

## AMR Drive-by Project Carlow

Automatic Meter Reading Project  
2009



### Client

Carlow County Council

### Clients Representative

Director of Services Carlow County Council

### Number of Customers to be metered

11 areas with 1,750 meters required

### Project Involvement

Supply, installation and commissioning

### Challenge

The remit of CSL from Carlow County Council was to provide an automatic meter reading system for non-domestic customers in the town and county of Carlow. The system installed was to be a fully automated 'Drive-By' meter reading (AMR) installation.

In 2008 CSL were awarded a contract to supply Carlow County Council with 'Bonyto Concentric' water meters for installation on service connections to their nondomestic customers. This particular class C meter was selected for it's capability to read very low flows and provide pulse output for automatic meter reading.

**AMR Drive-by Project  
Carlow**



**Solution**

We provided an AMR true drive-by system supplied by Hydrometer which included the following;

- The AMR system for a total of 1,750 meters
- 1,500 concentric meters supplied by CSL
- 150 in-line meters supplied by CSL
- 100 bulk meter transponders
- Meter boxes

The drive-by radio transponders were two types -

1. Clip-on to Hydrometer meters (90% +)
2. And retro-fitted to other existing bulk meters (Siemens, ABB etc.,)

Payback period for transponders, installation & commissioning based on 4 meter reads per year: 3.8 years.

Payback period for transponders only based on 4 meter reads per year: 1.8 years.

**Benefits**

- See table below
- Total ownership by Carlow CC
- Installed by contractor and Carlow CC
- Interface directly to Agresso (CSL).
- Improved cashflow for the local authority through more frequent billing
- Reduced customer complaints
- No consultants used
- Future proof - marginal cost of future meter reads is tiny e.g. future domestic meters
- Release of manpower
- Improved health and safety
- Eliminate "armchair" readings

**Water conservation through data**

- Detecting leaks - built-in leak detection alarms
- DMA night-time readings - estimate total DMA flows
- Realtime flow
- Water usage - Improved water usage through comparison of similar sites
- Passing data to users
- Leakage rate in Ireland by technology deployed
  - CSL AMR - 28%
  - Others - 43%

Benchmark	Before Installation	After Installation
<b>Time taken to read meters</b>	100 man days	3 days max.
<b>No of meter readers needed.</b>	12	1
<b>% of meters read by drive-by</b>	0	99%
<b>Cost of bill production as % of revenue collected</b>	10%	1%
<b>Achievable billing frequency</b>	Bi-annual	Bi-monthly