Fostering a Performance Culture in Operations and Maintenance





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Industry Challenge and Opportunity



Managing a consent decree, lead service lines, and an aging system we need to find ways to do business more efficiently while maintaining a motivated work force, increasing our level of service and remain affordable for all in our community.







Aspirations and Objectives



How might we...continue building our Utility of the Future by rethinking Field Operations?

Specific Objectives:

- Combine City Utilities Water Maintenance and Sewer Maintenance into one department Field Operations.
- Operate Field Operations like a private business
- Complete small capital projects with Field Operations crews
- Develop collaboration and comradery between Field Operations and Engineering

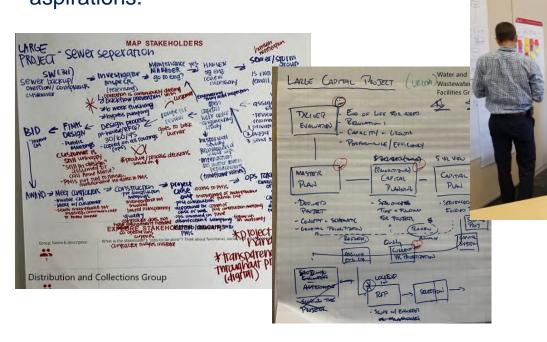


Removing Institutional Barriers



Design Sprint

Definition of current processes, challenges, and aspirations.

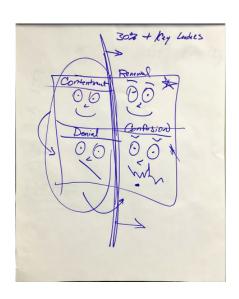




Removing Institutional Barriers

Org Design

Definition of current system, defining shared vision and value, and change management

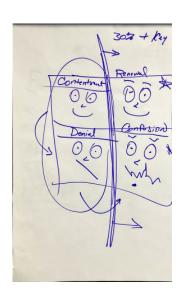




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Org Design

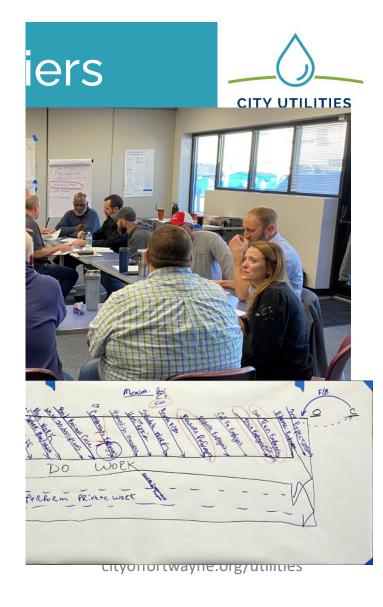
Definition of current syste defining shared vision an and change managemen



Field Operations - Construction (1-10-2023)

Shared Vision

- Highly trained staff that can work on water, sewer, storm (can fix it all, drive truck skills interchangeable)
- 2. Highly paid (compensated)
- 3. Satisfied customers (lack of complaints); accolades, compliments
- 4. Satisfied employees (retention, competitive, happy to be here)
- 5. Ability to respond to emergency 365-24/7, We go like the fire department
- 6. Employees et al Thinking ahead, know the next steps & doing those w/o being told
- 7. Time management We are getting jobs done efficiently & effectively
- Being able to help customers w/repairs that fits their budget & billed through us (do private work) (leak on owners)
- 9. "C" w/affected customers of emergency water shut downs
- Customers "choose" our services over private contractors (better quality, better pricing, value)
- "C" between departments Capitalize on key learnings from each other... (Engineering, Construction, Customer Support)
- 12. More P.R. w/our customers (telling our story), Advertising/Outreach
- 13. Be professional/Look professional (Look different Differentiate ourselves)
- 14. More efficient w/our new employees (good succession plan to retain knowledge) Good training program & Cross training
- 15. Good applicants (Desirous place to work)
- 16. We help to fix private (large complex) when folks can't get help
- 17. Use good asset mgmt.
 - a. Maximizing our work staff (H.R.)
 - b. Maximizing our equipment investment
 - c. Taking care of equipment
- 18. Managing our costs
- 19. Get response from Fleet mgmt.
- 20. Reward our top performers
- 21. Hold all accountable (weed the garden)
- 22. Priorities are set and shared and aligned (on the same page) "C" back and forth & supported
- 23. High job satisfaction, Ownership mentality
- Robust customer assistance programs (maybe using neighborhood link, veterans programs, etc)
- 25. Mutual respect and understanding for the work done in "other" departments and capabilities, Building each other up vs tearing others down
- 26. We do things to suppress rates (Rate Suppression)







Set Expectations



Plan and Schedule Work



Measures



Cross training



Project Title: Plan and Schedule Work.		Desc: 3/3/2823
Project Start Date: July 17, 2023		Target End Date: December 31, 2025
Current St	lete / Problem Discription (Immunistianal discription of the lisual):	
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single dep	ertment. We are currently not optimising our resources well.	
Vision for	the Project (describe what will be happening when the project is suspenduly	
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	Fully utilized equipment	
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	Dreplayer and customer satisfaction	
	Reduced cost	
Project St	element (Verb, Rosult, Frouco, Impact):	
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the austur	wer to increasing the work we get done, reduce our service times, for the employee	by being part of team that is getting better and more efficient.
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2.	Identify things that work well in the current state of planning and acheduling	
3.	Identify things that are not working well	
4	Define the overall peol of resources (equipment and people)	
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6.	Propose the planning and acheduling process:	
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Set Expectations



Plan and Schedule Work



Measures

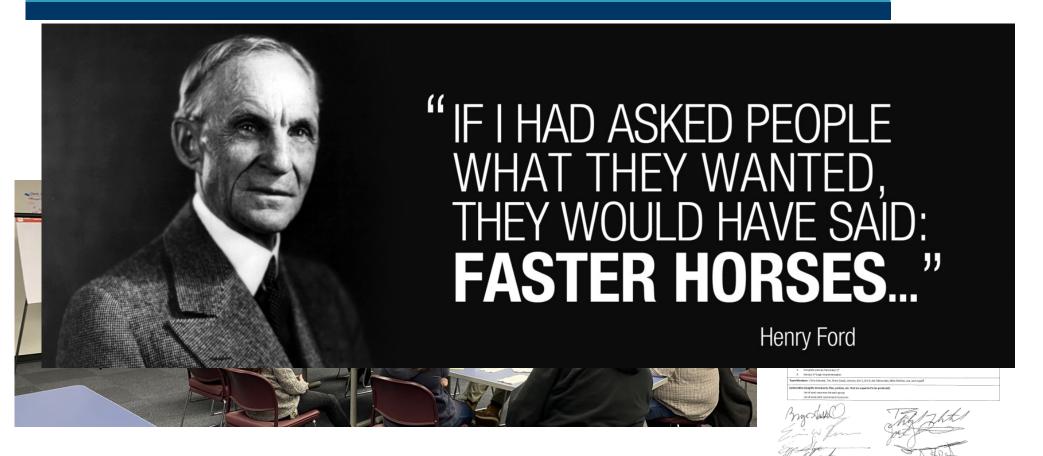


Cross training

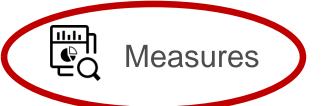


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Propest Se	num (what one the boundaries of changes; what's in / what's out):		
Wit will be	oli et comitraction and maintenance only		
Mintan	ns (specific things completed by data targets):		
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	Identify the averall paol of resources and needs by Databer 3*		
2.	Propose the planning and athelicle process to November 2"		
4.			
S.	3MUN'S 1" begin invitementation		
Town No.	emberer: Chris Edwards, Tim, Brian Gaskil, Johanie, Gric S, Gric R, Jim Schmusk	ker, Mike Rietcher, Joe, and report	
Delinerali	fer (tenglife documents, files, policies, etc. that are expected to be produc	nd):	
	List of your resources for each group. List of work with recommend resources		













Measure	Owner	Usage	Timing	Next Steps
Time to Complete WOs by Priority level	Construction Supervisor	Provide feedback to originator	3 months	Evaluate ability to pull reports – check with Resultant
Time Spent by WO Status	Construction Supervisor	Demonstrate overall time loss to outside entities	TBD	Understand capabilities within CMMS
Average Time to Address Unplanned Disruptions	Construction Supervisor / PCL	Service level measure	Immediately	Start pulling reports
Water/Wastewater FTEs (actual/estimated)	Construction Supervisor / PCL	Accurately capture needed staff	TBD	 Understand capabilities within CMMS Assigning hours per job
Scheduled Work / Completed Work (%)	Construction Supervisor	Evaluate ability to complete WOs in a timely manner	TBD	 Ability to determine when WO was assigned and reporting functions – check with Resultant
Training Hours/Employee	Safety Training / TBD	Ensure proper crew training	3-6 months	Implement Labor Management System Formalize training plan (in cross- training group)









Plan and Schedule Work

- Resources based planning
- Create a resource planner position
- Uniformity of work order process between supervisors
- Stop installing water services (private contractors can tap our water main)
- Move all the supervisors into one building
- Create a list of minimum coverage



Cross training

- Develop skill matrix
- Standard list of skills
- Priority of cross training
- Construction crew leader valve and hydrant operator



Set Expectations

- Construction crew leader's expectations of crew
- Construction crew leader's expectations of Supervisors



Measures







Insights from City Utilities On Change Initiatives



- Involving front line staff, managers, and superintendents in developing the proposals for changes was helpful in building trust and by in
- Not everyone decided to align with the vision
- Not all changes were from us and added to change fatigue

Implementation



- Built the proposals for change into the 2024 productivity goals
- We have went from a base of five person crew to four
- GPS Telematics and Camera
- Locator and valve operator consolidation
- Cross trained former sewer and water construction crews and put them on alternating stand by shifts

2024 Field Operations - Construction Management Goals

Number	Measure	Distribution	Comments	MAX Amount
1	Implement 4 person base crews	achieve = \$150	Develop and execute an implementation plan to move all crews to a base crew of 4 members.	\$150
2	Develop a rotation plan and execute the plan. Mix water and sewer crew and switch staff quarterly	achieve = \$150	Develop by end of 1st quarter. Impliment rotation by the end of 2nd quarter. Make crews of 50% water and 50% sewer and change the crew up on an agreed upon time.	\$150
3	Develop and implement a bianual evaluation form staff	achieve = \$100	Develop and implement	\$100
4	Plan and Assign work for the next week	90% of crews have assigned work for the next week = \$150	By beginning of 3rd quarter work is planned out and assigned for all crews by the Friday before for the next week.	\$150
5	Develop monthly and quarterly plan for capital work (planned \$550K in labor)	achieve = \$250	Develop a monthly and quarterly plan for capital work that gives the staff enough work to complete \$550K in labor)	\$250
6	Estimated jobs with resources (equipment and staff)	achieve = \$125	Estimate jobs based on equipment and staff needed to complete the job not just the same equipment and four staff every time.	\$125
7	Create Skill Matrix Table of Construction Staff	achieve = \$150	Create a skill matrix table and evaluate all construction staff.	\$150
8	Water Service Installation - Field Ops no longer installs services 2" and less	achieve = \$50	Developed new process in Engineering/DVS to ensure contractors install new water services correctly and stop offering option for installation (or tap) by Field Ops.	\$50
9	Work Order Management	achieve = \$50	Participation in process mapping and redesigning process to match best management practices for the new work order management system.	\$50
10	Measures Job completed vs planned	achieve = \$150	Jobs planned for the year vs jobs completed Type of Capital projects completed J. Field Ops cost vs engineering estimate for each capital project 3. Cost savings for capital project	\$150
11	Pothole Program Improvements	achieve =\$50	Pot holing app update, training and process/data quality	\$50

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Note: If hourly staff complete \$5500 for other labor management can add up to \$200 for other short comings in their goals.

Keys to a Performance Culture

- Understanding "why?" and "why now?"
- Framing next steps
- Building buy-in and momentum
- Enabling change
- Fostering innovation

Approach to Performance Culture



Establishing "why" and "why now"

Defining change drivers and vision. Defining the value to organization and individual.

2

Building buy-in and momentum

Involving the stakeholders in developing the details of the change and benefits.

Fostering innovation

Managing innovation as a business practice to build a performance culture.

5

Framing next steps

Developing the high-level roadmap including focus areas and timeframe.

4

Enabling change

Aligning the structure, skillsets and resources to empower stakeholders to drive change cityoffortwayne.org/utilities

Framing Next Steps



Mission

- Support a **performance-driven** culture
- Position team to cost-effectively address emerging challenges
- Demonstrate Field Asset's high level of performance

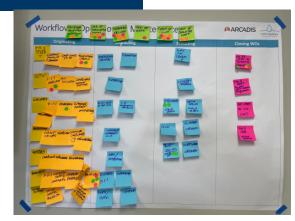
Goals for Performance Measures	Strategic Focus Areas	
1. Assess job-specific performance against industry standards (outcomes)	 National standards that support benchmarking (e.g., AWWA) 	
2. Assess available work capacity of current staff (resource)	Crew structureIdle time (people and equipment)	
3. Leverage efficiency opportunities (activity)	Mobilization/DemobilizationWork execution	
4. Support staffing and management decisions (guiding practices)	 Planning and scheduling Transparent and regular reporting Skill assessment Onboarding, training, and cross-training 	

Building Buy-In and Momentum



- Large group discussion to define the work and performance gaps.
- O&M and Construction breakout groups to map workflows and opportunity areas.
- Four work order management opportunity areas:
 - Originating
 - Scheduling
 - o Executing
 - o Closing







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Understanding Performance and Opportunities



- Each opportunity area assessed for potential pain points or performance limiting factors.
- Each pain point examined for root cause
- Opportunity areas refined and prioritized for improvement using pain points

Originating	Scheduling	Executing	Closing WOs	
7	12	21	2	
311 customers Service crews Hydrant Valve Truck CMOM Inspection DUS Development Services Lead Service Coordinator* Service Technicians	Schedule service new Backlog of leaks, services, hydrants* Crew Water: PCL, Operator, Truck ervice Coordinator* Technicians Crew Sewer: PCL, Operator, 2		Closing workorder by Admin	
Locators TV Truck/Flusher Engineering	 Originating 	Scheduling	Executing	Closing WOs
Mayor/Utility Administration	. 9	0	4	4
	PMs Sewer Lines (grease backup, complaints drive, production goals*) CCTV (311 complaints*, engineering projects, compliance consent decree) Locates (811, emergency*, customer support, inspectors, engineering) Inspections (permit driven, complaint, engineering) Meters (compliance, engineering) maintenance) Reactive (311, internal crews/contractors, external agency, direct customers, political*) Construction Support (assist	PMs Sewer Lines (internally driven, diagnostics) CCTV (supervisor) Locates (81.1, 2 hour emergency) Inspections (Bispatcher generates WO) Meters (Supervisor, inspector) Reactive (311, supervisor Construction Support (supervisor, dispatch)	PMs Sewer Lines (supervisor to crews) CCTV (geographic locates, hydrants*) Locates (hydrants, field maps, catch basins) Inspections (crew, flushers, geographic) Meters (On-call date*, valves, field map, investigators, geographic)	PMs Sewer Lines (WO to supervisor, to dispatch - paper*) CCTV (Feld maps valves, catch basins, hydrants) Locates (Post events, no WO (CSO)) Inspections (MS4 web, NPDES permits)
Construction	Scheduling – Right-si Manual prioritization	zing the crew and workload of WOs – based on institutio outside influences on schedul nation		votes)
Operations at Maintenance	Lack of coordination Technology failures (Reactive issues (e.g., Competing priorities	ions / breakdowns (i.e., repair / communications (e.g., equip e.g., servers, systems, GIS sup being pulled off to react to ur for prioritization (i.e., politica nunications of WO to supervis	oment repair, proactive plan ported field apps, integration aplanned work) II, snow plows get priority)	

Reflection on Industry



- Using the refined opportunity areas the group surveyed utility sector and private sector perspectives on management.
- Key areas for improvement included:
 - Scheduling and planning work
 - Standards and expectations for work
 - Performance measures used to monitor and manage work.

Utility Practices	Private Perspective
Scheduling and Planning WO scheduler/planner to maximize utilization, address syster requirements/goals, coordinate with warehouse, and address (e.g., permitting, locates) Create workload and performance measures by geographic of develop these measures using the tasks in prior bullet Have responders in a call-down list based on geographic crew by any available (least OT or comp time hours) Carefully consider alternative schedules as it is hard to revers not meeting all goals Standards Establish time, equipment, and cost estimates for common W Develop standards for equipment inspections and determine data to be collected based on criticality of those assets Use Reliability Centered Maintenance or best practices to de routines	prep work ew — followed course if followed course if course if Os. necessary - Evaluate Wo history for utility in decision making) Explore seasonal/peak staffing Right size the crew for the job and keep the crew working togethe Estimate time to complete and track progress against schedule Update schedule based on unexpected conditions encountered if a crew member isn't actively engaged in the current task, you content to the current task, you content
Utility Practices	Private Perspective
mance Measures ablish minimum number of measures that are focused on things that uence business decisions (i.e., What happens if you don't meet the 11? If nothing, don't measure it.) ially select measures based on availability of data and data capture ctices ablish clear ownership for individual measures ke measures visible and dynamic (e.g., dashboard, regular report, iteboard) to create accountability and potentially healthy npetitive atmosphere asurement frequency should vary (e.g., some benchmarking asures may be checked quarterly or annually, WO productivity asured daily) urue performance measures management supports decision making g., person closing WOs isn't 3 weeks behind) usider opportunities for performance-based incentives to reinforce ority on productivity (e.g., bonus, parking spot)	Performance Measures They use their data to improve performance Planners and estimators on staff Incentives tied to performance measure achievement Employment and retention are driven by utilization Schedule and financially driven (e.g., on time, on budget) Deep expertise allows them to develop accurate and useful schedules, estimates for WOs, and goals for execution





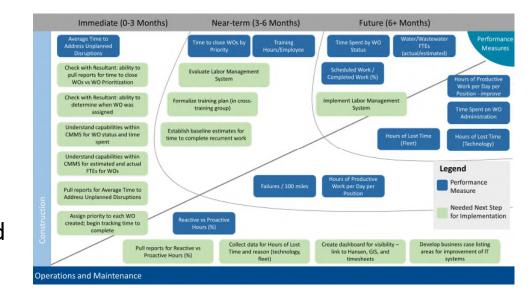
- Breakout groups reviewed and selected performance measures that were aligned with opportunity areas.
- Each performance measure was evaluated for usability and ease of maintenance. Key discussion points included:
 - Are we collecting this information?
 - Who will own this performance measure?
 - How will the performance measure be used?
 - When should this be implemented?
 - What additional steps are needed before implementation?







- Using workshop results the project team developed a simple roadmap outlining implementation steps and sequence of performance measures.
- Steps included engaging other stakeholders, leveraging underlying systems, assessment of available data, and establishing feedback loop.
- Roadmap provide clarity and basis for accountability.



Aligning Core Systems



Institutionalizing the performance culture through core system improvements that support business process improvements and sets the stage for continuous evolution.

Goals for Performance Measures	Core System Improvements
1. Assess job-specific performance against industry standards (outcomes)	 Improved asset allocation and optimization through vehicle tracking system
2. Assess available work capacity of current staff (resource)	(Telematics/GPS)
3. Leverage efficiency opportunities (activity)	 Converted data into intelligence through dashboards
4. Support staffing and management decisions (guiding practices)	Embedding performance measure tracking as functional requirements for maintenance system updates

Fostering a Performance Culture Takeaways



- Establish broad understanding of the "why" and "why now".
- Create a concrete vision for performance
- Remove institutional barriers to aligning organization with aspirations
- Shrink the change for roles
- Create focus on building blocks
- Engage stakeholders in building block development and defining new behaviors
- Define performance expectations on understanding of current challenges
- Create roadmap to guide change and manage accountability
- Build change into underlying systems





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