

Council Report, Request for Decision - Advanced Meter Infrastructure

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Update on AMI

Today's discussion will;

1. Review Council's 2018 Request and show our current state;
2. Review the purpose and benefits of AMI;
3. Summarize financial benefits; and
4. Review Next Steps.

What was requested by Council

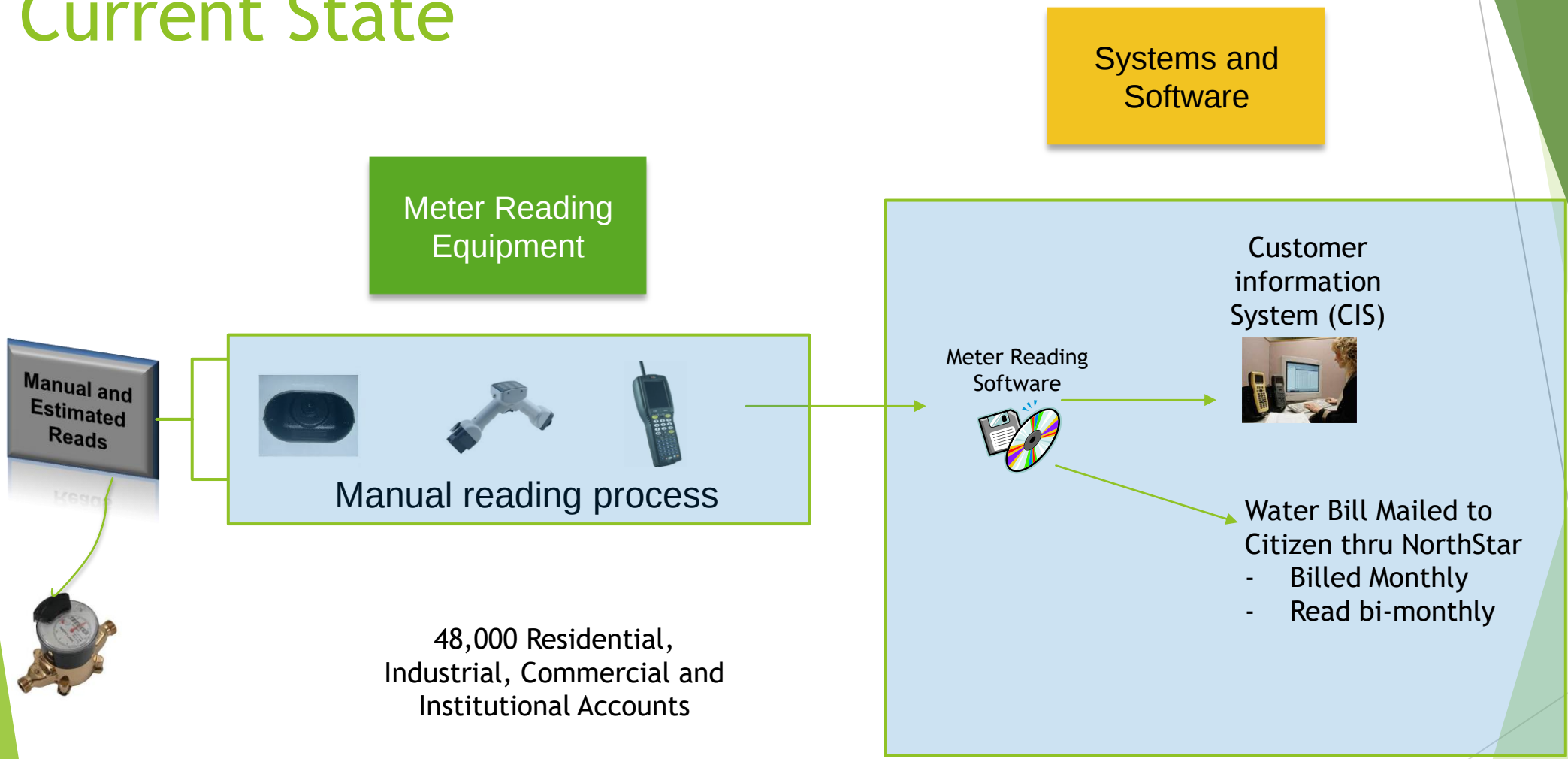
1. Report on process to update all 48,000 residential and ICI accounts
2. Implement our own custom Meter Analytics software
3. Create a citizen portal for online access with the ability to review and initiate service requests

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What was requested by Council

4. Clearly define;
 - ▶ Meter replacement needs
 - ▶ Implementation of AMI system, water meters and installation
 - ▶ External project support
 - ▶ Internal project support
5. Show how AMI connects to the Strategic Plan; and
6. Explain process to achieve full implementation in 36 months

Current State



Current State

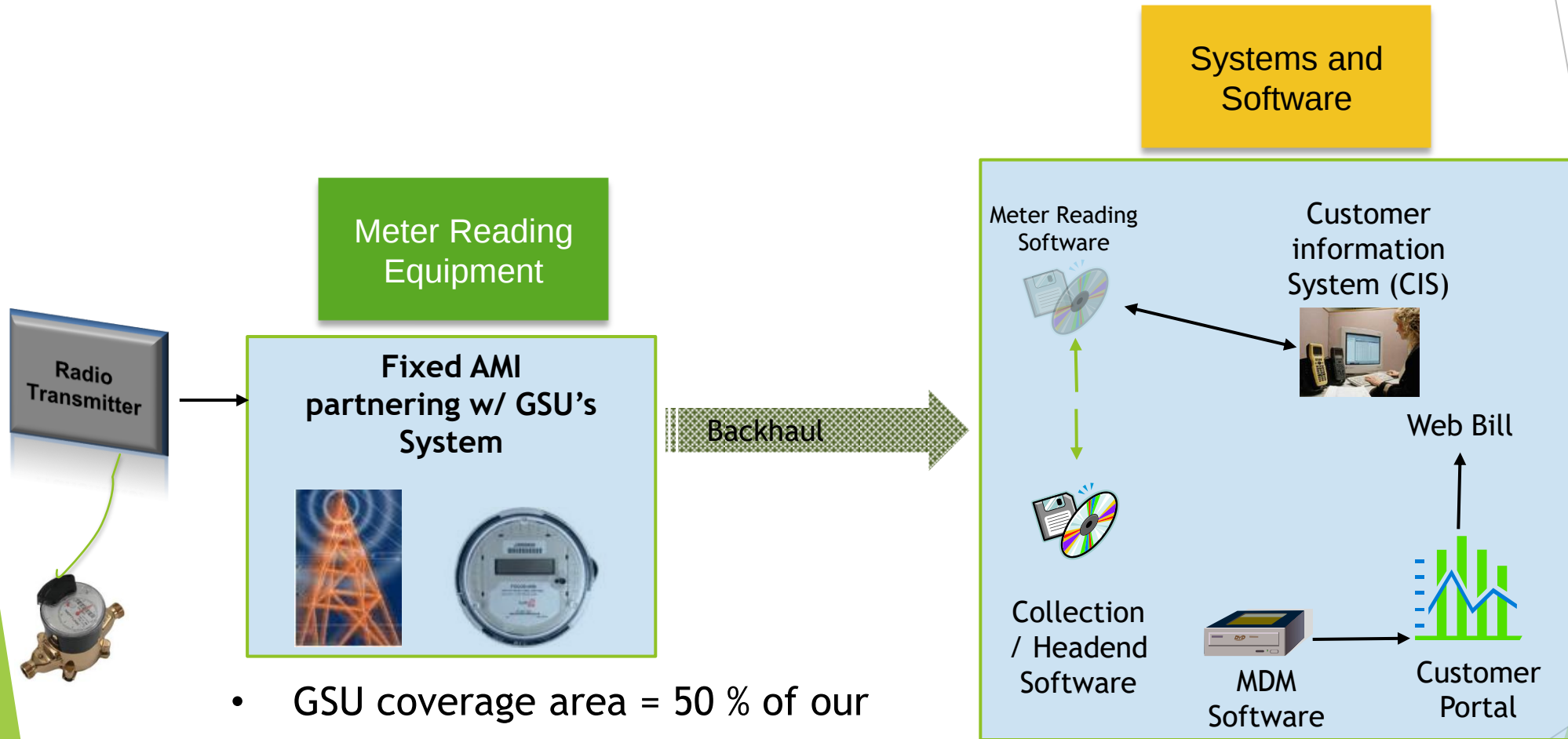
1. Missed Manual reads leading to billing estimates (7.2%)
 - ▶ Touch Pad Technology not reliable and outdated
2. 6 months of estimated reads annually (~300,000)
 - ▶ Manual reads currently cost ~\$360,000 / year;
3. Web access/customer portal has very limited water information;
4. Many high bill complaints resulting from lack of timely data;
 - ▶ Inability to detect leaks/notify of leaks;
 - ▶ 18 month period 43 “high bill” complaints received; and
 - ▶ \$37,000 total, \$750 average

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Current State

5. Manual data collection forces numerous visits by staff;
 - ▶ final reads, water meter complaints - impact on carbon footprint, etc - \$40,000 / year;
6. Large amounts of unaccounted for water/water meter damage;
 - ▶ Loss of \$400,000 / year in revenue
7. Greater than 50% of our meters have reached end of useful life
 - ▶ Currently replacing about 1,000 meters/year ~40 year renewal plan
8. Cumbersome financial reporting; and
9. Unable to “water balance” between treated and consumed.

AMI Overview



- GSU coverage area = 50 % of our area
- Whole area Coverage = 550 km²

Alignment with Draft Strategic Plan

1. Asset Management and Service Excellence

- ▶ Renewal of one of our most vital assets
- ▶ Improved accuracy
- ▶ Prioritize capital expenditures in future years

2. Business Attraction, Development and Retention

- ▶ Retaining funds in our community
- ▶ Fairness & value for dollar on competitive water rates

Alignment with Draft Strategic Plan

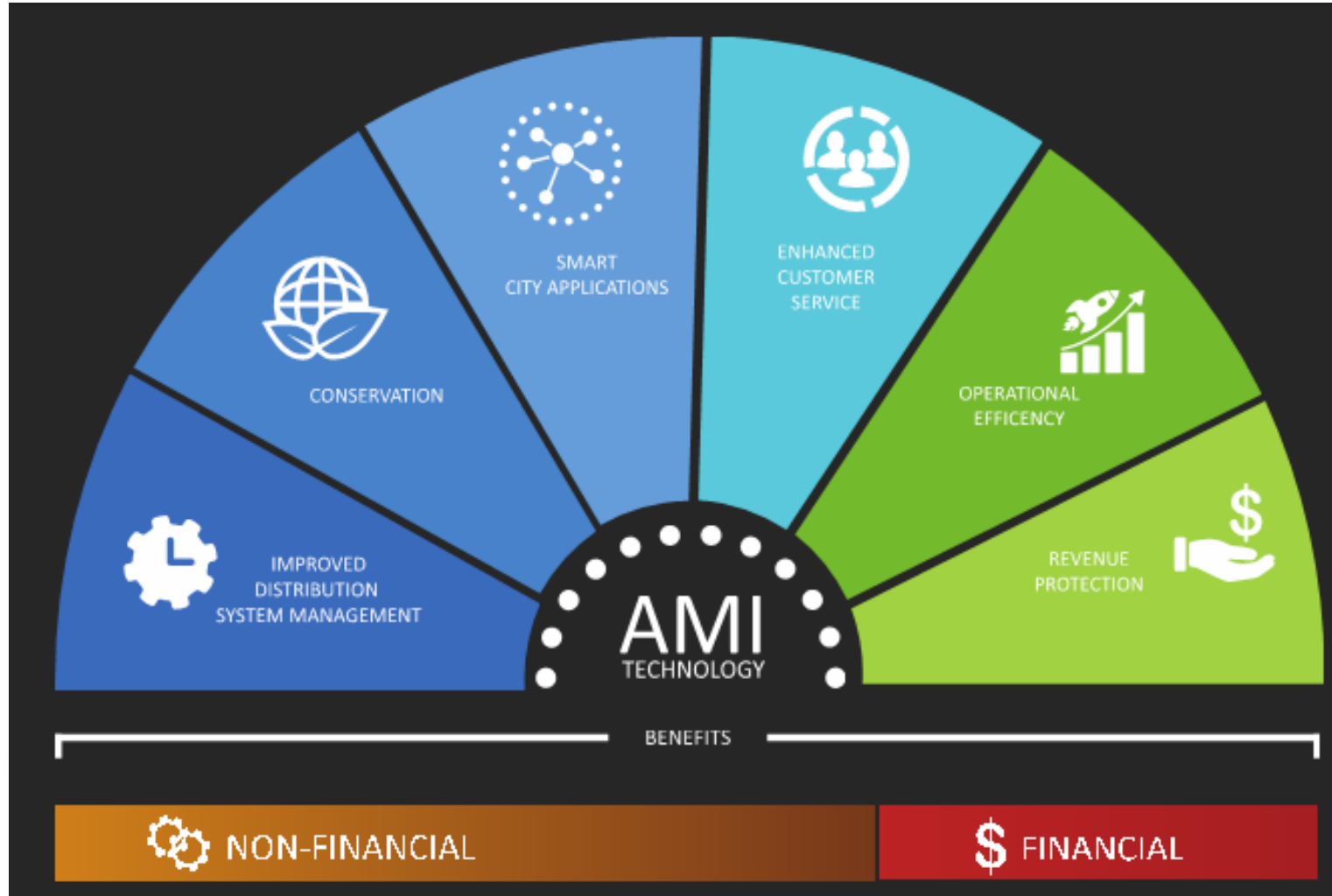
3. Climate Change

- ▶ Conservation efforts and programs
- ▶ Less vehicles on road
- ▶ Less energy consumption

4. Economic Capacity and Investment Readiness

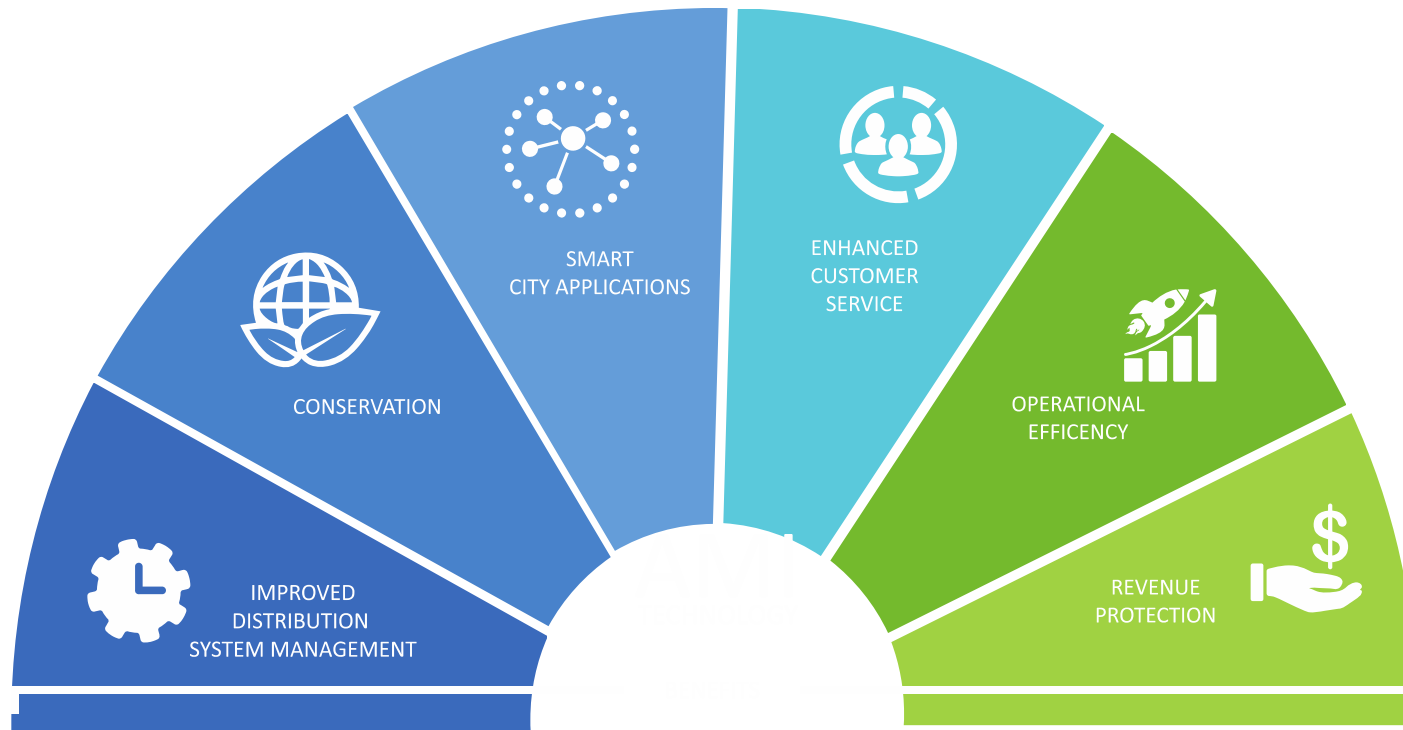
- ▶ Allow customers to directly manage their water

Business Drivers and Benefits of AMI



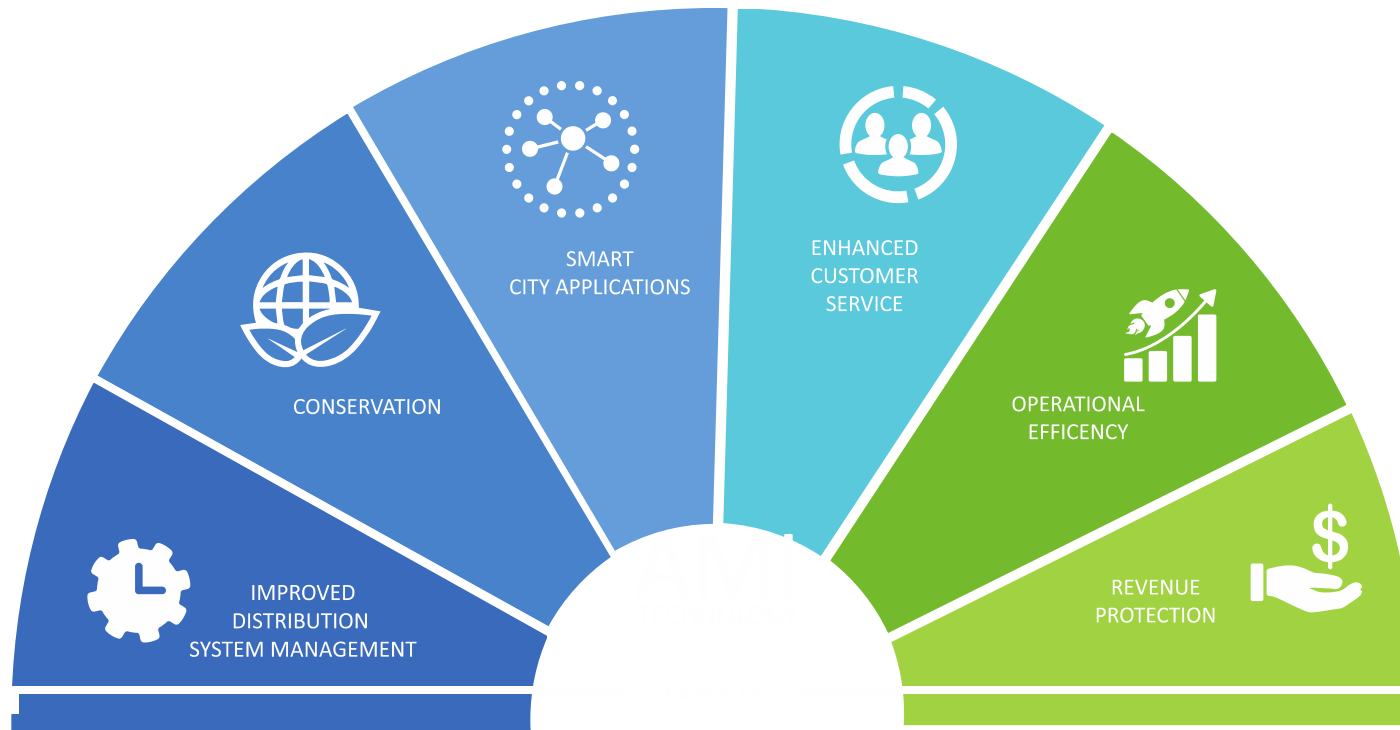
- Enhanced Customer Experience
- Operational Efficiencies and Savings
- Revenue Protection
- Improved Distribution Management
- Conservation

Enhanced Customer Service



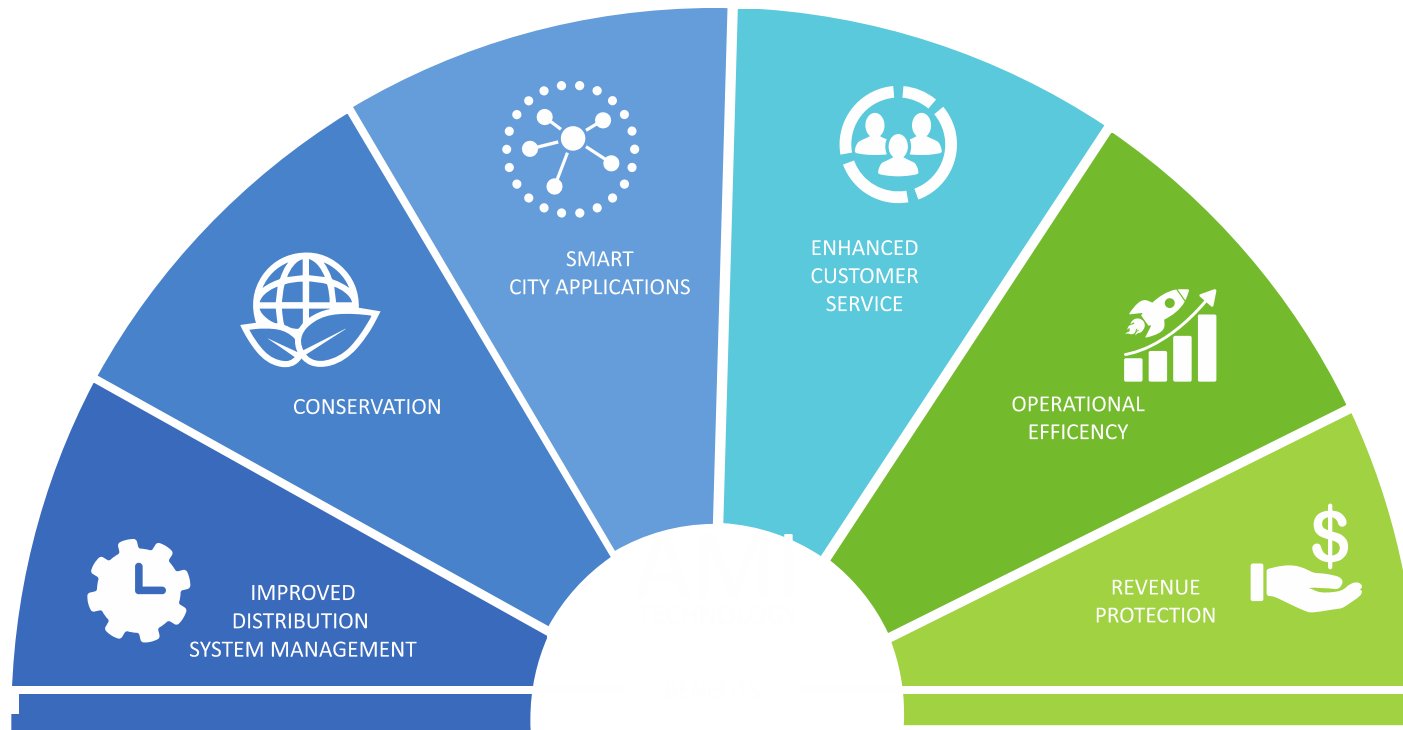
- Eliminate estimated bills
 - Water Rate vs Tax Levy
- Monthly billing cycle based on actual reads
- Customer web access to consumption data and alerts
- Ability to monitor/alert frozen water services
- Quicker notice of high bill issues and leak alerts
- Improved move in/out services

Operational Efficiencies and Savings



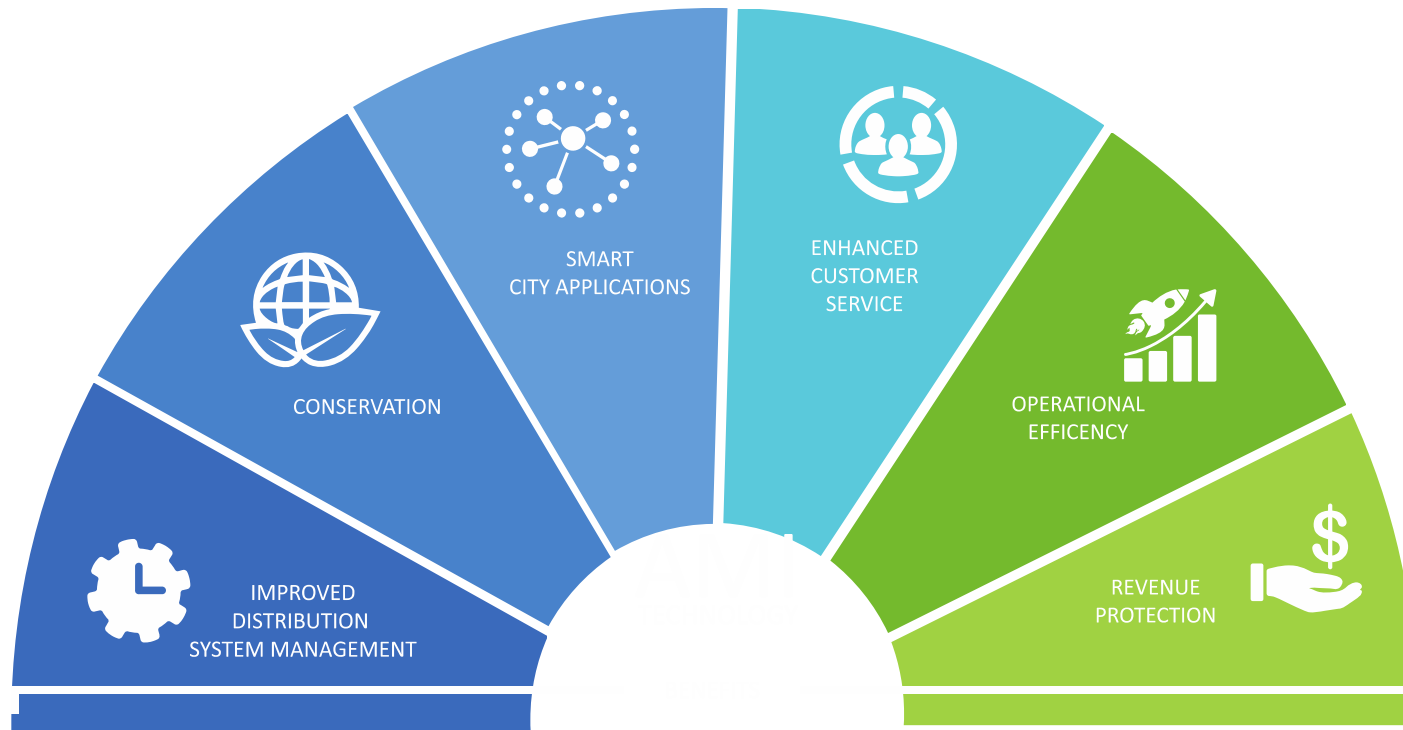
- Eliminate manual reading costs
- Reduce reading exceptions and reliability issues
- Expedites same day special reads
- Minimize high/low field visits
- Monitor and detect backflow events

Revenue Protection



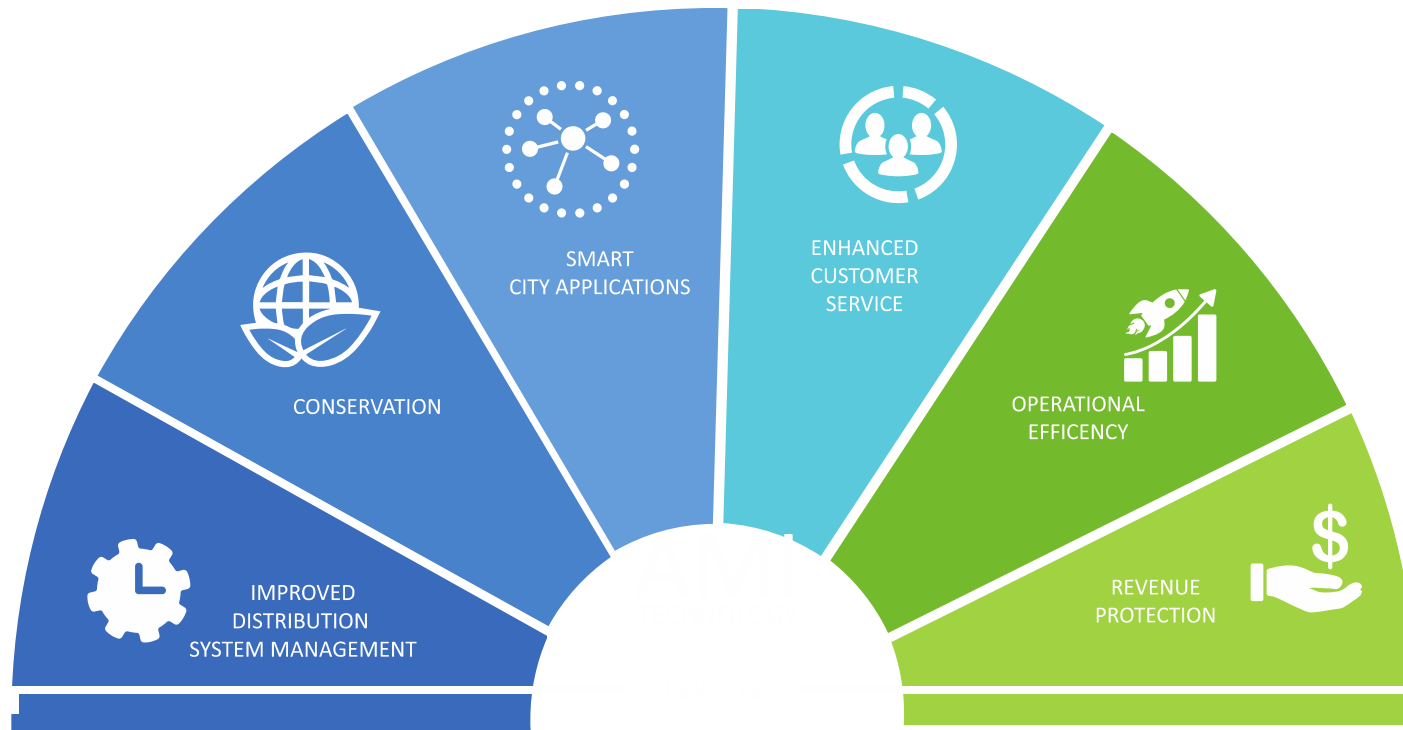
- Detect water meter damage sooner
- Improved water meter accuracy
- Improved financial reporting with fair financial accountability amongst rate payers
 - Target Capital funding on system improvements

Improved Distribution Management



- Better understand water loss and where to prioritize investment (+30%)
- Improvements based on system water loss
 - Avoid investing in new infrastructure
- Improved consumption recognition

Conservation



- Reduce chemical and energy use for water and wastewater treatment
- Ability to embark on innovative conservation efforts
 - Water Quantity/Conservation

Review Financial Benefits

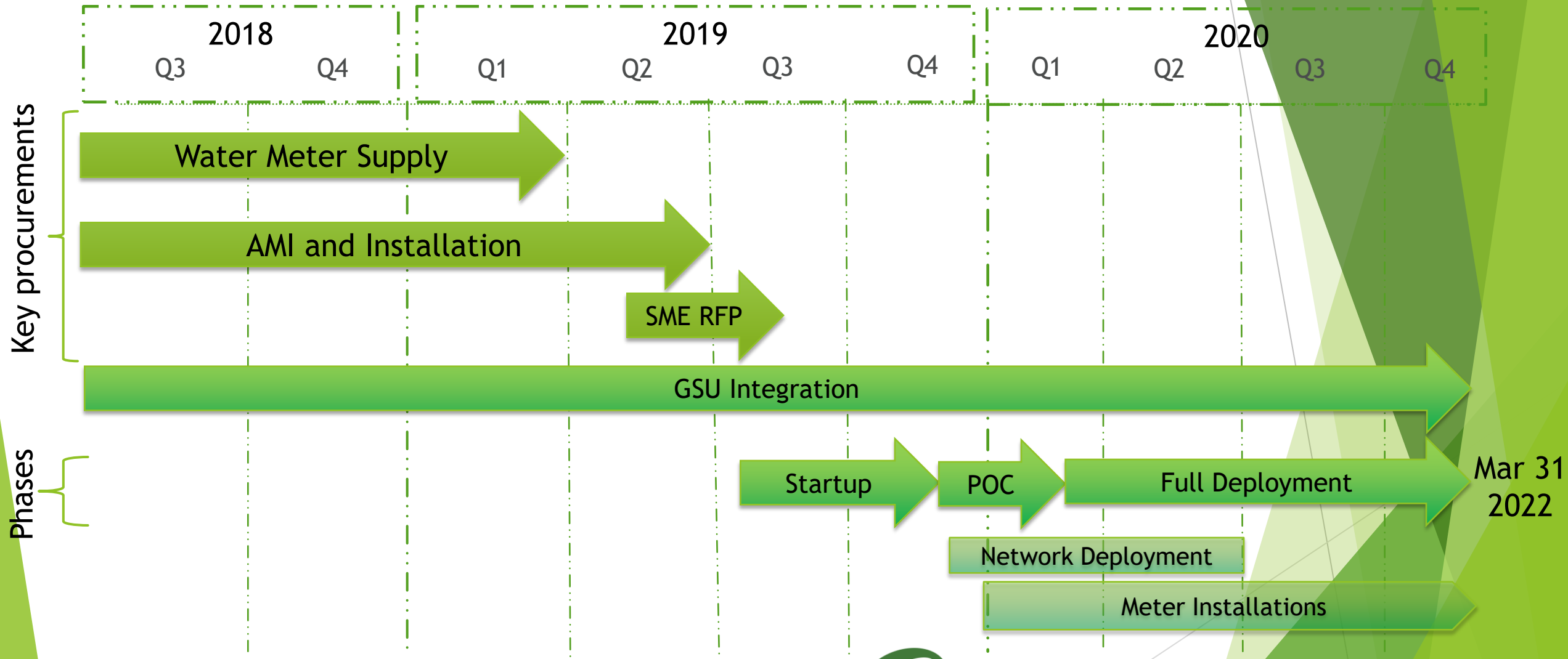
In addition to benefits to citizens and CGS

- 10 year payback
- 20 + year life cycle of equipment

Review Financial Benefits

Component	Business Case
Annual Benefits	
Meter Reading	\$360,000 - Olameter Contract
Meter Maintenance	\$40,000 - Less overall service call outs. However, includes additional maintenance of radio transmitters
Billing Efficiencies	\$182,000 - Enhanced Customer Service
Unaccounted for Water	\$428,000 - Water distribution system Improvements
Annual Costs	
Support & Maintenance	(\$326,000) - Estimated increased annual cost to support the AMI program, such as data analysis, technology support and GSU support.
Net amount savings	
Total Net Savings	\$684,000

Project Phases



Next Steps

- Execute contracts with recommended vendors
- Integrate changes to the Service Level Agreement w/ GSU
 - Report back to Council with recommended changes
- Move to Implementation:
 - Start up activities
 - Complete Proof of Concept (Ward 1)
 - Evaluate results of User Acceptance Testing
- Once POC and UAT are successful, proceed into Full Deployment