

**Sustainable Strategies Webinar Series –
Spring 2014
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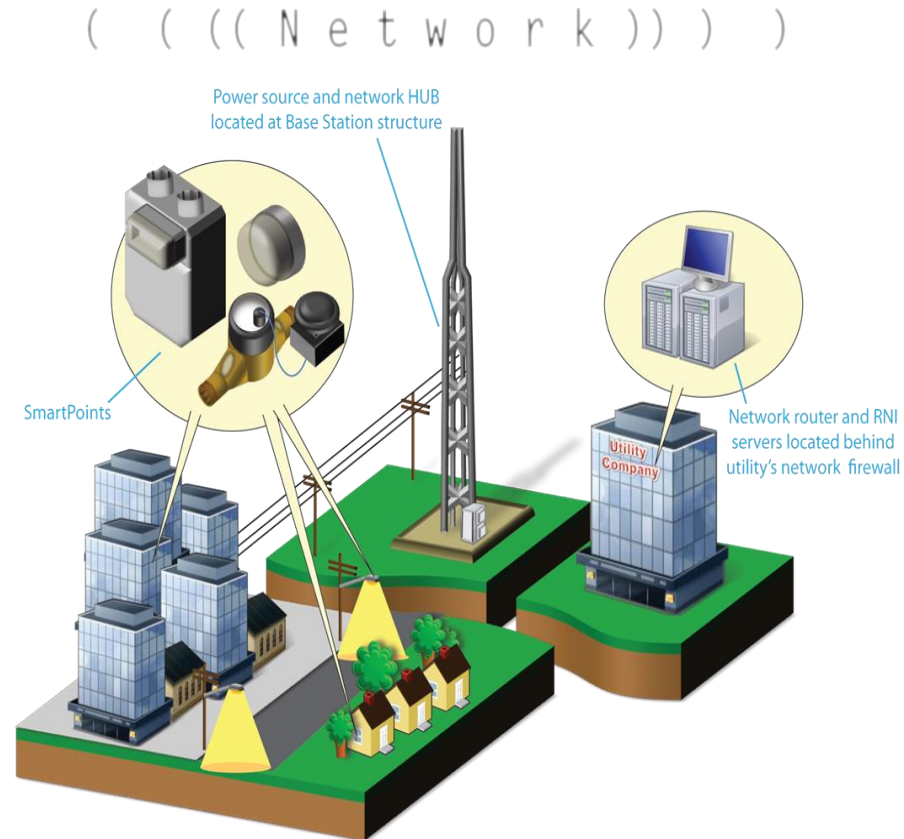
AMR vs AMI

- **Automated Meter Reading (AMR)**
- **Introduced early 1990's**
- **Available wb/db applications**
- **Primary drivers**
 - Access to inside meter sets-flooded pits
 - Elimination of estimated reads
 - Safety
- **Efficiency**
- **Majority of solutions sold today**



AMR vs AMI

- **Advanced Metering Infrastructure (AMI)**
- **Data is more than a billing read**
- **Trend continues to grow in the water market**
- **Drivers**
 - Greater data frequency (hourly vs monthly)
 - Improved technology – leak detection – reverse flow
 - Migrateability
 - Two way communications
 - Products beyond the meter
 - Improved data analytics



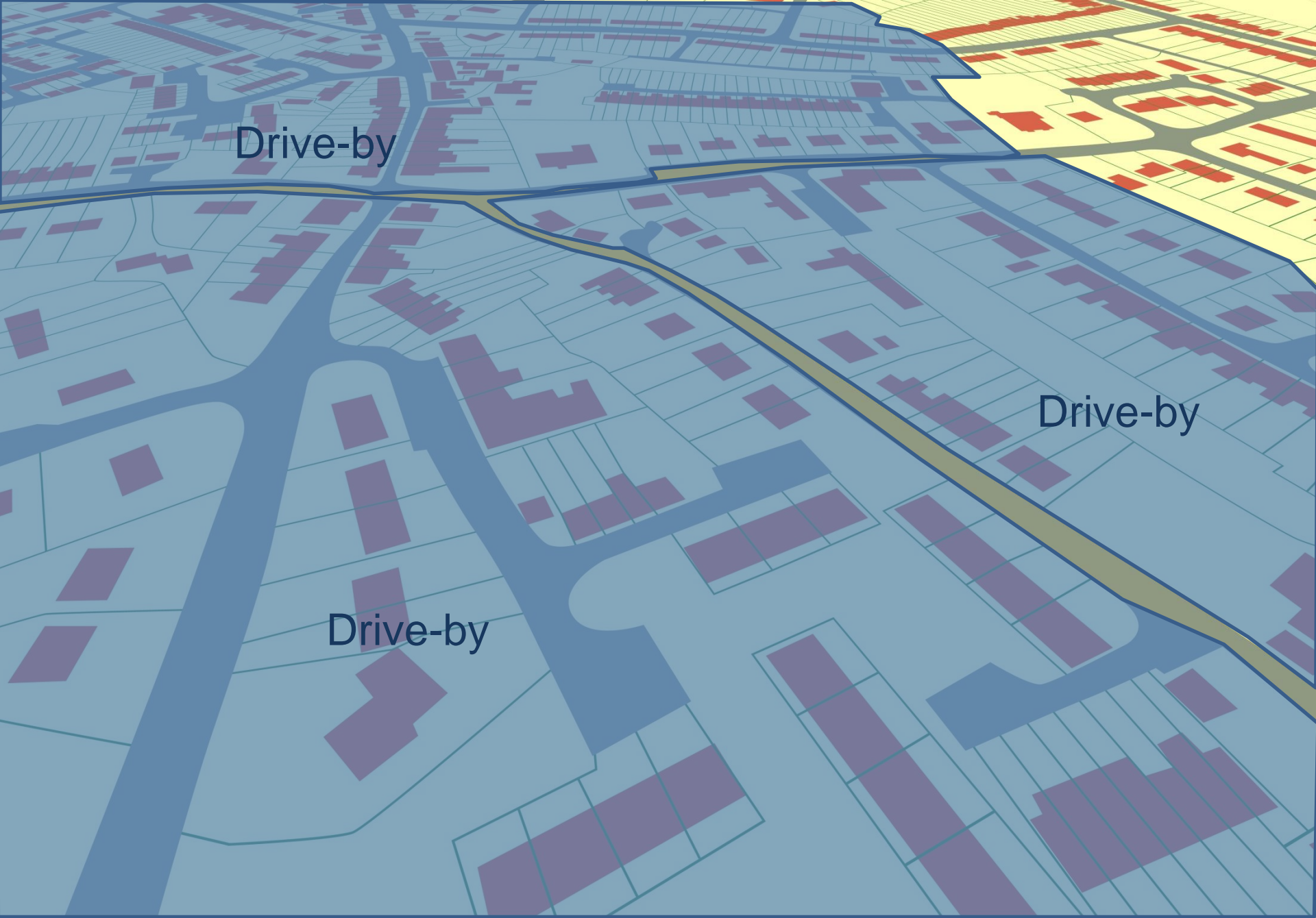


Walk-by



Walk-by

Walk-by



Drive-by

Drive-by

Drive-by



Fixed base

Drive-by

Drive-by



Fixed base



Fixed base

Water Industry Survey

68% of water utility managers believe it is critical that water utilities adopt smart water meter technologies

TOP FIVE BENEFITS ASSOCIATED WITH SMART WATER TECHNOLOGIES FOR WATER UTILITIES*

- | | |
|----|--|
| 1. | Enabling early leaks detection (62%) |
| 2. | Supplying customers with the tools to monitor/reduce their water usage (35%) |
| 3. | Providing more accurate water rates (24%) |
| 4. | Curbing overall water demand (19%) |
| 5. | Improving ability to conduct preventive maintenance (18%) |

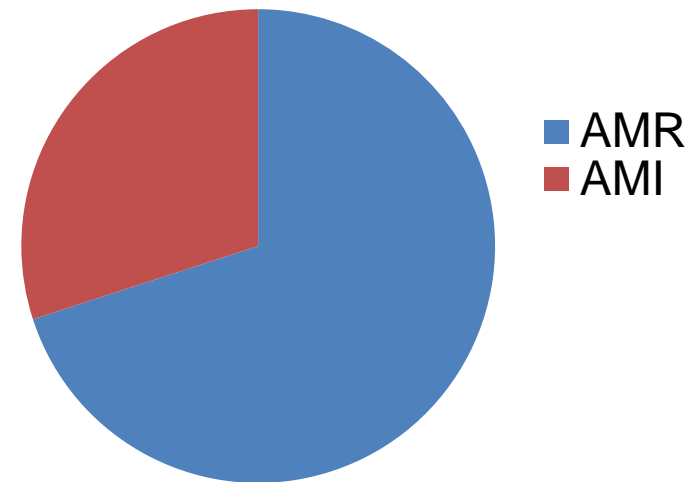
Canadian water utilities are significantly more likely than US water utilities to consider supplying customer information a top benefit
Source Oracle- Testing the Water Smart Metering for Water Utilities, Jan 2010

*Utility managers were asked to select top two most significant benefits

Current AMI Market Saturation

- Market continues to shift from AMR to AMI
- 90/10 split in 2010
- 70/30 split today
- New applications and solutions driving the trend
- Water scarcity and drought conditions (regionally)
- System integration and greater operational efficiency

AMI vs AMR



Future Solutions- Trends

- **Two way solutions provides opportunity for:**
 - On demand reads
 - Remote shut off capabilities
- **Other monitoring capabilities:**
 - Pressure
 - Temperature
 - Pump monitoring and control
 - Valve control
 - District metering
 - Distribution line leak detection

Current Wisconsin Success

- **AMR solutions – 100+ customers**
- **Migratable solutions 60+ customers**
- **AMI – fixed base solutions 25+ customers**



Gas



Thank you!