AQS Web Services

AirVision/OpenNode2 Connectivity

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- Customer in process of implementing OpenNode2 system.

- Initial Dataflow selected was the AQS Flow

- Customer encountered dead end where a custom solution would be required to move further.

- Windsor and Agilaire contacted for assistance and agreed to come up with a solution that could be used generically for additional customers.

AirVision System Functions

- Ambient Data Collection
- Quality Assurance
- Data Analysis
- Reporting

AirVision Highlights

Can acquire data from a variety of different sources (data loggers, directly from instruments, automated file import, etc)

Automated Data Validation Processor can validate data from the moment it is acquired using up to 100's of user-defined logical rules
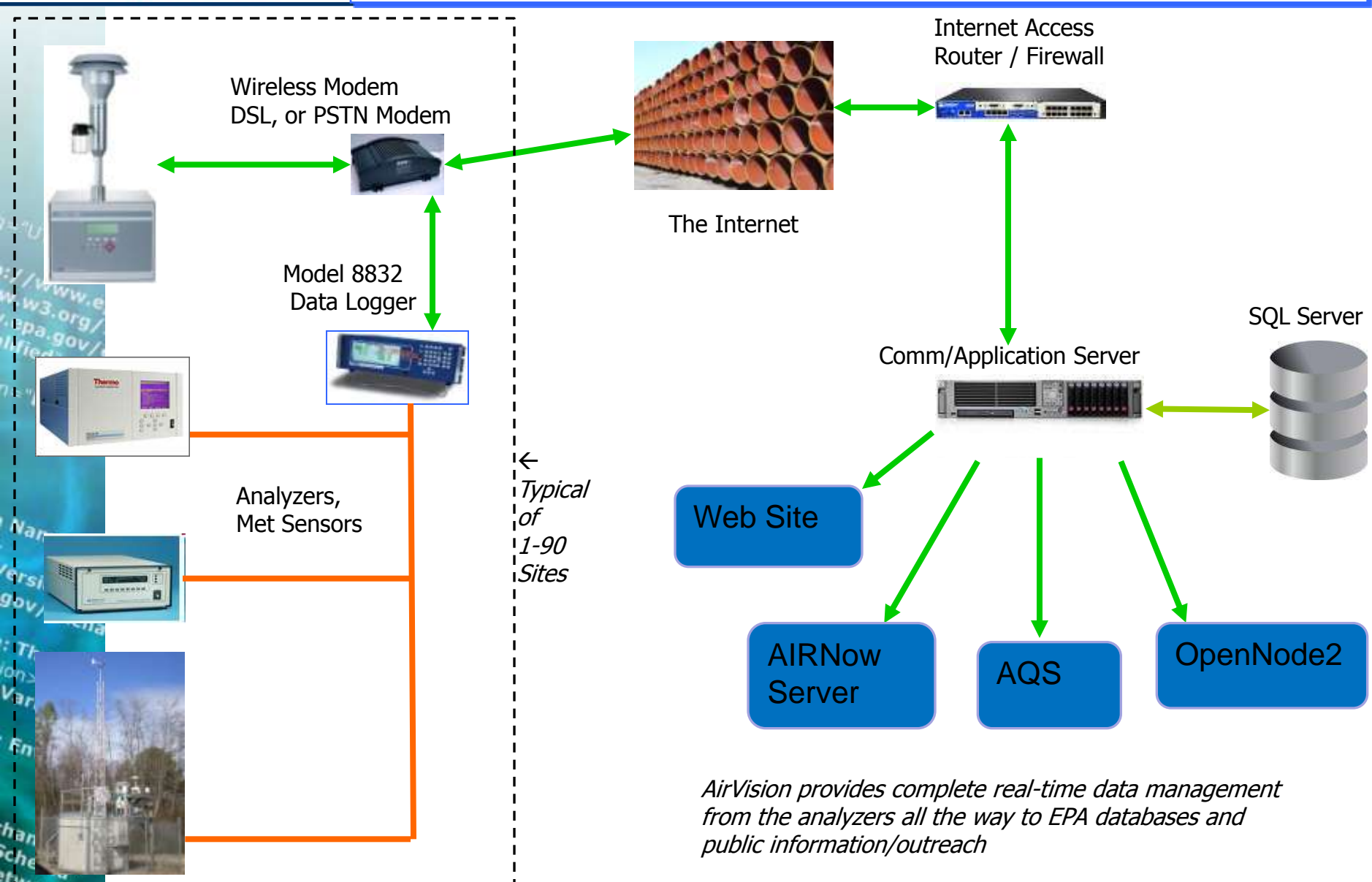
- Allows for higher quality of real-time data presented to the public.

Dozens of statistical tools and reports back up automated QA

Plug-and-Play AgileWeb site for public information / outreach

AirVision System Overview

Environmental Information eXchange Network

Wireless Modem DSL, or PSTN Modem

Internet Access Router / Firewall

The Internet

Model 8832 Data Logger

SQL Server

Comm/Application Server

Analyzers, Met Sensors

← Typical of 1-90 Sites

Web Site

AIRNow Server

AQS

OpenNode2

AirVision provides complete real-time data management from the analyzers all the way to EPA databases and public information/outreach
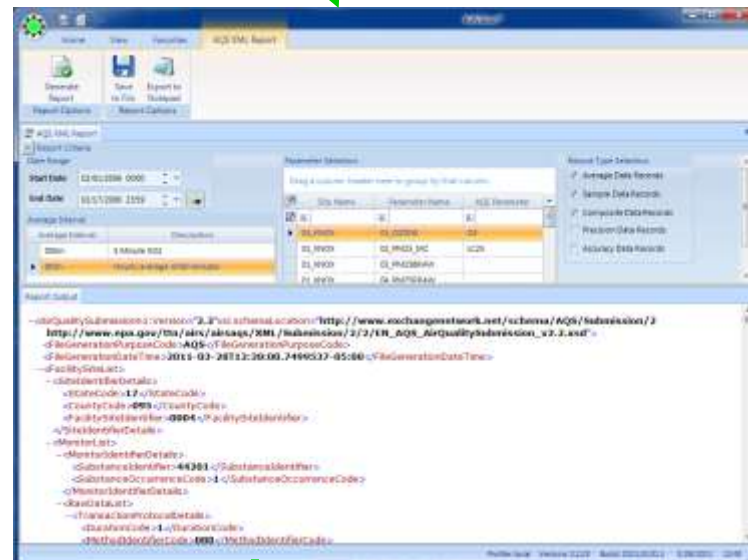
Existing Report Process

Quality Assure all data using AirVision QA tools

One-button generation of XML output file

Manually submit file to AQS / EN

Existing AirVision can automate the process to generate the file every hour/day and FTP the file, but this bypasses the QA process, so it's not popular.

As the line between AIRNow, AQS, and XN blurs, it's important for us to support direct transfer / requests from nodes.
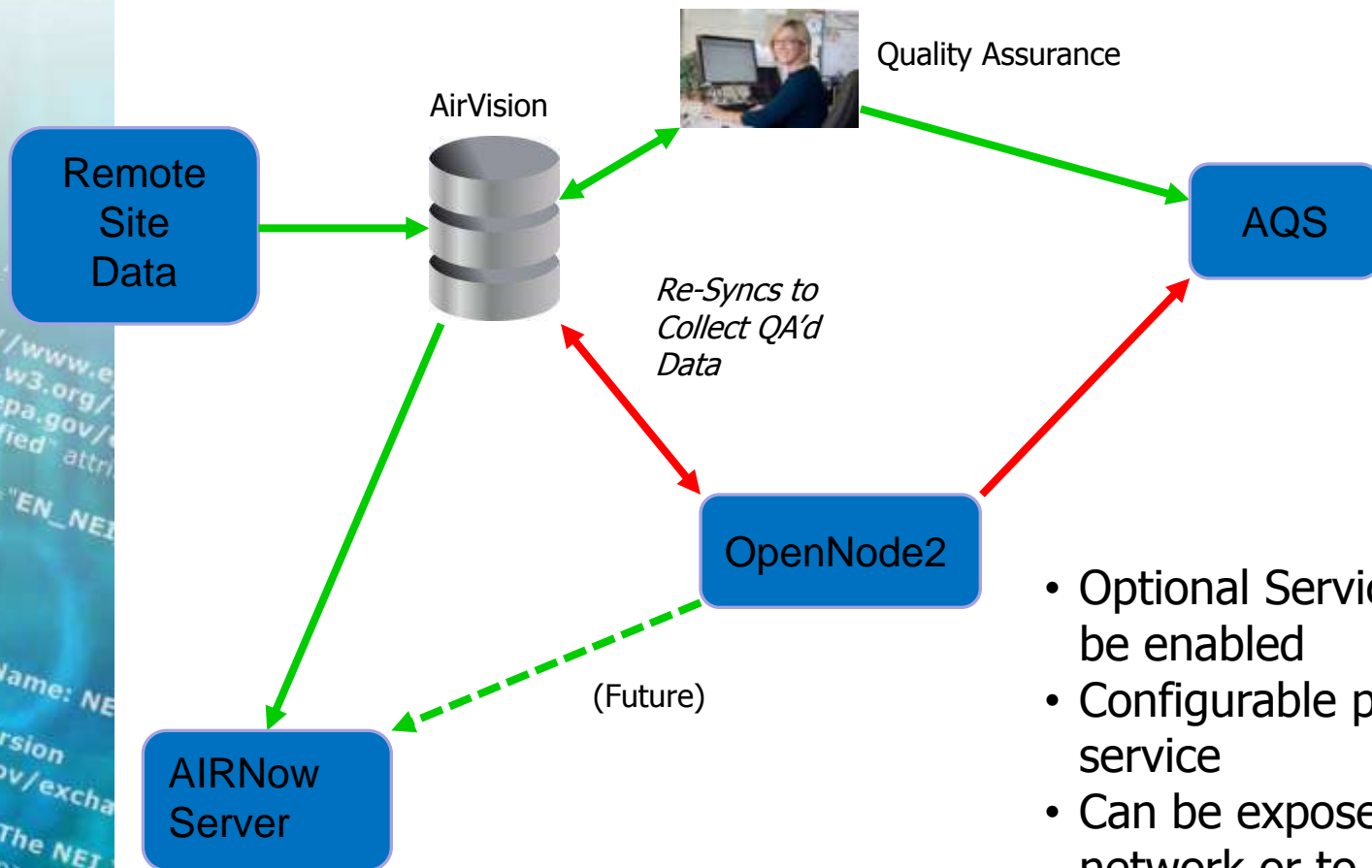

XN

AQS

AirVision Demonstration

With OpenNode2 Plug-In

Quality Assurance

AirVision

Remote Site Data

AQS

Re-Syncs to Collect QA'd Data

OpenNode2

(Future)

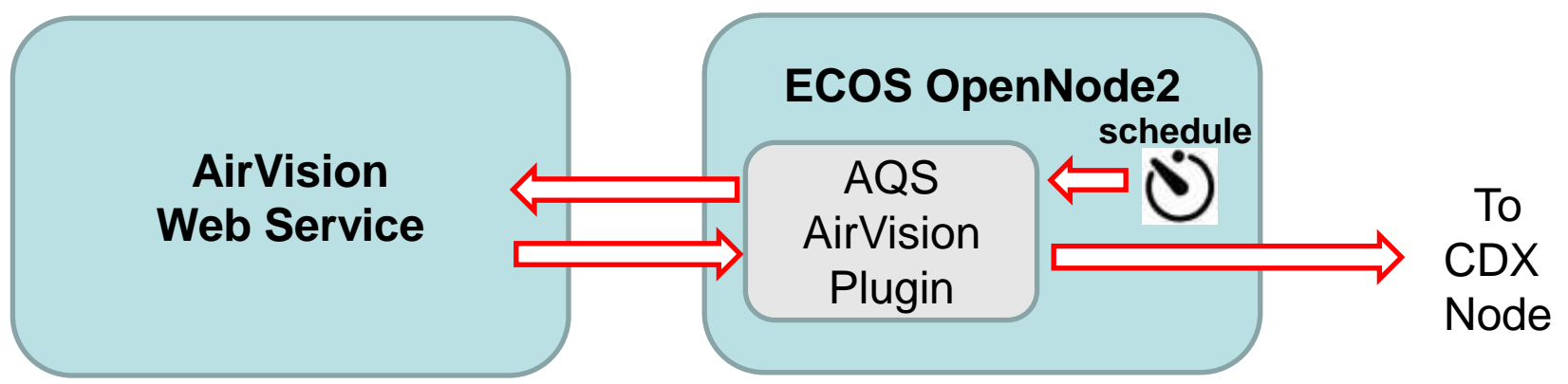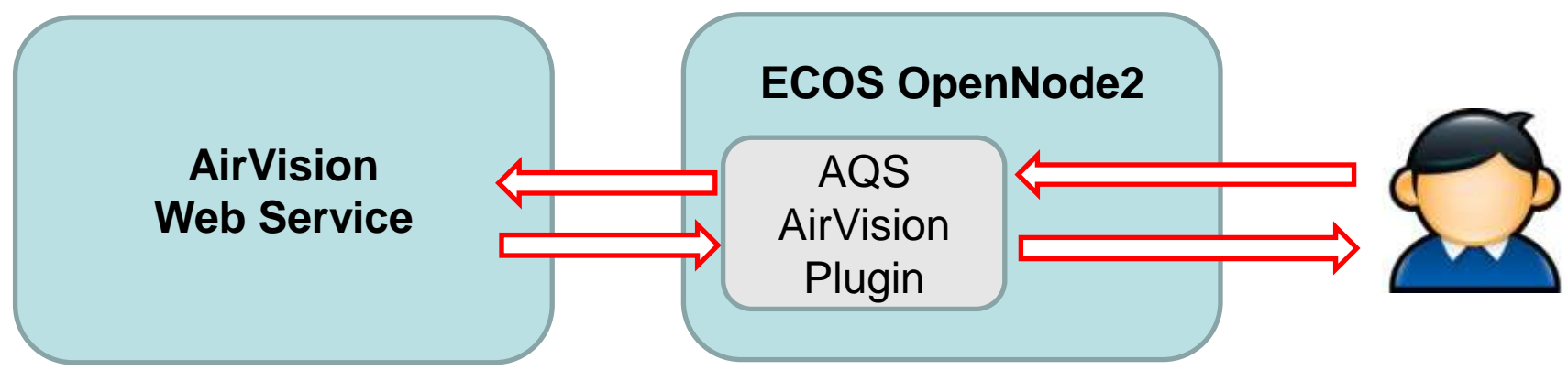AIRNow Server

- Optional Service: doesn't have to be enabled
- Configurable port to access the service
- Can be exposed to local TCP network or to Internet
- Hosted within AirVision Service, no requirement for IIS
- Compressed Payload

OpenNode2 Plugin Workflow

Scenario 1: Scheduled Submittal to CDX

Scenario 2: Ad-hoc Query of AQS Data by External Partner

AirVision Query Filter Criteria

Date Filters

Start Date

End Date

Yes/No Filters

Send Only QA Data

Send RD Transactions

Send RB Transactions

Send RA Transactions

Send RP Transactions

Tag Filters

Tag 1 (Agency Code, Site Code, Parameter Code, Duration Code)
Tag 2 (Agency Code, Site Code, Parameter Code, Duration Code)
Tag 3 (Agency Code, Site Code, Parameter Code, Duration Code)
Tag 4 (Agency Code, Site Code, Parameter Code, Duration Code)

AQS XML AirVision/OpenNode2 Demonstration