

NLQ-Enabled Document Analysis with Scan2x What is NLQ (Natural Language Query)?



SCAN2^X AI FEATURES SCAN2^X AI FEATURES

1. Use Case Overview



Goal

To ingest a wide range of document types (e.g., PDF, image, scanned forms), submit them to Scan2x for NLQ Processing, and retrieve specified fields or summaries in a structured format—based on user-defined descriptions and contextual prompts.



Primary Actor

Document Processing Specialist or Business User.



Supporting Actors

Scan2x Platform (configured for NLQ processing) Downstream Systems (databases, ERPs, analytics tools) that receive the extracted data

2. Stakeholders and Interests



Business Operations / Admin Staff

- Want to extract specific information from complex or varied documents without heavy configuration.
- Need to handle a broad variety of document layouts or content structures seamlessly.



IT Department / Scan2x Administrators

- Configure the NLQ settings, including prompts and field definitions.
- Ensure data security and integration with other enterprise systems.



Legal / Compliance Teams

May need deeper insights from policies, contracts, or regulatory documents to ensure compliance and manage risk.

Data Analysts / Researchers

- Use the extracted data for reporting, analytics, or further review.
- Require context-based extraction for nuanced details not easily captured by simpler OCR templates.

3. Preconditions



Scan2x Configuration

- Scan2x is installed and accessible to authorised users.
- The Processing with Natural Language Query feature is enabled.



Prompt and Context Setup

- Administrators define a general prompt or context about the documents to be analysed (e.g., "These are marketing disclaimers," or "These are internal policy documents").
- Administrators also create normalised field definitions with plain-language descriptions (e.g., "Author Name," "Document Summary," "Key Dates").



NLQ Integration

 Scan2x includes advanced language and vision-based analysis capabilities to interpret document text, images, and layouts.





User Access

 Relevant staff have permissions to upload documents and initiate NLQ processing in Scan2x.

4. Triggers



Manual Document Submission

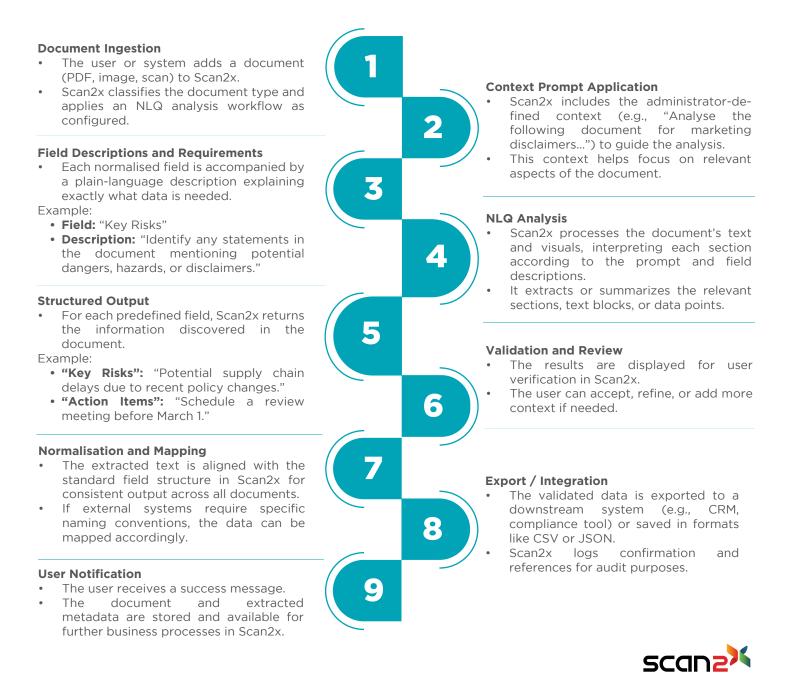
• A user uploads or scans a document into Scan2x and selects "NLQ Processing" as the desired method of analysis.



Automated Queue

• Documents placed in a monitored folder or email inbox can be automatically routed to the NLQ workflow in Scan2x.

5. Main Success Scenario (Basic Flow)



6. Alternative Flows and Exceptions



Ambiguous or Incomplete Document

- **Trigger:** The document lacks clear text or is partially unreadable.
- Action: Scan2x flags the data for review or requests additional user input to clarify the missing details.



Inconsistent Context

- **Trigger:** The context provided doesn't match the actual document type.
- Action: The user updates the prompt or reclassifies the document, then re-runs the NLQ process.



Network / System Errors

- **Trigger:** Technical issues prevent analysis from completing.
- Action: Scan2x retries or notifies the user to correct the error (e.g., network outage, file corruption).



High-Sensitivity Documents

- **Trigger:** The document contains confidential information.
- Action: Security settings in Scan2x either block unauthorised processing or anonymise sensitive fields before NLQ processing.

7. Postconditions



Successful Analysis

- Scan2x has extracted targeted text for each normalised field, guided by the plain-language prompts and context.
- Data is available in a structured format for immediate use or downstream consumption.



Audit Trails and Review

- Scan2x maintains a history of all requests, outputs, and user edits.
- Administrators can review these logs to refine the prompts or address any compliance considerations.

8. Benefits and Outcomes



- Flexible, Context-Based Extraction
- NLQ allows administrators and users to define precisely what they want from a document, using everyday language and a general or specific context prompt.
- Minimal Configuration
- Users can adapt to new or varied document types simply by adjusting plain-language field definitions and context.
- Reduced Manual Labor
- Automated interpretation of documents—even complex or lengthy ones—significantly cuts the time needed for data entry and review.
- Consistent, Normalised Results
- Despite varied document formats, the final extracted data is mapped into standard fields for easy integration with other systems.
- Improved Decision-Making
- Relevant insights are quickly accessible, supporting faster, data-driven decisions across different organisational functions.



Use Case Summary

Using Scan2x Natural Language Query Processing, organisations can swiftly interpret and extract vital information from documents of virtually any format. By providing both a contextual prompt and plain-language field definitions, Scan2x guides the analysis process, returning structured, normalised data ready for downstream systems and decision-making. This approach reduces setup time, increases accuracy, and accommodates a wide array of document types—all without requiring specialised template creation or extensive configuration.



Avantech Ltd avantechsoftware.com
♥ +356 2148 8800 | +44 780-9757598
■ software@avantechsoftware.com
in Avantech Ltd | ■ @Avantechsoftware

