

IQOffice

Alongside CNAR, Critchlow's comprehensive New Zealand dataset, IQ Office offers a complete, highly integrated solution to identify and resolve data quality issues.

Overview.

Critchlow Ltd, in partnership with Intech Solutions Pty Ltd (Intech), offers the market-leading IQ Office™ suite of data quality solutions for business and enterprise.

By combining Critchlow's local knowledge and comprehensive New Zealand address dataset (CNAR) with Intech's best-of-breed software and state-of-the-art matching algorithms, IQ Office provides a range of data quality services with unparalleled performance, match rates, and accuracy.

IQ Office is a New Zealand Post SendRight™ certified suite of software for resolving data quality issues in complex, high-volume, and multi-platform business environments. It provides address validation, geocoding, data profiling, parsing and standardisation, record matching, and de-duplication functionality all in an integrated set of components. It also offers solutions for the preparation of data for analytics, data transformation, person identity matching, and single entity view.

IQ Office products are superior in design, providing the highest levels of relevance, performance, functionality, robustness, accuracy, and longevity. Each one incorporates leading-edge technologies and algorithms that are continuously reassessed and enhanced to keep pace with evolving customer requirements.

All IQ Office components can be deployed individually or in combination to provide a solution that is tailored to each customer's unique requirements. The ability to configure IQ Office to meet environment-specific conditions allows for an optimised solution in all cases.

Key organisational advantages of using IQ Office for address validation and geocoding.

All elements of IQ Office incorporate market-leading characteristics that will successfully improve data quality issues, providing continuous return on investment. Organisations will benefit from all of the following:

- ✓ **Data capture is more accurate.** IQ Office ensures that data (both at point of capture and pre-existing) is as accurate as it can be. Depending on the edition of IQ Office employed, this is achieved by:
 - validating addresses
 - geocoding address data to verify its location

- confirming that email addresses are valid
- correctly identifying a person's gender based on the name entered
- potentially validating other critical identifying data.

IQ Office does this without requiring you to deviate from your normal data-entry routines, further enhancing the likelihood that data will be captured quickly and accurately.

- ✓ **Data is more consistent.** IQ Office validates data (both at point of capture and pre-existing) against a source of truth, ensuring it is consistent, complete, and accurate. The ability to ensure that an organisation's data meets minimum criteria, conforms to standards, and is ultimately useable, is absolutely vital for maintaining efficient and effective analysis, reporting, and communication with customers, stakeholders, and vendors.
- ✓ **Data is 'fit for purpose'.** IQ Office helps organisations ensure that data captured by or held in transactional and reporting systems is 'fit for purpose' and of sufficiently high quality to meet organisational requirements, goals, and obligations, providing a reliable source of information suitable for a number of purposes.
- ✓ **Informed decision making.** IQ Office gives decision makers a higher level of confidence in the accuracy of the data held, and the subsequent analysis and reporting that can be completed with it. Decisions can only ever be as good as the underlying data, making data quality a top priority for all organisations.
- ✓ **User friendly.** IQ Office allows users to enter address data into their own 'standard' application address entry screens rather than requiring the data be entered in a separate or third-party address capture screen. This can eliminate training requirements and accelerate uptake by users of all levels.
- ✓ **Architecture for precision customisation.** While IQ Office is a complete solution, it also holds all its data-specific logic in open interfaces allowing for simple or complex customisation. Each IQ Office component represents a mature solution in its own right; yet is open so it can be deployed and modified independently to meet specific business requirements (such as address validation, geocoding, or unique entity identification). Parsing and standardisation logic can be tailored to deal with any type of data; and open validation reference data means that organisations can configure IQ Office to validate against any set of address-based reference data.
- ✓ **Native platform support.** IQ Office supports client/server and Mainframe platforms in their native environments without the need for one platform to emulate another. This includes 32-bit and 64-bit client/server operating systems such as Windows, Unix-based, and Mainframe, as well as Batch and CICS interfaces.
- ✓ **Functionally 'open configuration'.** IQ Office allows organisations to incorporate their site-specific configuration and logic.

- ✓ **Seamless integration.** IQ Office integrates seamlessly with a wide range of technical architectures, including many operating systems (Windows, Unix-based, and Mainframe MVS) with interfaces such as COM/DCOM (Windows only), COBOL (MVS Batch and CICS), C, Java, IP Sockets, and SOAP-style web services. Sample integration code is available for all these development environments, and many others.

IQ Office supports connectivity to common database systems like Oracle and SQL, among others. IQ Office can access the database via OLE DB connectors, including stored procedures. Additionally, IQ Office can be integrated into databases for direct access as dictated by user-defined extensions, for example, external procedures and CLR.

- ✓ **Open geocoding.** As well as offering accurate geocoding such as latitude and longitude, IQ Office can be configured to append any geographic boundary to address records. These include statistical areas like mesh block codes, as well as other more specific areas like police and emergency services districts, customer service catchment areas, or any other geographic boundary.
- ✓ **Open data layer.** IQ Office adapts to an organisation's chosen data format, as opposed to forcing their data into its own format. This eliminates:
 - the need for software customisation
 - risks associated with transferring site-specific data into different formats
 - requirement for user training.
- ✓ **Multi-threading.** Batch processes can also be configured to utilise the parallel processing capabilities of the host environment.
- ✓ **Faster implementation.** The use of existing 'tried and tested' software components, along with open interfaces, reduces risk and uncertainty around implementation timeframes; increases maintainability and durability; and enables additional systems to rapidly connect to the functionality.
- ✓ **Scalability.** IQ Office allows an unlimited number of end-user connections at any one time without affecting performance of the parsing, matching, and address validation engines.
- ✓ **Small system resources footprint.** The IQ Office architecture allows other components to effortlessly share memory resources for the application.
- ✓ **Stability and reliability.** IQ Office is proven to work exceptionally, even under heavy load.

Technical features and benefits of IQ Office.

The technical architecture of IQ Office ensures low maintenance costs and reliable performance for organisations, now and in the future. Major benefits can be found in the following key technical features:

- ✓ **Zero training requirement.** Users don't need to change their usual data entry procedures and practices to easily capture a complete, accurate, and valid address. Regardless of how the address is entered, IQ Office understands the 'unstructured' input and transforms it to a standard format before matching it to an Address Reference File. For example, a user could type the following three addresses into the IQ Rapid Address client application:
 - *'4 Aquarius Ave, GLEN EDEN'*
 - *'4 Aqarios Ave, WAITAKERE'*
 - *'My House, 4 Aqua Ave, WAITAKERE'*

Each address would then be returned as *'4 Aquarius Ave, GLEN EDEN AUCKLAND 0602'*. This process ensures that training requirements are kept to a bare minimum, allowing users to work within the application confidently and comfortably right from the start.

- ✓ **Support for any Address Reference File (ARF).** IQ Office can validate addresses against both a standard ARF, and an ARF containing any other address reference data users identify as important. The selected ARF is considered to be the 'source of truth' – each ARF is selected for a particular purpose. Users can validate postal or non-postal addresses, and other descriptors.
- ✓ **Natural order address entry.** While IQ Office does support postcode/locality 'drill down', it is optimised to accept address elements in a 'natural' order, for example: street level information first, followed by suburb, city, and postcode. With as little as eight characters entered in their 'natural order', IQ Office can deliver a complete and valid address, eliminating the need for city or postcode details to be known and entered.
- ✓ **Performance.** IQ Office is optimised for batch and real-time address lookups that take place at extremely high speeds, potentially up to thousands of records per second. This includes data parsing, matching, and address validation performance.
- ✓ **Reliable and valid accuracy.** The address matching rules incorporated into IQ Office are defined by New Zealand Post. IQ Office provides unrivalled accuracy in its ability to parse free-format data and perform address validation.
- ✓ **Detailed error messages.** IQ Office provides detailed, specific, and easily understood output that includes:
 - Flag code: How a match was achieved or what prevented the match
 - Amended flag: Indicates which attributes of an address were fixed, or left unchanged, legitimately

- Flag string: A combination of the amended flags and codes, presented in a user-friendly description, examples include:
 - *'Number range invalid (on different sides of the street)'*
 - *'No street of that name in this suburb'*
 - *'Ambiguous house number'*
 - *'Address amended – fixed street name'*
 - *'Street name spelling amended and Suburb appended'*
 - *'Address amended and matched to a primary point only'*
 - *'Address correct'*
- ✓ **Geocoding accuracy.** IQ Office provides detailed, specific, and easily understood output that includes:
 - Reliability indicator: The accuracy of the latitude/longitude appended by IQ Office
 - GIF flag: How a geocode was appended or what prevented the geocode being appended, GIF flags can include:
 - *0 – No geographic information for this address*
 - *1 – Geographic information associated with the exact street address*
 - *5 – Geographical information associated with street*
 - *9 – Geographic information associated with street intersection*

About Intech Solutions.

Intech Solutions is an Australian-owned company and has been delivering data quality products and services to customers since its founding in 1996.

Intech's state-of-the-art products are the result of years of dedicated software development driven by the desire to increase functionality, effectiveness, and efficiency for users.

About Critchlow Ltd.

Critchlow specialises in location intelligence and incident management solutions, and pioneered many of the early developments of both industries throughout Australasia.

For over 25 years, Critchlow has enabled organisations to **see, share and understand** information so they can make the best business and operational decisions.

Contact Critchlow

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