



WaterMeter

PROGRAM

CITY OF TORONTO WATER METER PROGRAM

Presented By: Carlo Casale – Project Manager
Toronto Water - City of Toronto

Project Highlights

Water Meter Program (AMR) Project

- **Install new meters and AMR at flat rate customers**
 - **72,000** customers are currently not metered

- **Replace most large meters** (refurbish) and **install AMR**
 - Roughly **14,000** large meters (Only 93% accurate)
 - 65% of meters fail internal guidelines for accuracy

Project Highlights

Water Meter Program (AMR) Project

- **Replace most small meters**
 - 380,000 customers (Only 96.9% accurate in 2001)
 - 31% of meters fail internal guidelines for accuracy
- Deployment of a city-wide **Fixed Area Network System**
- Development and integration of a **Data Repository**

Water Meter Program

City of Toronto & Neptune Technology Group

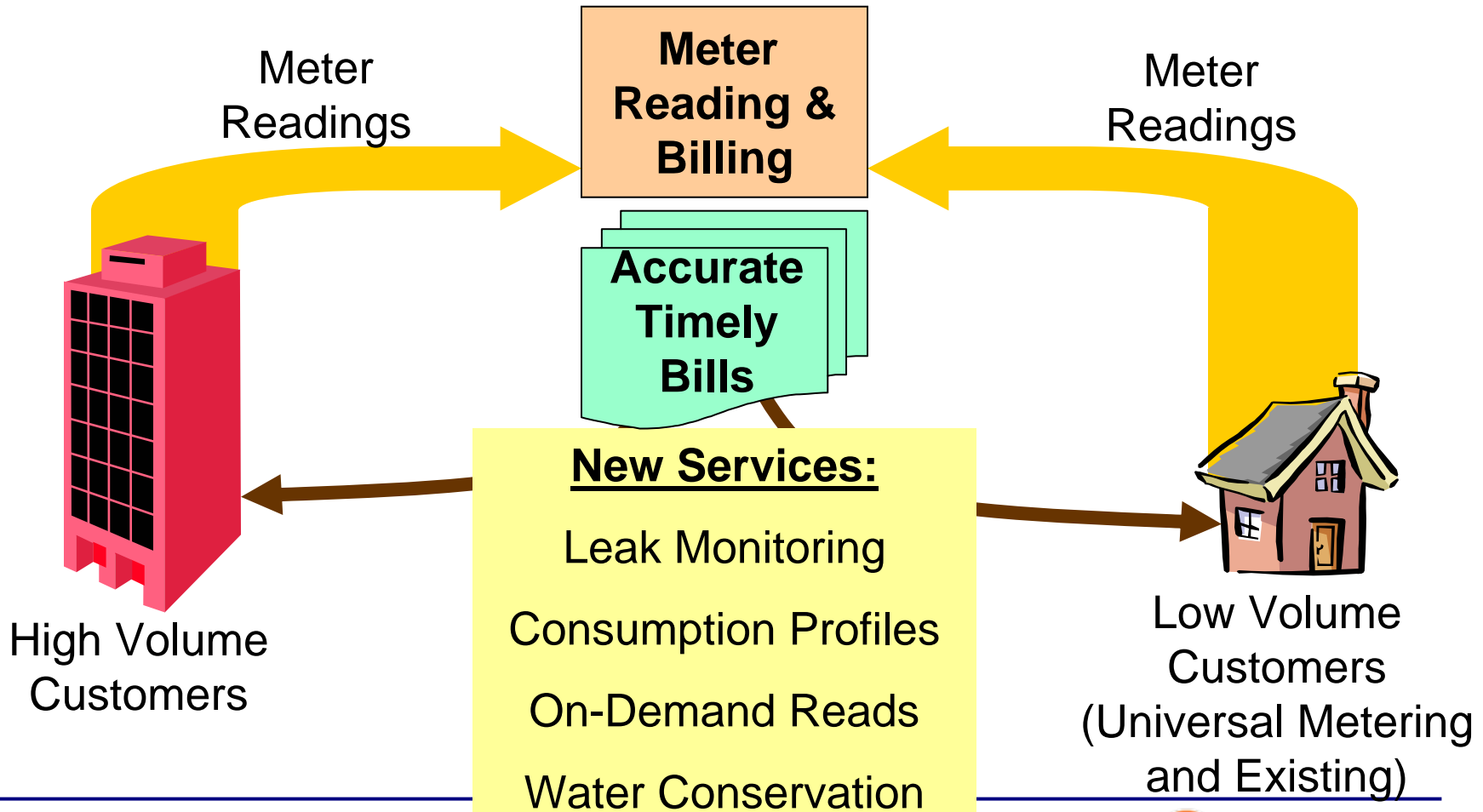
- The City selected **Neptune Technology Group (Canada) Ltd.** as the prime contractor who will be **responsible for the entire system integration** which encompasses:
 - Meter procurement
 - Network installation
 - Software and Data Repository Integration
 - Meter installation
 - Public education and other communication initiatives

Benefits Of WMP

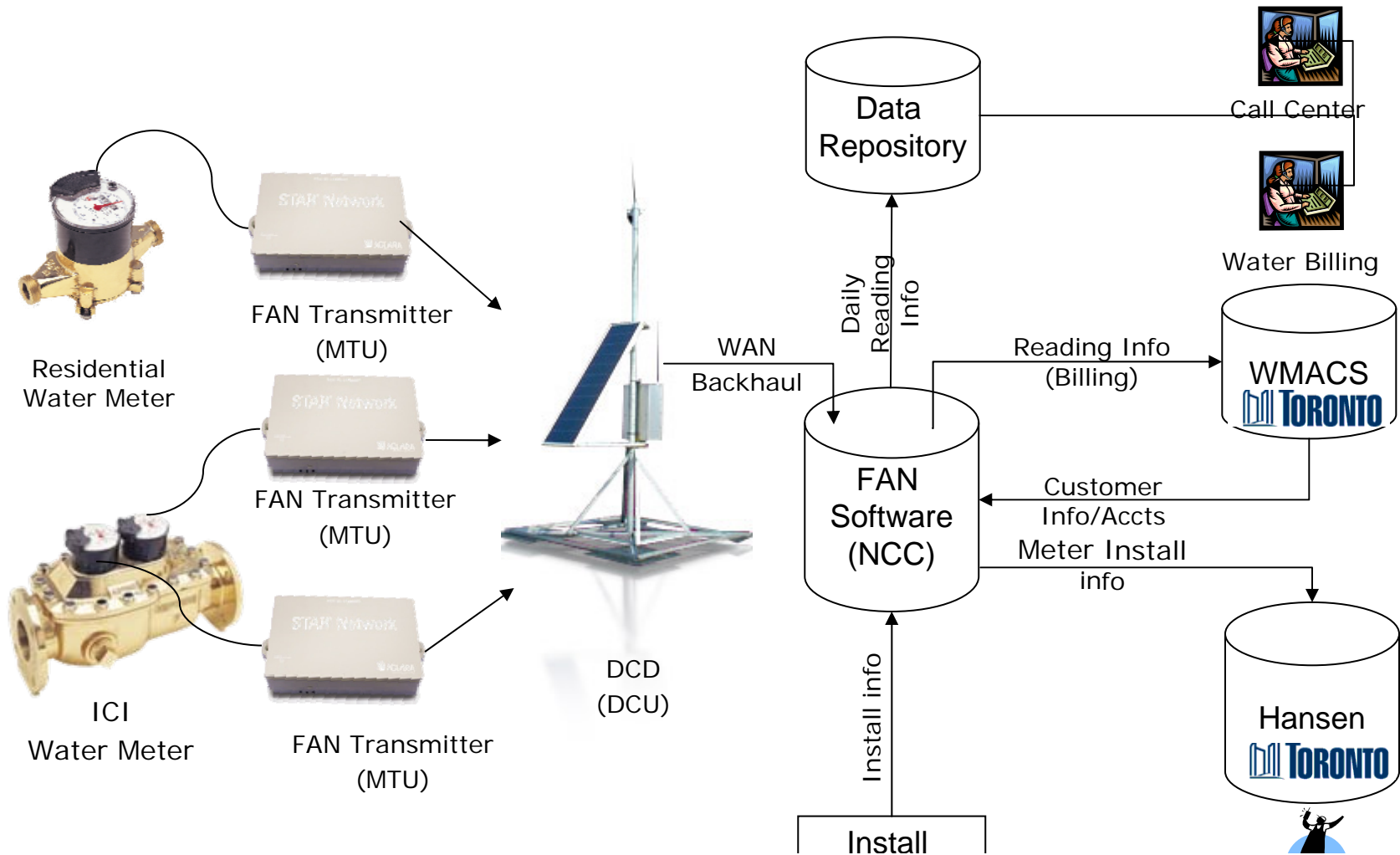
Benefits to the City of Implementing the Program

- Improves customer service
- Improves ability to conserve water (customer and City)
- Solves inequity in meter accuracy (customers paying some of the cost of others)
- Cost is approximately **219 M** (net GST)
- Duration is 6 years

AMR Benefits All Customers



Implementation Of The AMR System



Additional Objectives and Benefits

Provide consumption trends and comparisons to customers

- Reduce leaks
- Improve water conservation

Requirements:

- Acquire enough historical information so that customers can get immediate value
- Develop clear advice on using information
- Educate customers on how to use the information

Additional Objectives and Benefits

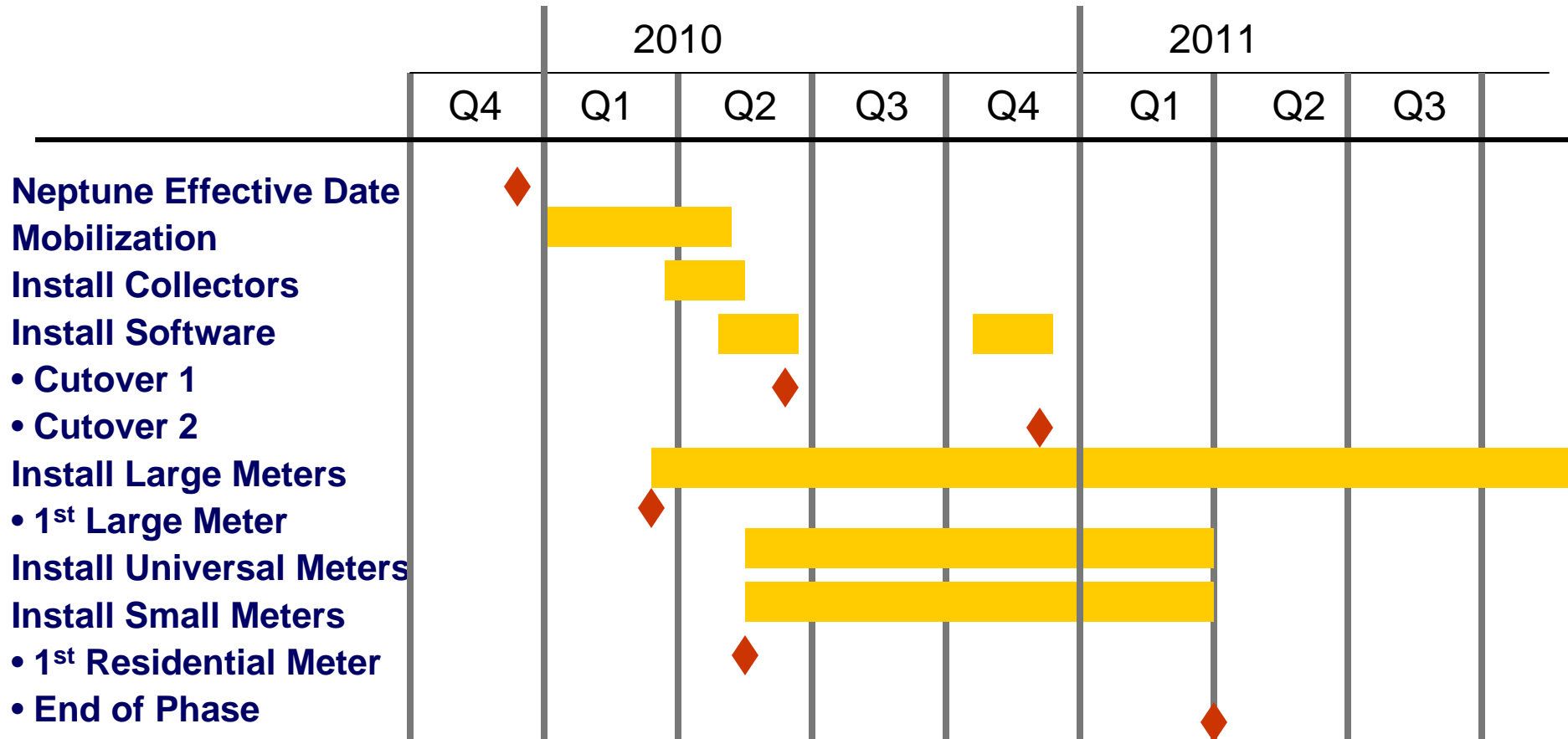
Provide consumption data to water system planners

- More accurate measurement of consumption
- Improve water system leakage index determination

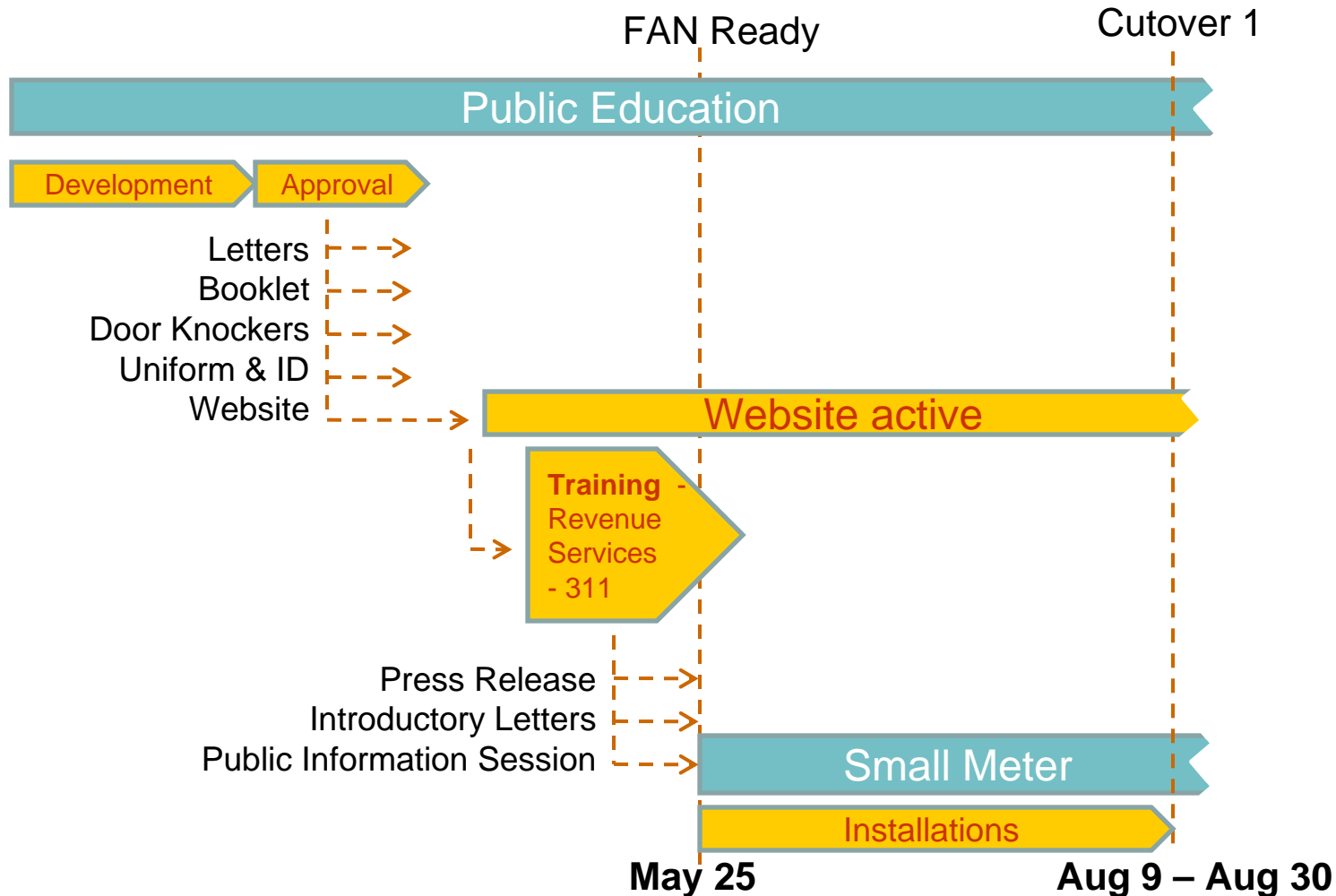
Requirements:

- Develop requirements for reporting information

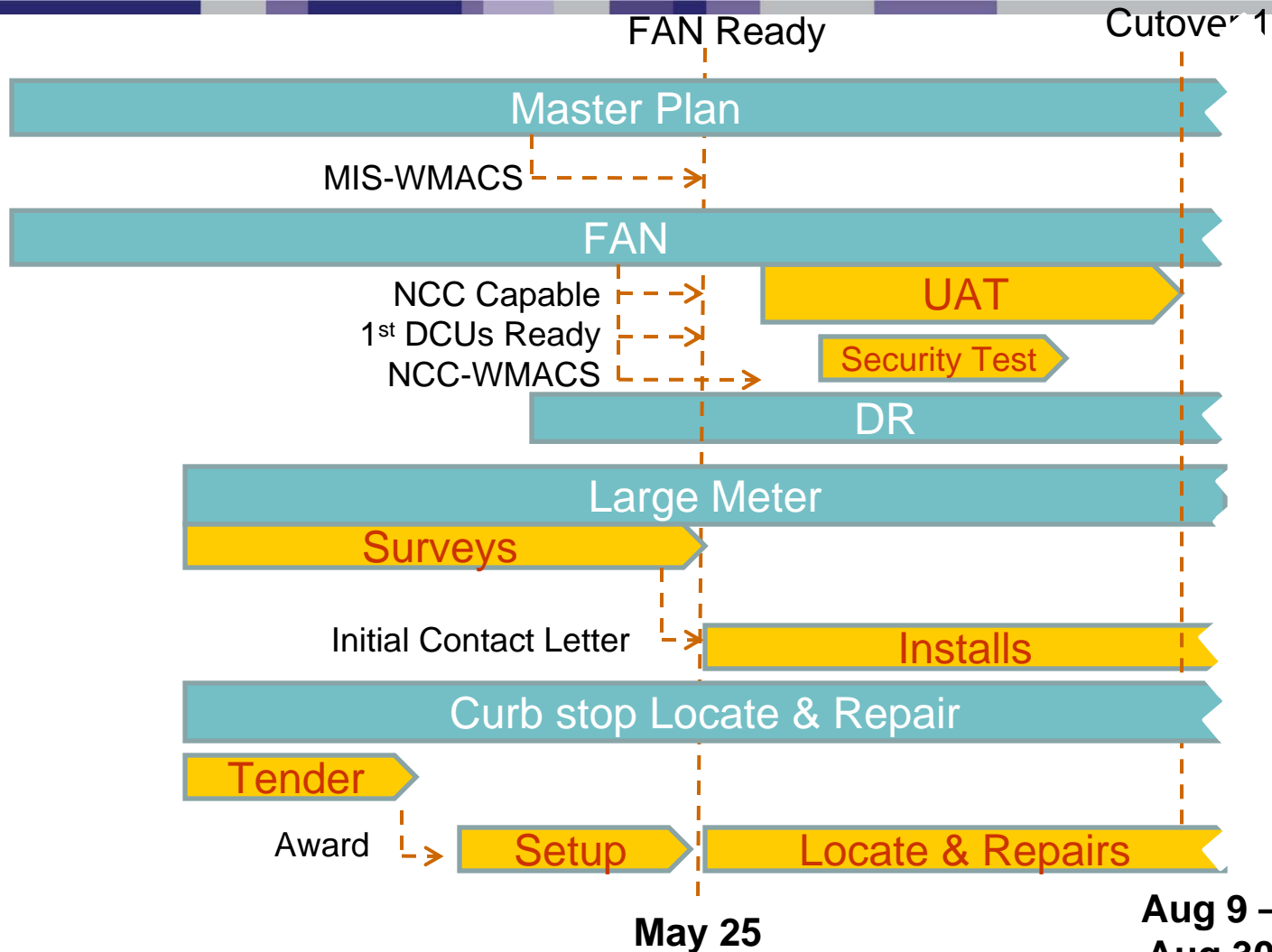
Water Meter Program Project Schedule



Project Schedule Partitioned to Enable Subject by Subject Updates



Project Schedule



Project Highlights:

- Public Communication Plan
 - Public Education Coordinator
 - Internal Training
 - Area Management and Public Communications
 - Website, Press Releases, Booklets, etc.
- Water Supply By-law requires mandatory compliance
- Proven successful on other metering projects
- Monitoring and Performance Measures
 - Standard reporting
 - Progress Meetings
 - Production
 - Monitor Project Plan
 - Sub-meetings to Review Specific Topics
 - Read Success Rate

Project Highlights: Value Added Data

Further Enhancements to the System

- **All ICI meters (37 mm and greater)** will be equipped with **advanced E-Coder® register** technology
- **Maximizes the City's overall investment:**
 - Value added features, guaranteed accuracy, higher resolution, safety flags, and timely information
- **Resolution** to conduct **proper consumption analysis** based on hourly reads as the **intelligence is installed at the end-point.**
- The advanced register has the unique ability to:
 - Detect and communicate the occurrence of a **critical event in 15 minute intervals**
 - **Seamlessly transmit this data through the FAN System.**

Project Highlights: Data Repository

System Integration

- Development and implementation of a **Data Repository**
 - A **web internet interface** to allow the **City's customers** to:
 - access their **consumption history**
 - compare** their consumption to **other customers within the utility.**
 - Allow **City Staff** to perform **advanced data analysis** and **ad hoc reporting** on historical data to assist with **demand side management** and **rate structure reviews.**



Public Education and Relations

Neptune Call Centre

- Setup in March
- 311 – Coordination, Frequently Asked Questions and Training
- Project Website

Public Relations Events

- Councilors
 - Information Package
 - Meeting with them ahead of work in their Ward
- Ceremonial Meter Installation in April 28
- Press Releases issued April 26



WaterMeter

PROGRAM