



# Cityworks CMMS Implementation at Tualatin Valley Water District



Pete Boone, PE, PLS – Tualatin Valley Water District

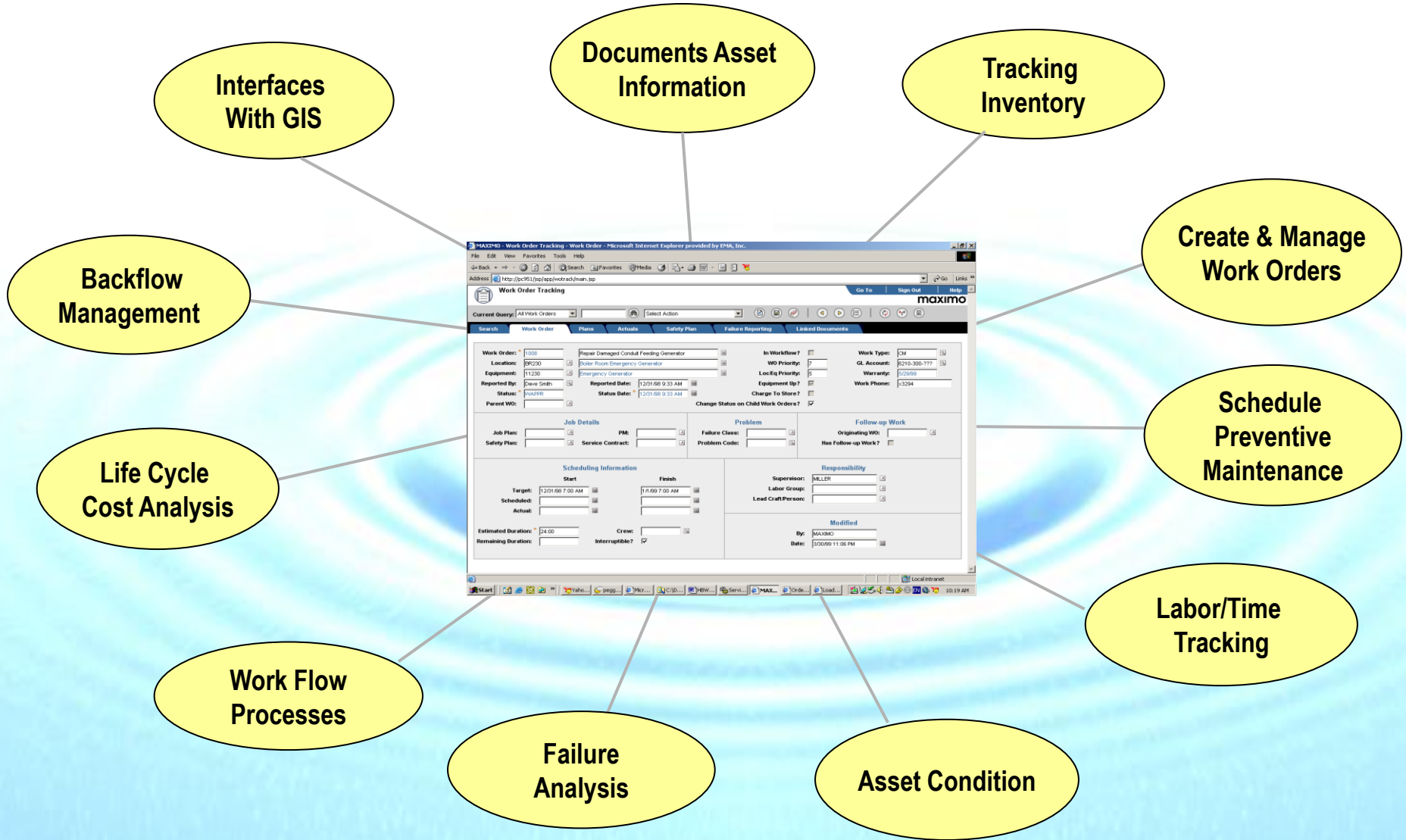


## CMMS Program Objectives

- Optimize Asset Life Cycle Management
- Improve Field Operations Process
- Maximize Cost Management
- Optimize Water Distribution Operations
- Improve Customer Service

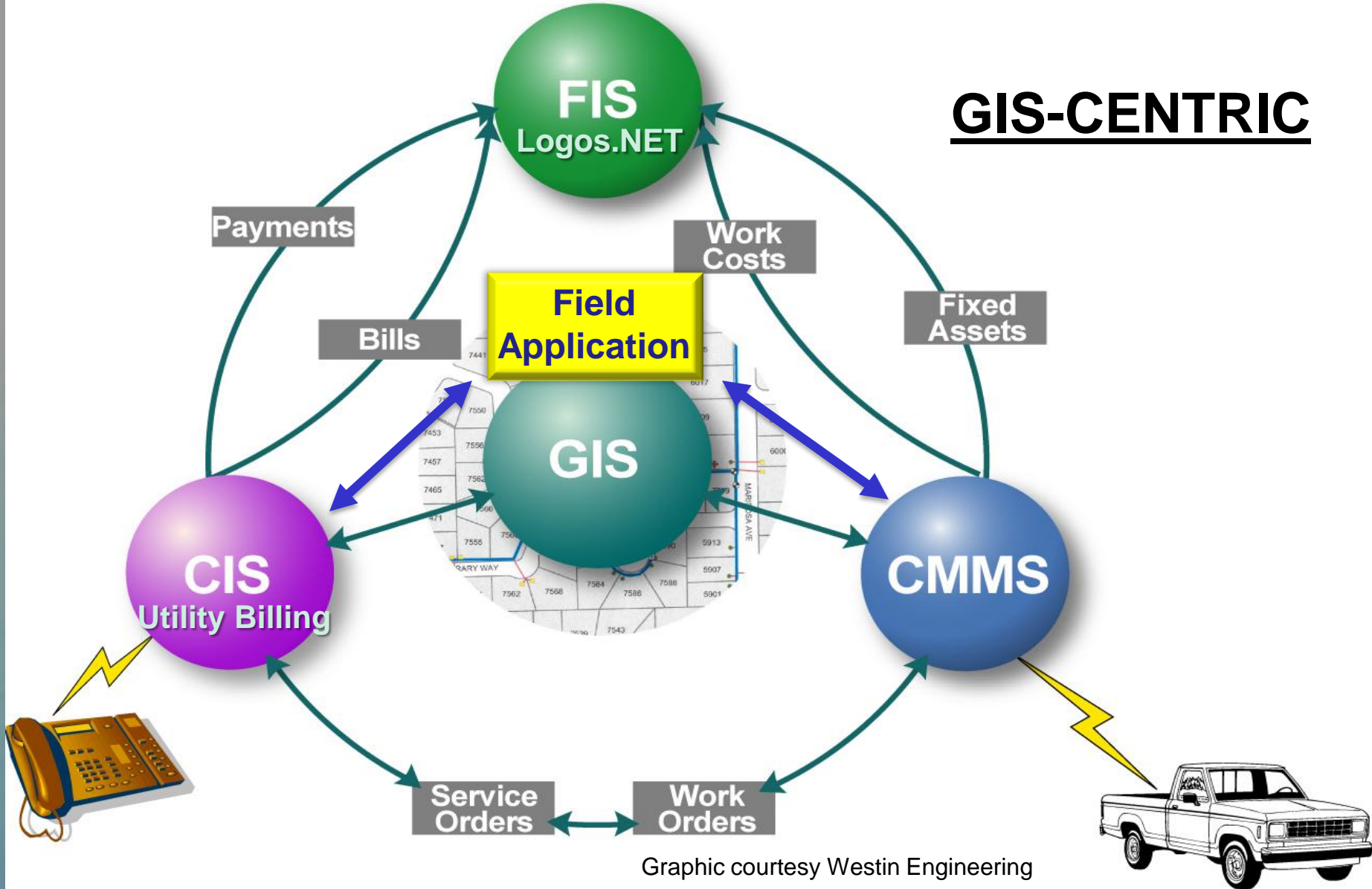


# CMMS: Computerized Maintenance Management System





## GIS-CENTRIC



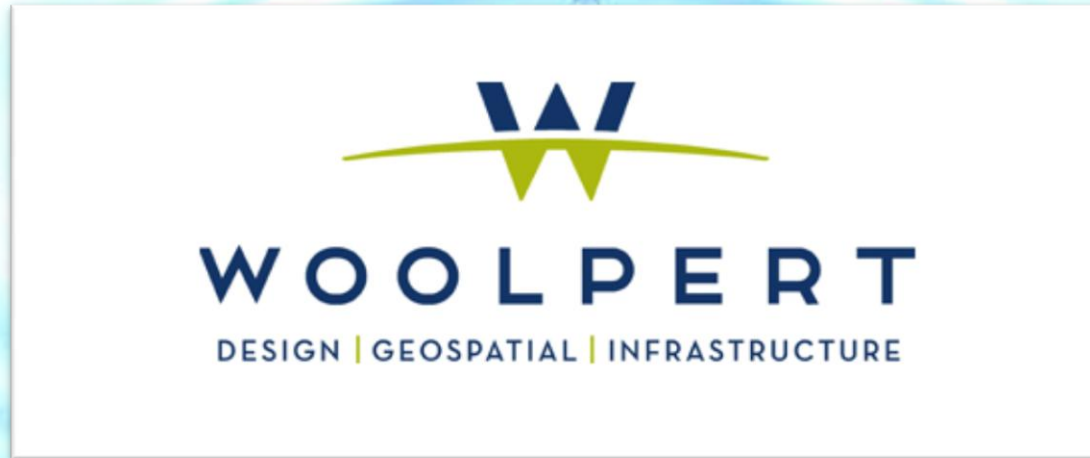
Graphic courtesy Westin Engineering



Selection process facilitated by Woolpert

TVWD considered several different software programs and ultimately selected Cityworks.

Selection heavily influenced by GIS integration





## **Woolpert: “70% of CMMS deployments fail”**

- ~20% fail during implementation due to
  - Poor product choice
  - Inadequate preparation
- ~50% fail in post implementation due to
  - Inadequate monitoring
  - Lack of understanding that CMMS is a piece of a larger Asset Management program
  - Weak preparation of and acceptance by staff



RFP process for implementation & integration consultant

Selected POWER Engineers based on their experience with Cityworks and integration with other software

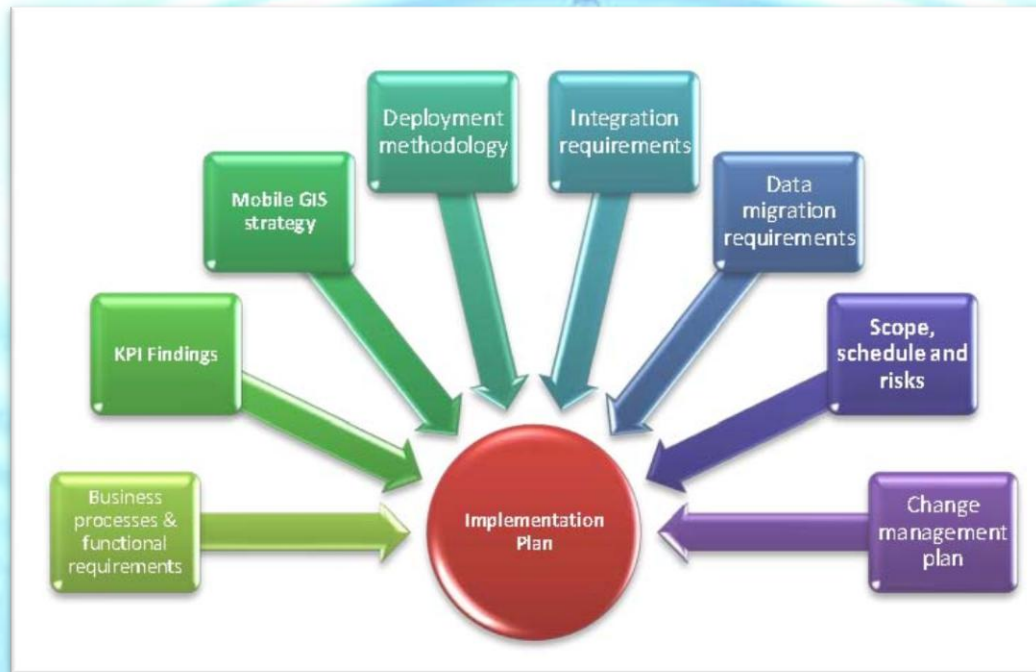
POWER has considerable experience in the water industry, which helped us in designing our “to-be” work processes within Cityworks. They have completed nearly 30 Cityworks implementations.





## Project Phases

- Discovery
  - What we do currently, how we do it
  - How Cityworks will fit in, how it can help
- Implementation & Integration
  - Timing of implementations & training
  - Integration with other systems







## *Discovery*

- Definition of KPIs and other reporting metrics
- Review of existing District legacy software systems
- Analysis of "As-Is" business processes and definition of "To-Be" business processes
- Cityworks field pilot to determine performance of remote access to a Cityworks Server application on a District server
- Definition of Mobile GIS requirements and an analysis of the two primary solutions, infraMap and GO! Sync.
- Documentation of interface requirements and definition of high level architectures for the interfaces
- Determination of Data Migration requirements





## *Business Process Review*

- Determine the "As-Is" workflow.
  - Which departments/people are involved?
  - What are the steps of the process?
  - How will existing process fit into CMMS?
- Determine "To-Be" process





## *Mobile software selection*

iWater Inframap implemented in 2010.

- Initial deployment to single crew
- Subsequent deployments to other crews

Consideration of other mobile products with CMMS implementation

- TC Technology GO!Sync
- Cityworks Anywhere

Combined approach with Inframap and Cityworks Server with remote access





## *Implementation and Integration considerations*

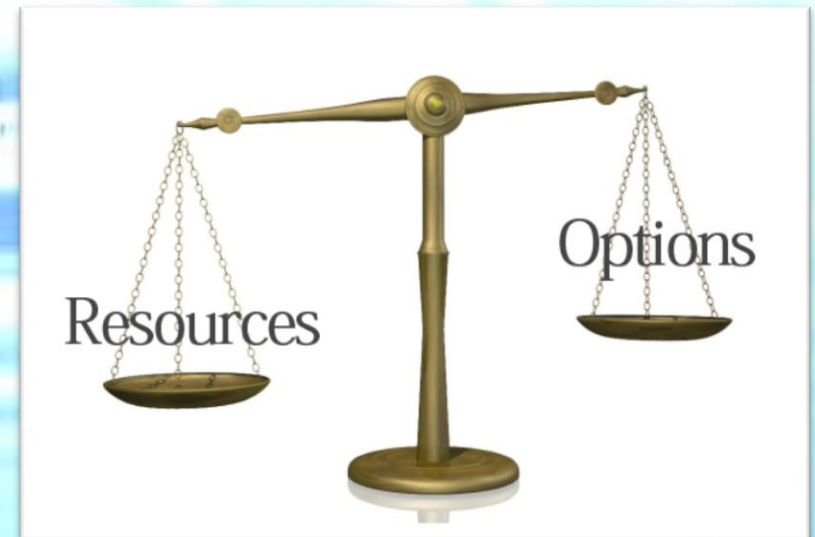
“Big Bang” approach vs. phasing

Early win vs. highest value

Simplistic processes vs. “one button” integration

Out of the box functionality vs. customization vs. custom development

Cost and resource constraints





# CMMS Implementation Plan

- **Functional Groupings** - Groupings include sets of users and/or departments, and specific workflows that will be available by deploying the functional grouping.
- **Implementation Dependencies** - Before deploying a CMMS solution for a workflow, the interfaces and customizations called out in that workflow must be implemented.
- **Phased Implementation Plan** - Proposed implementation plan that lays out phases and shows which functional groupings, interfaces, customizations, and dependencies will be satisfied with each phase.
- **Plan for GIS data modeling, data acquisition and data maintenance** – A key dependency on the implementation of the CMMS is the availability of asset data, which is stored in the GIS.
- **Resource constraints** – The plan must take into account the availability of staff: District IT and GIS staff, POWER staff and District end users.



- **Deploy quick, simple solutions first to build momentum early with a quick “win”**– Implementing the product and having a small set of users utilize the product will help identify any issues early on in the project. It will be easier to resolve issues and make environment or configuration changes if there is only a small production user base.
- **Implement processes that have a high return on investment first?** – Which user groups will gain the most benefit from a deployment?
- **Deploy all of a Department’s or Group’s solutions at one time**
- **Deploy only full work processes**
- **Reduce risk by prototyping high risk areas first** –Addressing high risk areas early in the project will help identify issues so that those issues can be resolved with minimal impact on the project schedule.
- **Cost Threshold** – The entire implementation must be delivered under a fixed budget threshold.



## *Next Steps*

- Finalize implementation plan and phasing
- Software and hardware procurement
- Data migration and system integration
- Remote access and synchronization functionality
- User training
- Deployment to functional groups

Questions?



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