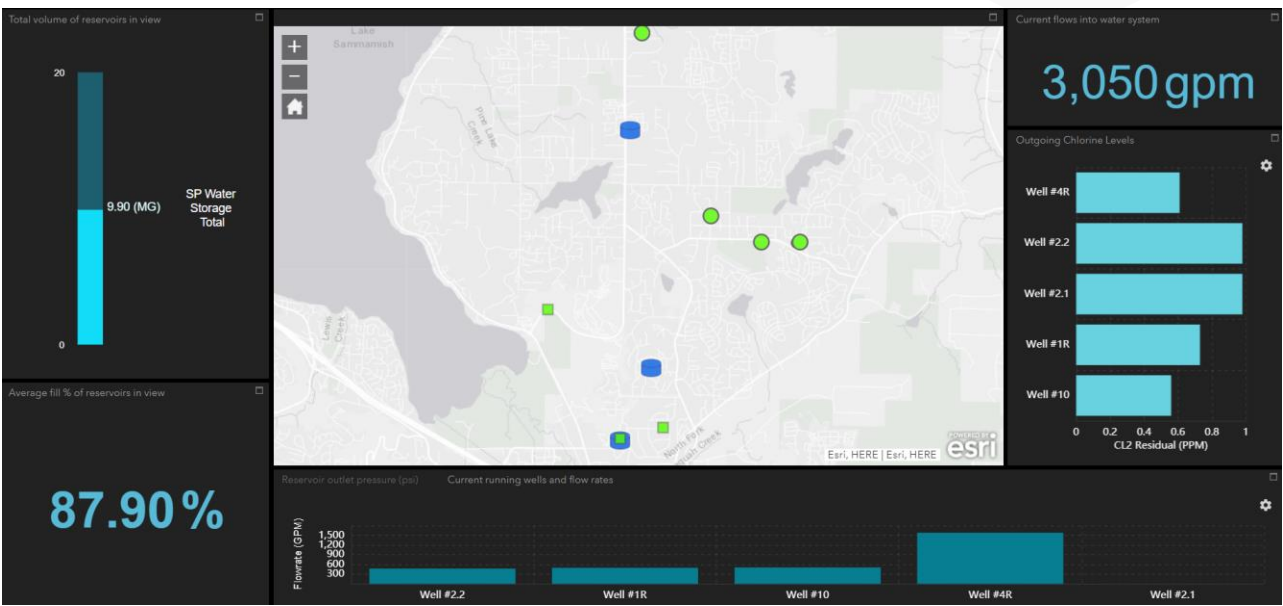
## GIS CENTRIC APPROACH FOR ENTERPRISE SOFTWARE INTEGRATION AT SPWSD



# USING CMMS AND GIS FOR WO TRACKING - NOW

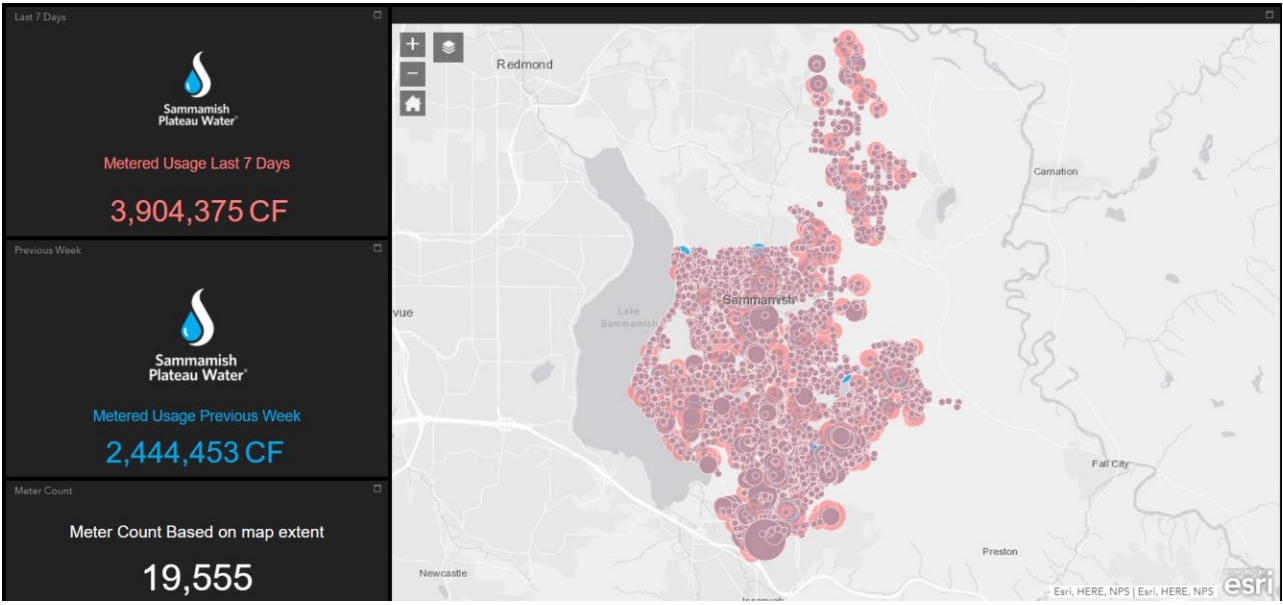


Screen captured 8/27/2020



Screen captured 8/27/2020





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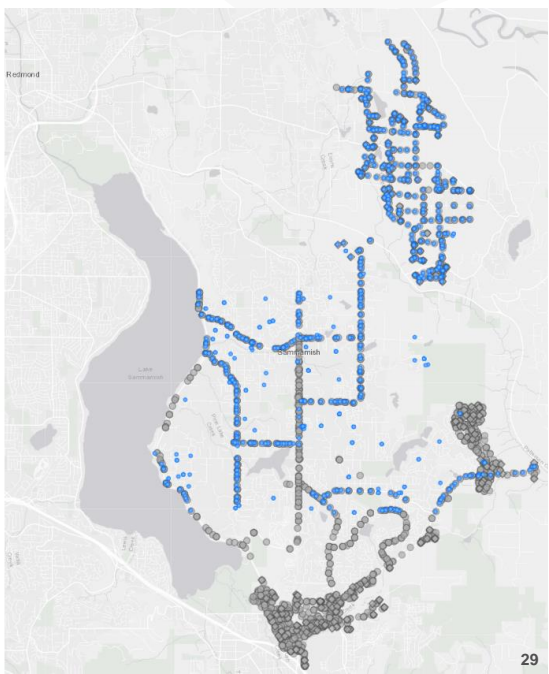
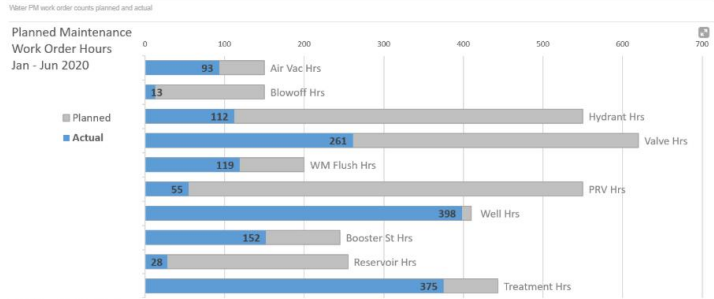
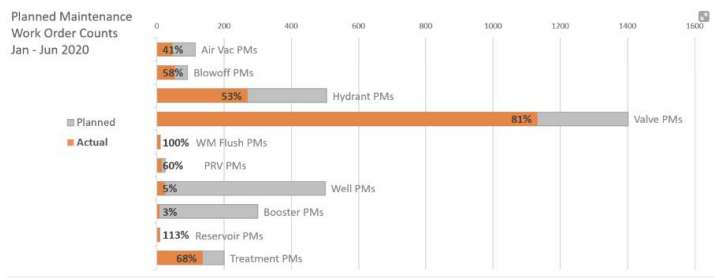


Screen captured 8/27/2020

# BEST LAID PLANS - COVID

## Water PM data Jan - Jun 2020

The map on the right shows the actual vs. planned activities represented in the graphs below. These graphs represent where we are in relation to where we should be in accomplished PM work order counts, and then displayed in the second graph as actual to allocated hours it took to accomplish those PM work orders. [Click the graphs to enlarge](#)



## THE OPPOSITE OF SUSTAINABLE IS TEMPORARY

IS YOUR ORGANIZATION POSITIONED FOR SUSTAINABILITY?





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## SPWATER TECHNOLOGY CENTRIC OUTCOMES

- Asset management and GIS provided opportunities for technology integrations
- Integrations and applications were managed in-house
- Systems evolved to enterprise integrations
- Enterprise platform supports fiscal and infrastructure sustainability
- AMI data brings another dimension of analytics
- SPWater enterprise = digital legacy
- Initiatives took 15 years to evolve

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### ASK THE EXPERTS



**Jay Krauss**  
Sammamish Plateau  
Water



**Ross Clark**  
City of Austin, Austin  
Water, IT Services



**Ting Lu, PhD, PE**  
Clean Water Services



**Michael Salas**  
SUEZ in North America

Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

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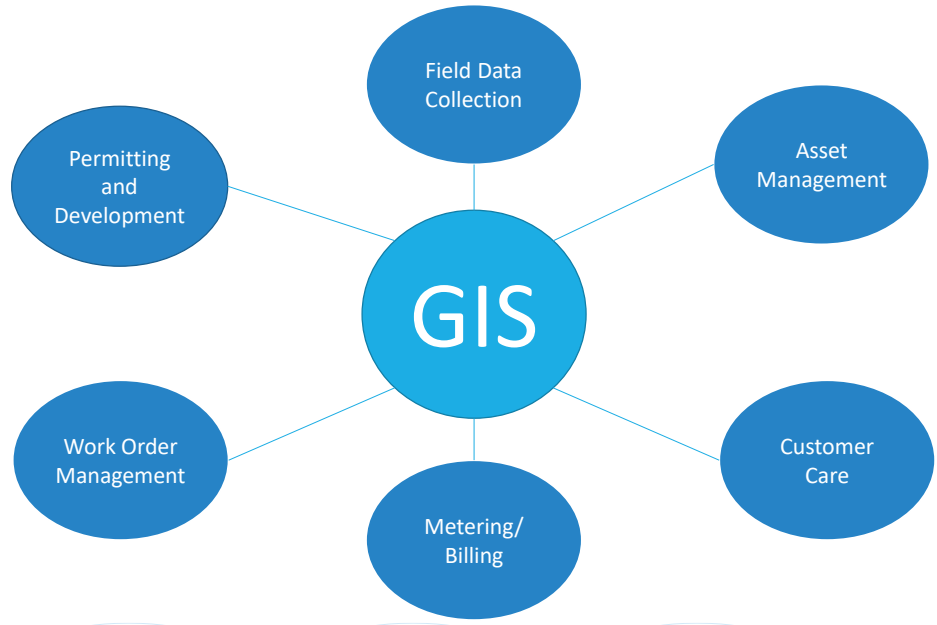


# Austin Water's Path to Resiliency

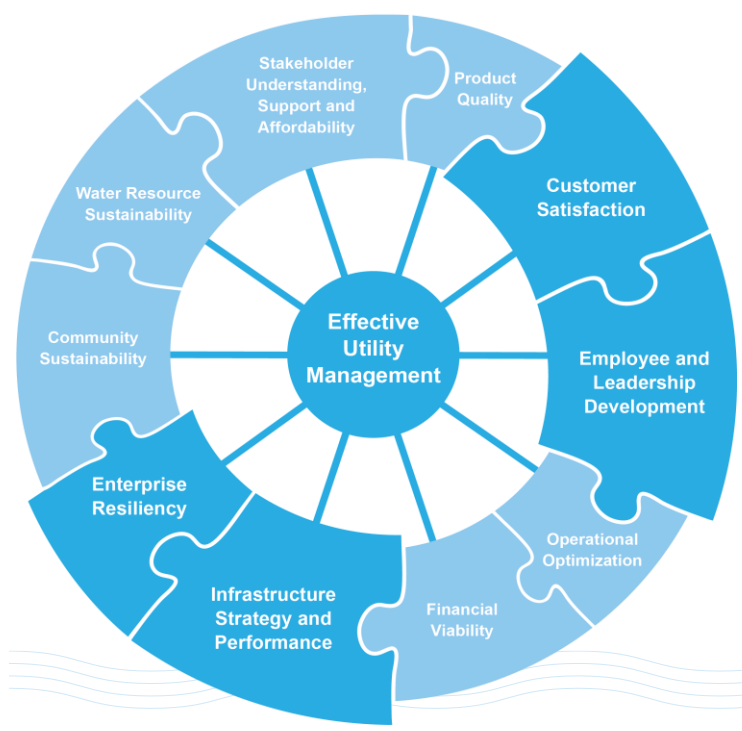
Ross Clark September 16, 2020



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# Effective Utility Management

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## EUM Successes

- ◆ Gains in Customer Satisfaction across the board, placing Austin Water 16<sup>th</sup> in the nation for large utilities and ahead of all other large metros in Texas
- ◆ Austin Water was recently selected as a case study by the EPA
  - "...Austin Water's use of EUM is among the most impressive that I have seen. ...We here at EPA will share it with other utilities around the country as an example of the leadership and vision exhibited by Austin Water every day." - James Horne, EPA Sustainable Utilities Program Manager

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## Enterprise Resiliency Goals

- ◆ Ensure AW preparedness for and response to critical incidents is effective, practiced, and regularly reviewed.
- ◆ Ensure water, reclaimed, and wastewater operational resiliency through normal and emergent conditions.
- ◆ Ensure utility resiliency by identifying and addressing natural hazard risks.

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## AUSTIN WATER E-NEWS

News for Austin Water Employees  
June 22, 2020



Get the latest on Austin Water news. Follow us on social media.

### Effective Utility Management



#### Effective Utility Management - a preview of what's ahead...

In 2016, Austin Water adopted the Effective Utility Management (EUM) framework to assess our operations and identify areas for improvement. This EUM framework is built upon industry best practices and management successes, and has been instrumental in aligning our employees, programs, and strategic initiatives to excel in an ever-changing business environment.

For the last three plus years, we focused on four areas of EUM also known as the Focus Four.

- Stakeholder Understanding & Support / Affordability
- Customer Satisfaction
- Employee & Leadership Development
- Infrastructure Stability

We want to celebrate the hard work and accomplishments that these teams have achieved with Fireworks for the Focus Four! Keep an eye out for the Fireworks stories right here, in each weekly edition of the E-News in July.

And while we have lots to celebrate, there's still work to be done. Our EUM focus in the coming years will revolve around:

- Customer Satisfaction
- Employee & Leadership Development
- Infrastructure Strategy & Performance
- Enterprise Resiliency

# Communication



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## Performance Management Meeting | Monthly Performance Dashboard

April 16, 2019

### Awards & Recognition

Utich Water Treatment Plant received the Partnership for Safe Water's Presidential Award. Only 32 surface water plants in the nation have achieved this award.

Austin Water Conservation programs demonstrate 100% compliance with the G450 Standard earning Platinum Recognition, the highest level award, from the Alliance of Water Efficiency (AWE). We are the largest and one of only three utilities to receive this honor.

### Did you know?

Austin Water manages 43,000 acres of wildlands that provide benefits to our entire community. They are not parks, but rather public lands held in trust for a specific purpose based on the mission of the program under which they are managed. Those managed under the Balcones Canyonlands Preserve program conserve habitat for eight endangered species and 27 species of concern. Those managed under the Water Quality Protection Lands program optimize the quantity and quality of water recharging the Barton Springs segment of the Edwards Aquifer.

## MONTHLY PERFORMANCE DASHBOARD

A report highlighting key performance indicators

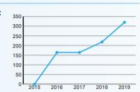
March 2019

### Business Excellence & Innovation

#### Advanced Metering Infrastructure (AMI):

300+ customers currently participating in residential pilot program

Monitoring several AMI pilot programs to find the best quality smart meter and data analytics software for the utility and its customers. Mobilized the AMI consultant in early 2018 (approved by Council in Nov 2017).



#### Leak Detection Technology -

Linear feet of leak detection performed on large diameter water transmission lines

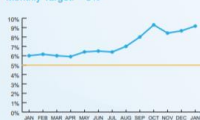
Annual Target: > 52,800



### Employee Engagement

#### Overall Vacancy Rate 2018

Monthly Target: < 5%



#### Listening to the workforce survey - Employee Satisfaction

Respondents that noted a positive response (Strongly Agree or Agree) about their overall job satisfaction level at Austin Water.



56% Participation Rate in 2018!  
The higher the participation rate, the better picture we get about what our workforce likes or dislikes about working at Austin Water.

Rate Adjustment	Effective Date
0%	2018
▼ 4.8%	2018 Midyear Reduction
0%	2019 Forecast
0%	2020 Forecast

### Affordability

Yearly rate adjustment of Average Residential Bill Rate reduction approved by Austin City Council for Austin Water retail residential and commercial customers. Decreases in rates took effect May 1, 2018



#### Annual Residential Bill

is to stay at or below 1.5 percent of Austin Median Household Income (MHI). Avg. Bill as % of MHI FY 2018 Target <= 1.5%



### Financial Health

#### Standard & Poor's Bond Rating

AA  
2018

Standard & Poor's rates companies on a scale from AAA to D. Austin Water's target is a rating of AA indicating a very strong capacity to meet financial commitments.

Financial Metrics	Actual 2017	Target	2018 Estimate
Number of Days Cash (Operating)	300	245	274
Debt Service Coverage Ratio	1.86	1.85	1.83
Cash Financing of Annual Capital Improvement Projects (Play as You Go)	33.5%	35% min. - 50% max.	46.5%



Austin WATER  
austinwater.org



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# General Principles

- ◆ Focus on business value
- ◆ Embrace standards wherever possible
- ◆ Information, not data
- ◆ Customize less, reduce costs
- ◆ Modernize our architectures



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# Why iterate?

- ◆ Allows us to start delivering value faster
- ◆ Better pace for learning and exploration
- ◆ Gives time for users to adapt
- ◆ Spreads cost out over time
- ◆ Less risk



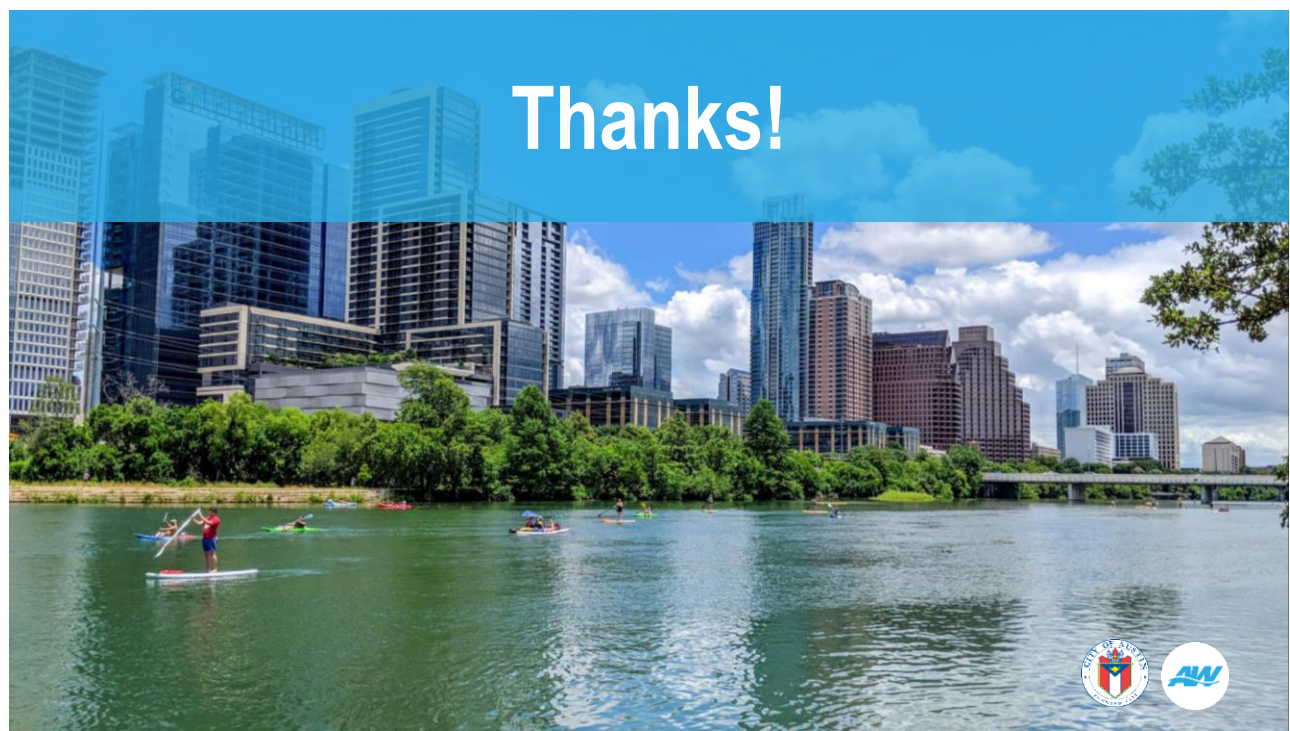
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Austin Water IT Services – Strategic Plan FY2020

Strategic Projects	<b>AMI</b> Design and build the network, data integrations, and customer portal to support Advanced Metering Infrastructure	<b>Infor EAM Upgrade</b> Upgrade of existing system to 11.4.1, migration of asset data, and enhancement to current preventative maintenance processes	<b>Security Program</b> Strengthen the Utility-wide Security Program through a master charter, policies, audits, risk assessments, and technologies	<b>Inventory System</b> Creation of an inventory and barcode management system to track and account for AW inventories	<b>Wi-Fi Installs</b> Installation of wireless networks at remaining sites: Hornsby, TLSC, NSC, Davis, and Ullrich
	<b>ArcGIS Pro Upgrade</b> Upgrade desktop software for individual workstations to utilize the AW Utility Network	<b>GIS Data Model</b> Implementation of Utility Network including redefining and standardizing existing geospatial objects	<b>OneDrive Migrations</b> Migration of all personal network drive data to Office 365 Government Cloud Computing (GCC)	<b>Development and Permitting</b> Enhance AMANDA utilization and systems integrations to transform and further digitalize the Utility's permitting process	<b>WEIRS</b> Enhance WEIRS layout, user experience, and functionality to better support the Utility's environmental and regulatory programs
Operational Projects					<b>Hach WIMS Pilot</b> Procurement and installation of Hach WIMS software for data management pilot program at Walnut Creek WWTP
Initiatives	<b>Mobility Initiative</b> Determination of additional use cases for IPS Mobile to enhance Utility efficiency		<b>Paperless Initiative</b> Implementation of technologies to reduce paper collection and use, and create more efficient processes		<b>GPS Locations</b> Implementation of new hardware and software to gather, report, and validate more accurate GPS locations of assets



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## ASK THE EXPERTS



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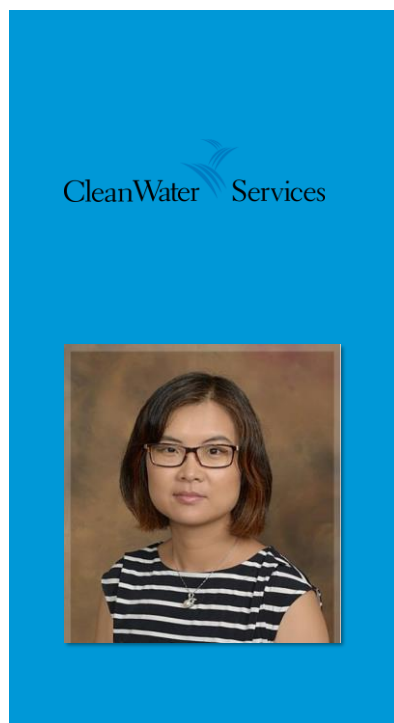
Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

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## DRIVING DIGITAL TRANSFORMATION AT CLEAN WATER SERVICES

Ting Lu, Ph.D., P.E.  
Business Practice Leader - Digital  
Solutions  
Clean Water Services

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## AGENDA

- Introducing Clean Water Services
- Case Studies
  - Leverage IoT Technology to Build a Digital Watershed
  - Operation Efficiency and Resiliency
- COVID-19 Impacts
- Digital Solution Roadmap: Map the Future
- Presentation “Take Aways”



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## CLEAN WATER SERVICES

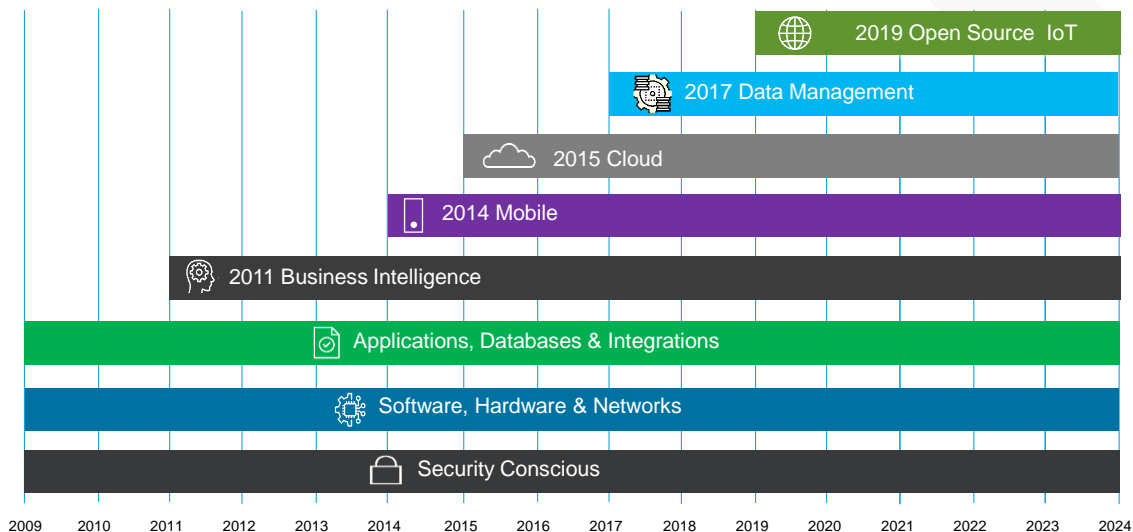
- Water Resource Recovery
- Surface Water Management
- River Flow Management
- Watershed Restoration



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## DIGITAL TRANSFORMATION IS ABOUT THE JOURNEY



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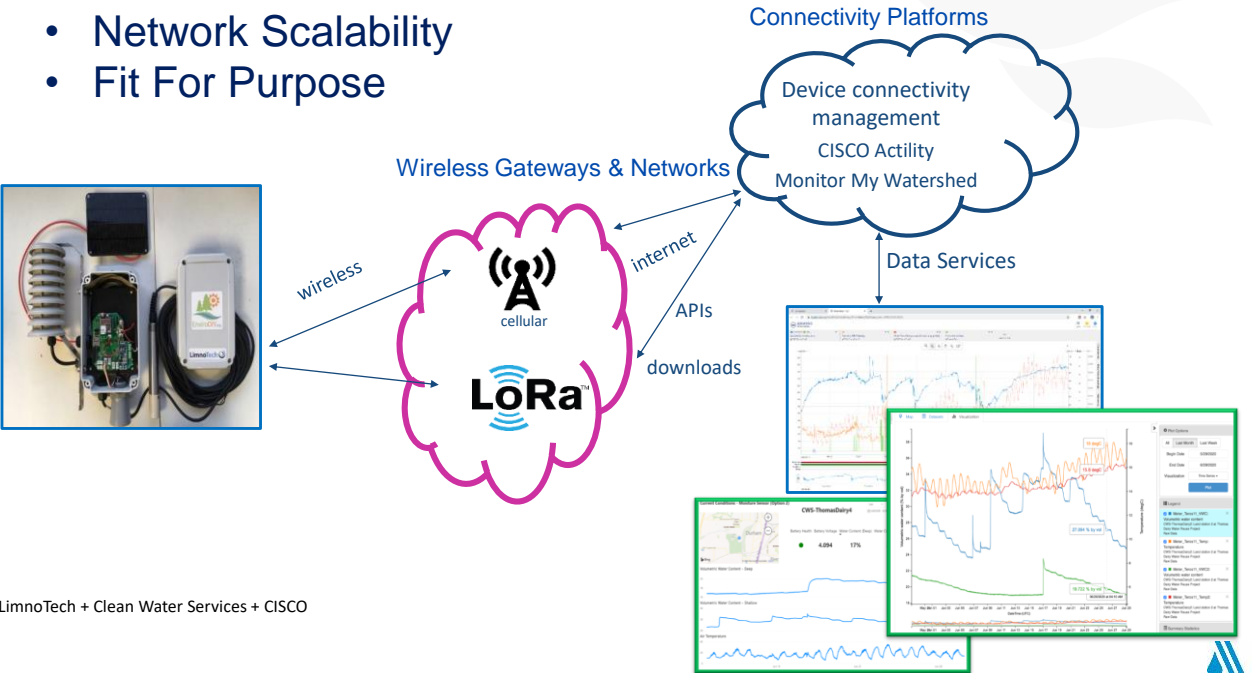
## LEVERAGE OPEN SOURCE IOT SENSORS (DIY)

- Modularity
  - Sensors
  - Radios
  - Dashboard



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- Network Scalability
- Fit For Purpose



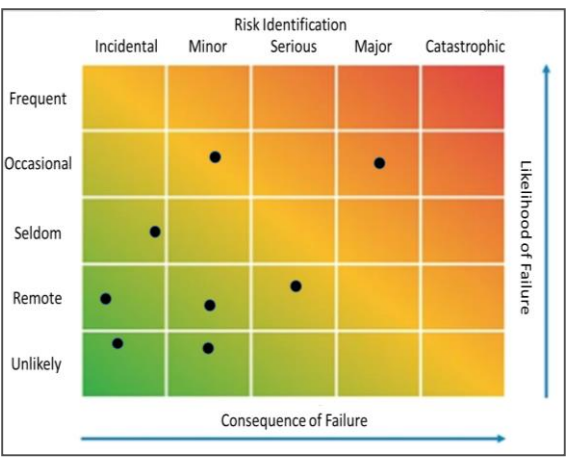
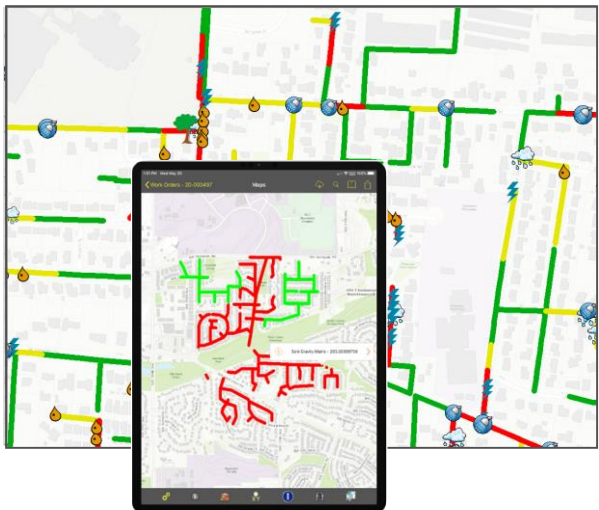
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The screenshot shows a GIS interface for a 'SEWERSHED SENSOR NETWORK'. On the left is a 'Layers' panel with various map layers, including 'Vehicle Locations', 'Annual Inspections', 'Flow Monitor Conditions', 'Flow Monitor Current Conditions', 'Rain Gauge Current Conditions', 'Odor Complaints', 'Active Work Requests', 'Active Capital Projects', 'Maintenance History', 'Documented Assets', 'Key Assets', 'Street Labels', 'Sanitary', 'Storm', 'District Infrastructure', 'Water Resources', and 'Project Boundaries'. The main map area shows a topographic map of the Chehalis Mountains region with several sensor locations marked by green squares and blue diamonds. A popup window is open over one sensor location, displaying the following data:

Measurement Time	September 7, 2020
Level	10.29
Flow	3.64
Velocity	4.37
Surcharge Level	0.00
Recent Level	10.44
Recent Surcharge Level	0.00
Hourly Trend	Flat
GisDescription	Level within 90% of pipe diameter
GisDescriptionSort	1
GisLabel	Green - Flat
UnusedDiameter	13.71
<a href="#">Zoom to</a> ...	

52

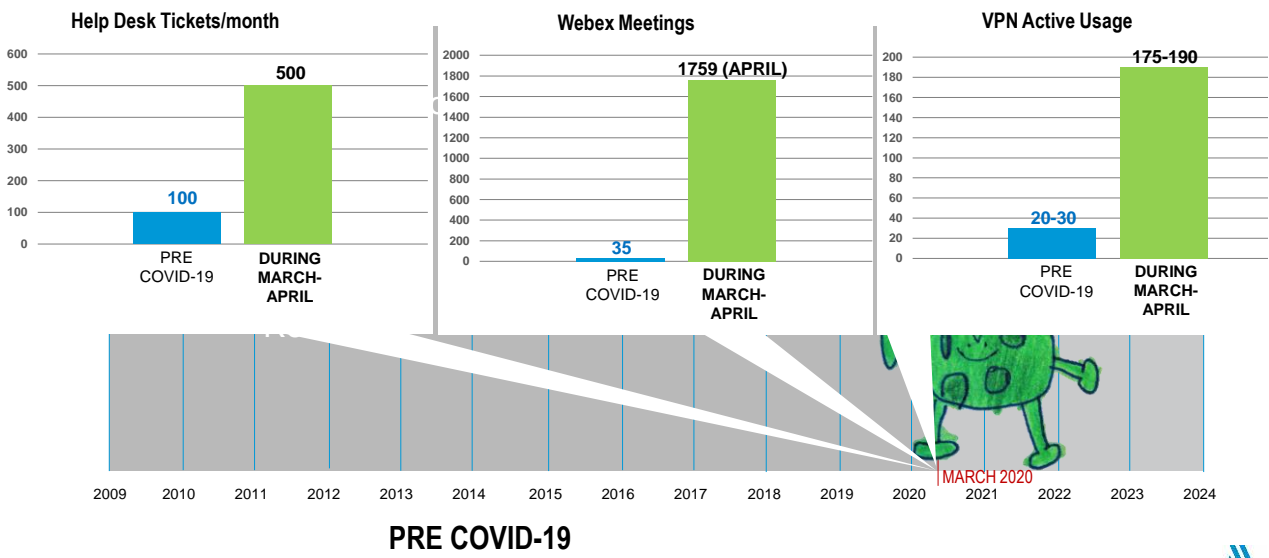
# TURNING DATA INTO INFORMATION ON ASSET MANAGEMENT



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# SUPPORT REMOTE WORKING CAPABILITIES



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# ROADMAP

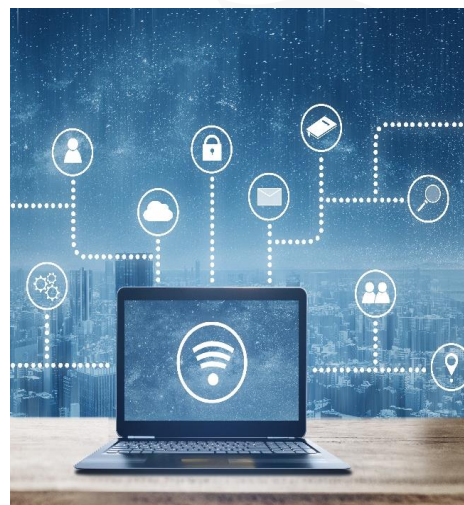
- Modernization
- Data-driven
- Security
- Reliability
- Continuity



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# KEY TAKE AWAYS

- Digital transformation is the key to organizational success and operation resiliency.
- Align technology planning and implementation with District's mission, vision and strategy
- Digital transformation requires a shift in culture, not just technology



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# Thank you!



**Ting Lu, Ph.D.**  
Clean Water Services  
Email: lut@cleanwaterservices.org

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## ASK THE EXPERTS



**Jay Krauss**  
Sammamish Plateau  
Water



**Ross Clark**  
City of Austin, Austin  
Water, IT Services



**Ting Lu, PhD, PE**  
Clean Water Services



**Michael Salas**  
SUEZ in North America

Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

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### Delivering a Digital Smart Utility – Benefits and COVID Implications

Michael Salas  
SVP, CIO & CDO  
SUEZ



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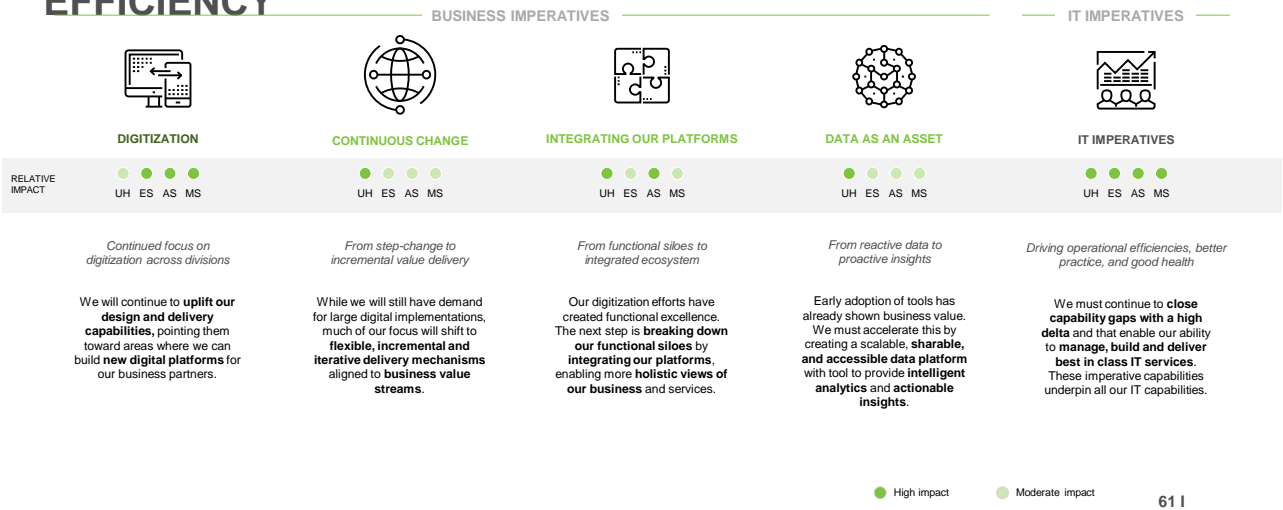
### SUEZ: 2nd LARGEST ENVIRONMENTAL SERVICES FIRM IN NORTH AMERICA



60 | SUEZ North America Overview

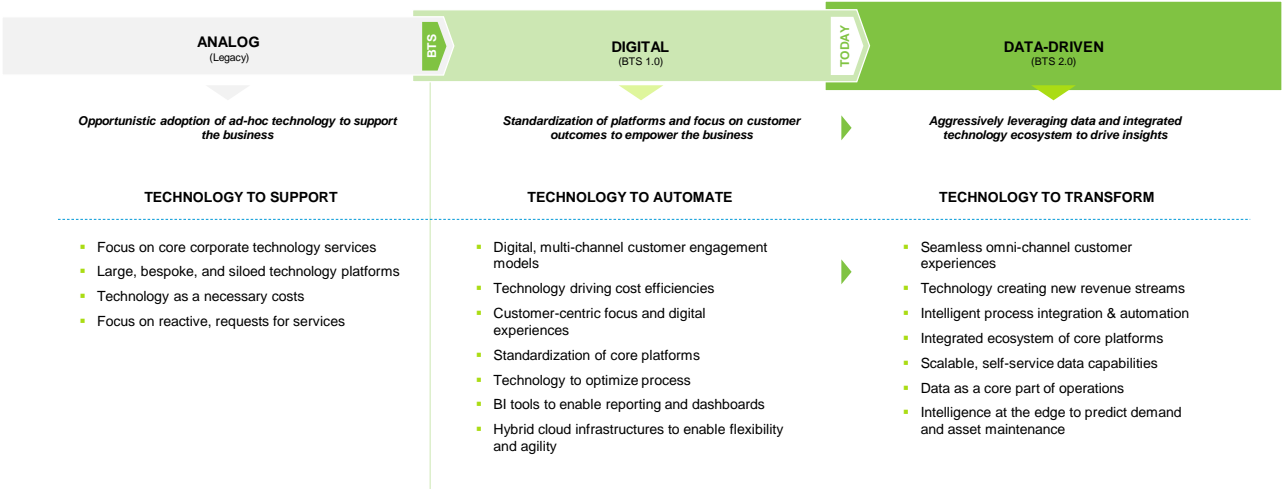
60

# TO ENABLE OUR BUSINESS STRATEGY, WE NEEDED TO INVEST IN CAPABILITIES THAT ENABLE US TO MEET THE NEEDS OF THE BUSINESS AND IMPROVE OUR OPERATIONAL EFFICIENCY



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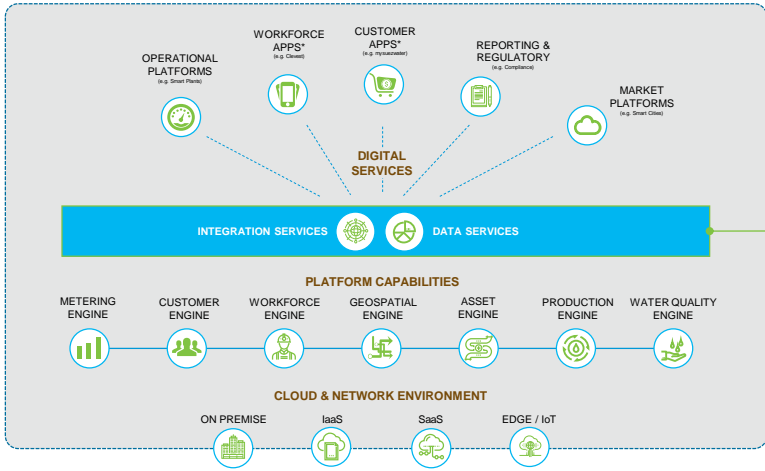
## OUR TRANSFORMATION ADDRESSED CRITICAL GAPS IN OUR BUSINESS. AS THIS PROGRESSES, THE FOCUS IS SHIFTING TO HOW WE CAN BECOME DATA DRIVEN



62 |

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# OUR TECHNOLOGY ARCHITECTURE IS FOR A MODERN AND INTEGRATED PLATFORM ECOSYSTEM THAT ENABLES GROWTH AND INNOVATION



- FOCUS: ENTERPRISE APPROACH**
  - To bring the best of SUEZ to market; innovative products and services, efficient processes and a great customer experience; it will be critical to take an enterprise wide division agnostic approach to technology selection, architecture and delivery
- FOCUS: INTEGRATION AND DATA**
  - We anticipate bringing in **new data sources** to inform our analyses and decision making (e.g. geotechnical data, tax information, satellite imagery).
  - This poses challenges in both the **exponential volume of data** that we hope to onboard, but in how we manage, process, and expose both **structured and unstructured data** to the business for valuable analysis.
  - Effective decision making requires **data from multiple domains** (e.g. customer information from CIS, asset information from GIS and CMMS). Our data is still **highly fragmented** and making this data **accessible and integrated** is critical to our next evolution.

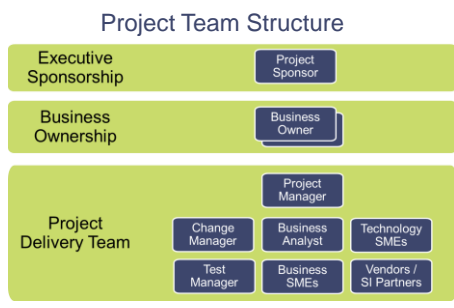
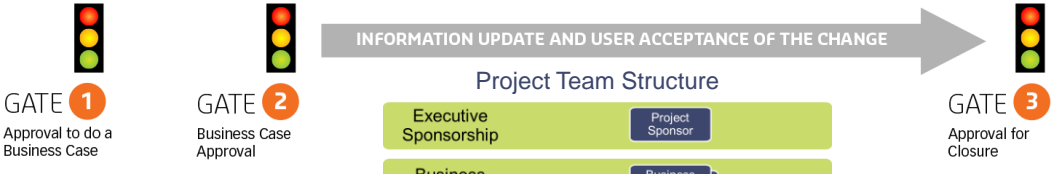
63 |

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# DELIVERING THE DIGITAL TRANSFORMATION NEEDED CLOSE COLLABORATION BETWEEN IT AND THE BUSINESS PEOPLE, PROCESS & TECHNOLOGY



IDEA	DEFINITION	ANALYSIS AND DESIGN	DELIVERY	IMPLEMENTATION	CLOSE
High Level Idea, Feasibility Analysis	Cost/Benefit Analysis, Business Case, Conceptual Design	Detailed Requirements, Solution Design, Formalise PM Set Up, *Project Estimate Review	Build and Test the Solution	Deployment of the Solution to Production	Post Implementation Review & Closing the Project



\* PGC to consider if significant impact to BC identified.

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## BENEFITS OF THE DIGITAL TRANSFORMATION PROGRAM

### DIGITAL TRANSFORMATION

#### Customer Experience

- 89% of Direct Debit subscriptions automatically processed
- Within the first 12 months, new online service offerings resulted in a 27% growth in online profiles registrations.
- The rollout of our new contact center solution introduced natural language speech recognition and a self-service rate of more than 40%

#### Smart Meters/AMI

- Average DBO (days billing outstanding) decreased from >40 days to 17 days
- reduction in theft and tampering was a significant component in decreasing NRW (non-revenue water) by over 25%

#### Work Management

- Each member of the field crews can complete an average of one additional job per day with 21% less overtime
- Increasing productivity across the workforce by 28%
- Eliminating back-office data entry work frees up employees to perform higher-value work. Backoffice scheduling time reduced from 7 minutes per job to 1.5 minutes

#### Asset Management

- Increased O&M efficiency by 15%, with over 1000 Preventative Maintenance orders
- Eliminated paper work orders, calendaring problems, back office errors, and lost maintenance data

#### GIS

- Moved legacy on-premise GIS to cloud increased system performance and availability beyond 99.9%. Added mobile GIS applications now used by over 10x more users
- The new GIS enables online outage maps, route optimization for WFM and proactive customer notification

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### RESILIENCE & COVID-19

#### Customer Experience

- All nine contact centers around the country were redeployed to work from home, utilizing the investments in cloud telephony and IVR technology. The service levels for all these contact centers were not impacted and surprisingly improved during the pandemic
- As water is essential for COVID-19 prevention, the governors in all the states we operate signed executive orders, stating we could no longer shut off the water supply to a customer for non-payment of bills. To change the collections processes, which includes physical letters, online notifications, robocall reminders and IVR workflow would have previously taken weeks. Due to the investment in our Customer Experience tools and journey map this changed was made over a weekend

#### Smart Meters/AMI

- The investment in the automated smart water network resulted in the operations team continuing to monitor and manage the water distribution network remotely. It also allowed the billing of water usage and monitoring of customer leaks to occur remotely and safely for our workers.

#### Work Management

- With all shut-off and non-essential work (i.e meter replacements) being canceled there was less fieldwork for our staff. They were all issued iPads as part of the digital transformation, so other administrative safe work (e.g inventory stock-take, safety training) was quickly reallocated to them using the new digital workforce management tools. This resulted in not having to furlough any field staff.

## ASK THE EXPERTS



**Jay Krauss**  
Sammamish Plateau  
Water



**Ross Clark**  
City of Austin, Austin  
Water, IT Services



**Ting Lu, PhD, PE**  
Clean Water Services



**Michael Salas**  
SUEZ in North America

Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

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## UPCOMING WEBINARS

Sep 29 - FREE Webinar from UMS: Metering Without a Hitch

Sep 30 - Water Reuse: Back to the Basics

Oct 7 - Adding Utility Benchmarking to Your Continuous Performance Improvement Toolbox

Oct 14 - Applying Real-Time Hydraulic Models to Everyday Operations

Oct 15 - Free Webinar: Innovation Roadmap for Utilities

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American Water Works Association  
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THE SMART WATER NETWORKS FORUM

[www.awwa.org/Events-Education/Smart-Water](http://www.awwa.org/Events-Education/Smart-Water)

Smart Water Networks Forum – [www.swan-forum.com](http://www.swan-forum.com)

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## THANK YOU FOR JOINING TODAY'S WEBINAR

- As part of your registration, you are entitled to an additional 30-day archive access of today's program.
- Until next time, keep the water safe and secure.

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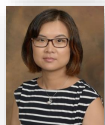
## PRESENTER BIOGRAPHY INFORMATION



Jay Krauss has been the General Manager of Sammamish Plateau Water since October 2010. Jay has a Masters Degree in Public Administration from Northern Illinois University. Prior to coming to Sammamish Plateau Water he spent 24 years in the field of City Management working in Carpentersville and Huntley Illinois, Niagara and Sturgeon Bay Wisconsin, and Lewiston Idaho. He is now a reformed city manager. While managing Sammamish Plateau Water, Jay and his staff have applied the principles of asset management through in-house initiatives to prove that it is possible to have responsible and sustainable utility management at the local government level.



As a geospatial professional working for the City of Austin for 21 years, Ross Clark knows his way around enterprise GIS management, floodplain management, long-range planning, and utilities. He holds a bachelor's degree in Geography from the University of Texas at Austin. When he's not managing projects for Austin Water's GIS Services team, he's doing his part to keep Austin weird.



Dr. Ting Lu is the Business Practice Leader for Digital Solutions at Clean Water Services in Hillsboro, Oregon. Ting leads and directs innovation of digital solutions and oversees day to day IT implementations and the implementation of data management and IT and OT integration. She is the Intelligent Water Focus Group Chair for the Water Research Foundation LIFT program



Michael Salas serves as chief information and digital officer for SUEZ North America, a subsidiary of SUEZ. In this position, he is responsible for all aspects of the company's IT, innovation and digital strategy and governance. In addition, he is accountable for transformation and project delivery, systems development and maintenance, infrastructure and IT service delivery. Michael has over 20 years of experience and a proven ability to lead major technology-enabling business transformation programs while consistently delivering great customer and employee experience.

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