

16i. Commonwealth Service Request

16i.1.1. Commonwealth Service Request (CSR) Overview

While Integration Framework Offers a customized use-case based integration, CSR can offer a COTS alternative to the Integration Framework for a knowledge-based search (similar to the Integration Framework web functionality), configuration of service requests throughout all Commonwealth agencies, mobile work order management, GIS-mapping of service requests, and call center support for intake and queries of agency activities. In addition, the CSR solution can be used in a mobile environment. This would provide a work order management application to your public service departments that can be accessed via their mobile data laptops.

16i.1.2. Commonwealth Service Request (CSR)

Commonwealth Service Request (CSR), is an enterprise productivity enhancing workflow management system for effectively handling large volume citizen requests for municipal information and services. The overall solution may be deployed within Commonwealth environments with 7-digit number(s) to traditional departments and/or citizen service centers, or in conjunction with the 311-phone number and call centers.

The Commonwealth Service Request Product to be deployed has built-in functionality to manage service requests (SR) from initial input through the resolution process. CSR delivers the tools to deliver services, including:

- ❖ Integrated service request intake, routing, resolution, and reporting modules
- ❖ Multiple security levels by user
- ❖ Work order management
- ❖ Correspondence management
- ❖ On-line information directory
- ❖ Integrated mapping module available
- ❖ Mobile solutions for personnel in the field
- ❖ Management reporting

The intake process can begin through a phone call to a consolidated call center or an individual department, a citizen walk-up, mail, or via a citizen request submitted over the web.

All participating agencies with a desktop workstation can access CSR when they receive a call from a citizen or other Commonwealth employee requesting services or information and initiate the process or provide requested information to the caller. The data generated by the call is stored in a central database. Business rules dictate the departmental assignments and allow departments to monitor and manage their activities relating to their operations. Report generation and query capability provide analytical information for various levels of municipal management. With CSR, the enterprise can be proactively managed as an enterprise with visibility into the complete service request and corresponding service delivery domain. All requests remain active and auditable until completed and closed by the responsible service delivery component.

16i.1.3. Service Request Intake

The intake process can begin through a phone call to a consolidated call center or an individual Department, a citizen walk-up, mail, or via a citizen request submitted over the web.

The CSR application includes the Intake module that is used to create and enter information about service requests into the system. Call takers and personnel in all Commonwealth Departments that have access to the CSR system are able to enter new Service Requests. This module is designed to guide the request originator through the collection of information needed to facilitate the resolution of the problem.

Features of the Intake module include:

- The ability to create, update, store, and categorize an unlimited number of requests based on types (e.g., Pothole, Missed Garbage, Water Leak requests, Department complaints, etc.) used by any authorized user to log individual service requests
- A Department generated, unique script used by any authorized user to collect all required and appropriate information related to that request type
- An inclusive data capturing screen to record incoming service requests
- The ability to allow the call taker and/or user to quickly:
 - Identify the appropriate request type
 - Navigate through the request type script
 - Collect the required request type information
 - Assign the appropriate priority to the request
 - Provide requested information and answer questions
- Application of your Department business rules for each service request type

- Ability to automatically determine duplicate service requests by type, date range, and location (determining duplicates by location requires GIS data loading); including the ability to identify whether the duplicate request is open, closed, in the resolution process, etc.
- Ability to automatically route the individual service request to the responsible Department(s)/Agency(ies) upon the completion of the information collection process
- Ability to assign a priority code to the individual service request
- Capture of appropriate location information (e.g., Street Number, Direction, Street Name, Street Suffix, Crossing Street Direction, Crossing Street Name), and any comments about the location of the requested service
- Acceptance of service requests for all location type address fields per service request type (city, state, County, and ZIP Code)
- Ability to capture information on the companies, people, and objects related to and participating in each individual service request
- View service request location information on a map (requires the implementation of the mapping module)

16i.1.4. Service Request Acceptance/Routing

The Acceptance/Routing module is used by Departments to identify all newly created service requests requiring action. From this screen, Departments can accept and/or reroute each service request and dispatch work crews to begin the resolution process. Users have the ability to check on all service requests that have not been updated or edited, for all groups of which they are members. This module also automatically refreshes itself to display new service requests created while users are dispatching the workers and assigned staff.

Features of the Acceptance/Routing module include:

- A data capture screen to record acceptance and/or routing information
- The ability to monitor and scan service requests by responding Department(s)/Agency(ies)
- Capability for responding Department(s)/Agency(ies) to:
 - Quickly view and/or accept service requests/inquiries in mass, or
 - Accept the service request individually, or
 - Make no change to the request, or
 - Reroute a request(s) to another Department

- Ability of responding Department(s)/Agency(ies) to begin the resolution/ activity process
- Capability to add comments and additional details about the service request(s)
- Ability to update or change the status of a service request
- Auto-refresh to check for “Records not touched by Resolution” with an audio alert
- Auto-refresh when user-set timer cycles
- Ability for user to toggle auto-refresh on or off

16i.1.5. Service Request Resolution/Activity

The CSR Resolution/Activity module is used to process and resolve service requests. From this module, Commonwealth Departments are able to add and complete activities accomplished to resolve the request, print work orders and print any correspondence. A complete record of resolution activities is then available to Department managers at a glance. Additionally, follow-up letters to the citizen can be automatically generated and be available for printing within minutes after the completion of the request by the Departments. Features of the Resolution Activity module include:

- Automatic or manual assignment of assigned staff, inspectors, or work crews by work division area (geographic) if only one staff member is defined to have that work division area as their territory
- Manual assignment of resolution activities to staff, work crews, or vendors
- Ability to capture activities that have been performed on the service request (e.g., letters, work orders, phone calls)
- Capability to enter and change service request information and status as resolution activities are processed
- Ability to change the priority of an existing service request (i.e. from “Standard” to “Emergency”)
- Ability to generate pre-formatted correspondence or work orders on demand
- Ability to view the transaction history of assigned mobile transactions
- Pop-up window to capture and view images associated with service request
- Print preview work orders generated to resolve service request
- Ability to send an email alert for past due activities

- Capability to view service requests linked to other CC, companion, and follow-on service requests
- Ability to add flex questions, edit flex question answers, and add or delete participants
- Ability to easily key enter work order information
- Ability to copy a service request to create a new one
- A tracking feature that enables the user to view a time line of major milestones during the life-cycle of the service request
- Ability to print a summary report of the service request
- Ability to view duplicate service requests
- The functionality to change the service request type and re-route or transfer it to a different Department/Agency

16i.1.6. Service Request Query

The CSR Query module allows users to query service requests previously entered into the system. This module provides County Departments the ability to track the status of services being provided by all County Departments using the CSR system. Features of the Service Request Query module include:

- Capability for allowing users to query service requests previously entered into the system using various selection criteria
- The ability to query the system based on the name of an individual requesting service or information, by geographic region (requires GIS data loading), by request type, status, priority or Department
- Ability to filter query results based on the user's security authorizations and group membership
- Ability to "drill down" to view resolution and activity information by service request, and to generate query reports
- Ability to plot service requests queried on a map (requires optional mapping module)

16i.1.7. Service Request Control Panel

The Control Panel is used to set and maintain the definitions, operational parameters, and default values for Service Request Types. The Control Panel is the “behind the scenes” tool that contains the setup and management information regarding the Service Request Types. The parameters set in the Control Panel drive functionality such as: how duplicates are checked, what location information is mandatory to be captured, what questions should be asked during the intake process, what activities and personnel need to be part of the resolution, etc.

16i.1.8. Location Object Proximity Search

The Location Object Proximity Search form is used to display information about objects that are located within a defined proximity of a location record. This form can be accessed from the Overview, Location pull-down menu item. It can also be called from the Service Request Intake or Resolution/Activity forms from an icon in the tool bar. It should be noted that the Location Object Proximity Search form can only be called from the Intake and Resolution/Activity forms if a valid location has been entered and if the Service Request Type being processed has an Object Type associated with it (e.g., Dog, Vehicle, Building, etc.).

16i.1.9. Information Reference

The CSR Information Reference module is used to display text-based reference, topic, and directory information (populated by the Commonwealth) to assist users during their use of the CSR System Modules. The Information Reference form is helpful in responding to inquiries and assisting the user in the process of categorization. Features of the Information Reference module include:

- Select a topic and view keywords associated with this topic, reference text, and hints, tips, and ‘How To’ information
- View correlated topic information simultaneously
- Search for topics using keywords and phrases
- View phone and addresses in the Information Directory

16i.1.10. Reporting

The CSR system provides an enterprise-wide look at performance across all Departments that use it. CSR increases the accountability of all departments, groups, and personnel through the use of CSR reporting capabilities. CSR offers two different types of reporting. Statistical reports provide a detailed snapshot across various performance measures during the time period selected. Management reporting is a separate browser-based application that provides up to the minute graphing of simple counts of various service request categories.

16i.2 Azteca Asset Management System Description

16i.2.1. Computerized Maintenance Management System

The optional Azteca solution provides an Enterprise GIS Asset and Maintenance Management or Computerized Maintenance Management System (CMMS) software for mapping out assets in an ESRI format and then schedules preventative and reactive maintenance to support those assets. This solution would allow the Commonwealth to leverage the inherent value and investment of the Commonwealth's GIS (Geographic Information System) data.

The solution is uniquely designed as a GIS-centric Enterprise Asset and Work Order Management tool. The core functionality is designed to fully leverage ESRI's leading GIS software, including ArcGIS, and ArcView. The CMMS can be used to maintain detailed asset inventories for Infrastructure, Equipment, Buildings, and Construction in Progress (CIP) Projects. And for GASB34-tracked assets, CMMS goes beyond the initial valuation of assets to provide a method of valuation adjustment for maintenance and restoration work.

CMMS provides powerful tools for feature inventory, network tracing, request for service and work order management. Department personnel have the ability to receive and track Commonwealth inquiries, create work orders, record inspections and tests, outline tasks, and account for the use of resources (labor, material, equipment).

And, like CSR, CMMS can be deployed in a mobile data environment. This would allow your maintenance crews a means of updating and completing maintenance work orders via their mobile data laptops.

16i.2.1.1. CMMS – uniquely designed as GIS-centric

In order to manage your infrastructure assets, you need to know what they are and where they are located. At the core of CMMS there is an asset inventory. CMMS is designed to utilize only the GIS database as the asset inventory database. CMMS does not contain separate asset tables that have to be maintained and rectified.

The GIS can easily be designed to accurately portray assets the way you want them represented. The data structures created are non-proprietary, open and usable by other applications, simplifying the management of your CMMS because no interface to the GIS is required. The existing Commonwealth GIS will be the tool to manage detailed asset and facility inventory in an easy-to-use interface. The objective of CMMS is management of the asset and facility work processes and activities within a GIS environment.



16i.2.1.2. CMMS Asset and Maintenance Management Relationship

CMMS directly links work orders to individual assets. The linkage between assets and work orders is maintained such that the history of completed work orders against a specific asset is viewable and can be reported on by querying the asset from the GIS.

16i.2.1.3. CMMS supports Address-based Work Orders

Often the assets do not yet exist in the GIS asset inventory. CMMS can gracefully manage the work order using address validation methodology. These are referred to as “address-based” or “unattached” work orders because they are not attached to an Asset and are spatially referenced by an address. Yet, “unattached work orders” are fully functional CMMS work orders, only temporarily lacking an association to an Asset.

16i.2.1.4. CMMS supports referencing Assets to “unattached” Work Orders

CMMS easily updates the Asset maintenance history once the Asset is reflected in the GIS so none of the Asset maintenance history is lost. This simple process allows the “unattached” work order to be “attached” to an Asset or Assets through the use of the geocoding and spatial association functionality inherent in the GIS.

Often, legacy system maintenance histories are not referenced to an Asset but instead to an address or a road segment. The CMMS functionality to “attach” historical maintenance histories to an Asset reflected in the GIS can help an organization avoid losing valuable Asset maintenance history data referenced by address in a legacy maintenance history system.

16i.2.2. CMMS and ESRI GIS: the Maintenance Management Solution

Together, CMMS and ESRI GIS provide all the major maintenance management system features and functions including:

- Service Requests, Address-based and Asset Work Orders, Inspections and Tests, Projects Management
- Scheduled Maintenance and Periodic Work Orders
- Labor, Material and Equipment Resource Utilization—at both a standardized estimate and actual basis
- Inventory and management of Infrastructure Assets (e.g., sewer main and manhole, water main and value, street segment, signal light, signs, trees, etc. —any thing that can be created in the GIS as an Asset)
- Work Order Search and Ad Hoc Reporting
- Document referencing including images, files and drawings

- CMMS Wireless Field Operations Browser
- CMMS “Inbox” Work Activity Browser
- Parts and Material and Timesheet Management

16i.2.2.1. CMMS is designed and created as a standards-based, open system

- Support of ESRI’s GIS standards
- Open data model attested to in licensing agreement
- Non-proprietary Asset data model facilitates third party integration
- Software maintenance and support covers all software release updates, major and minor versions

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