

Formata

Product Description and Functional Specification

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About this document

This document describes the functional characteristics of Formata version 1.6.0: its purpose, the functions of the platform and of the bundled Formata CRM application, the architecture, external interfaces, editions and known limitations.

It is written for the customer's specialists who evaluate the product and for reviewers who check it against its stated characteristics. Only what exists in the released version is described; where a commonly expected function is absent, the document says so.

1. General information

1.1. Name

Formata, version 1.6.0. Vendor: iMobile. The product includes the Formata CRM application.

1.2. Purpose

Formata automates the handling of customers, sales, tasks, documents, warehouse stock and settlements, and lets an organisation create its own forms and processes without changing the program's source code. Forms, queries, scripts, reports and processes are stored in the database as data; the server executes them as saved.

1.3. Field of use

Sales and customer-service teams, warehouse and back-office functions of organisations that need a system installed on their own server and want their own administrator to be able to change forms and logic.

1.4. Software class

Customer relationship management (CRM) system and metadata-driven application platform. Deployment type: server software with a web interface.

2. Functions

2.1. Forms and data handling

- A form is described by a JSON model: data sources, controls, field bindings, permissions and event handlers.
- Form controls: text field, multi-line field, list, field with lookup search, checkbox, multi-select, label, indicator, table, tree, card board, timeline, chart, schedule, image gallery, attachments, button.
- Data sources: a single table row, a named SQL query with parameters, a data component (a logical layer over a table with joins and calculated fields).
- Tables: paging, sorting and column filters performed on the server. CSV export is available by a button in the forms that provide one (in the CRM, the budget card) and by a request to the server for named queries and data components.
- Saving: only changed fields are written. Concurrent editing of one record by two users is detected when the table has a row-version column (`row_version`); the tables of the CRM application in version 1.6.0 have no such column, so the changed fields of whoever saves last are kept.
- Shell: main menu, up to six open tabs, real-time notifications, language selection. If the connection is lost, a save is queued in the browser and sent when the connection returns.

2.2. Designer

The designer is available to users with the `admin` role and contains these sections:

- forms: placing controls on a 12-column grid, properties, data sources, permissions, form check, preview, publication with a version increment;
- Python scripts and SQL queries: editor, syntax check, test run;
- print forms: a document is assembled from bands and fields and rendered to PDF;
- translation dictionary, main menu, login screen;
- users, roles and groups (a group with an explicit member list or with membership defined by an SQL query);
- processes, data schema (ER diagram), data components, organisational structure;
- service: UI test cases, monitoring of slow queries and scripts, integration API, configuration transfers;
- built-in documentation.

2.3. Scripts, jobs and background tasks

- Application logic is written in Python: button handlers, checks before saving and actions after it, reactions to a field change, rules that decide whether a form or field can be viewed or edited.
- A script reaches data through a query builder and named queries; arbitrary SQL from scripts is not allowed.
- Scripts run in separate worker processes (four by default). Run time is limited (30 seconds by default). A script that fails five times within five minutes is disabled automatically until an administrator re-enables it.
- The scheduler runs scripts on a schedule: every N seconds, minutes, hours or days, daily at a set time, or manually. Runs are logged.
- Background task queue: a one-off script run with retries on error and a status screen.

2.4. Business processes

- A process is drawn as a diagram of nodes: start, decision, approval, set field, notification, task, timer, script, sub-process, parallel branches, end.
- Start events: creation, change or deletion of a record, a timer (date, interval, cron expression), manual start, a message from another process.
- Process versions, escalation and retries, diagram validation and a trial run against a record, an instance list and an Approvals form are provided.

2.5. Access control

- User roles and a role-to-forms matrix, separately for viewing and editing.
- Permissions on an individual form control or table column and on a database table field (no access, read, write).
- Record visibility by owner and organisational structure: own records only, own and subordinates', own unit or organisation, all.
- Sharing of a single record with a user or role, optionally for a limited time.
- Restriction of named queries to a list of roles.

2.6. Formata CRM: sales

- Companies and contacts, linking a contact to several companies with a role, company tags.

- Leads with statuses; conversion of a lead into a company, a contact and a deal in one action.
- Deals: pipelines and stages, lost reason, currency, a deal board where cards are dragged between stages.
- Tasks with types (call, meeting, email, to-do) and a status set that depends on the type; a timeline of activities and notes for each object.
- Automatic task creation when a deal enters a stage; reminders about overdue tasks.
- Assignment rules for leads and deals: a specific user, round-robin, least loaded, with skills, territories and availability taken into account; an assignment log.
- Analytics: forecast, open deal amount, win rate, average cycle, funnel, manager workload, plan versus actual; a deal report with filters.
- Import of companies and leads from CSV; intake of website requests and telephony events over HTTP.
- Lead scoring: by built-in rules or, if the administrator has configured a key, through an external AI service.

2.7. Documents, mail, messages

- Documents (contracts, invoices, quotes, acts): a type with its own status set, automatic numbering, links to a company, deal and contact, attachments.
- Mail: several mailboxes over IMAP and SMTP, receiving, sending, reply and forward, attachments, message templates, linking messages to contacts.
- Messages: direct and group chats between employees, files, links to records. Voice calls are not implemented.

2.8. Warehouse and print forms

- Products, warehouses, stock by batch and bin; receipt, issue, transfer, write-off, return, opening-balance, revaluation and sale documents.
- Document statuses Draft, Reserved and Posted; stock changes only through documents.
- Price lists with validity periods and markups by product group, works and services, product images, counterparties with legal details.
- A vehicles section: a customer's vehicles and sale of selected spare parts.
- Print forms: Commercial Invoice and Packing Slip (United States), VAT Invoice and Delivery Note (European Union), warehouse delivery note, stock sheet, price tags. The forms are templates; their content must be confirmed by the organisation's accountant or customs broker before use. Which forms are offered depends on the country of the document.

2.9. Budgets

A plan as a tree of items and actual payments, accounts, currencies and rates, revaluation, transfers between accounts, recurring items, a change journal, an account balance forecast, tracking of payment for a sale document.

2.10. Regional features

A region setting controls which region-specific forms and menu items are shown; individual features can be switched on in the Regional features registry.

2.11. Data loading and configuration transfer

- Bulk loading: a CSV file is loaded into a staging table and transformed by a single query with foreign-key resolution and an error list.
- Configuration transfer between instances: a set of forms, queries, scripts and jobs is exported to a JSON file; a comparison is shown before it is applied, and an applied set can be rolled back. Customer data is never transferred by sets.

2.12. Logs and monitoring

An action log, field change history, an API call log, a monitoring page (health, requests and response times, jobs, script errors), a list of slow queries and script execution statistics.

3. Architecture and components

Component	Purpose
crm_server process	HTTP API, form execution, permission checks, scheduler, task queue, delivery of web-client files
Python worker processes	Run application scripts under an unprivileged operating-system account and a restricted database role
PostgreSQL database	System tables <code>sys_*</code> (users, forms, scripts, queries, log, jobs, files) and application tables <code>crm_*</code>
Web client	Application, designer and monitoring pages that run in the browser
Attachment directory	Files attached to records

A TLS reverse proxy and, when several service instances are run, a Redis server for shared sessions are outside the product.

4. Interfaces and data exchange

- The browser and the server exchange JSON messages over HTTP; the server pushes data-change events and notifications as a Server-Sent Events stream.
- Integration API `/api/v1`: reading, creating, updating and deleting records of registered entities, running named queries, queuing background tasks. Access uses a key in the `X-API-Key` header with scopes and a per-minute request limit. An OpenAPI 3 description is served at `/api/v1/openapi.json`.
- Website request intake: `POST /api/public/lead`, enabled by a setting and protected by a key.
Telephony event intake: `POST /api/telephony/event`.
- Service health: `/healthz` (JSON); metrics in Prometheus format: `/metrics`.
- File formats: CSV (export of query results, data loading), PDF (print forms), JSON (configuration sets).
- Mail servers: IMAP and SMTP. Checking the password of a domain account: a request to an identity provider over OpenID Connect.
- Exchange with an online shop: the `shop` database schema and a named API query (products, stock, prices, orders).
- The core implements delivery of outbound webhooks (HTTP, HMAC-SHA256 signature) and a SCIM 2.0 route; the webhook queue, the subscription form and the SCIM handler are not part of the CRM application in version 1.6.0.

5. Editions and limitations

The product is supplied in a single edition. The licence is annual and covers a number of seats: 5, 10, 25, 100, 1,000 or 5,000; above 5,000 by separate agreement. The set of functions does not depend on the number of seats.

Limitations of version 1.6.0:

- there is no activation and no technical enforcement of the number of seats; the program does not contact the vendor's servers;
- there are no binary installation packages, no automatic update and no built-in backup;
- the server accepts connections over HTTP only; HTTPS requires a reverse proxy;
- there is no multi-factor authentication; sign-in through an identity provider is a login-and-password check, without redirection to the provider's sign-in page;
- data at rest is not encrypted;
- network access and memory of application scripts are not restricted, so the right to change scripts is given to trusted administrators only;
- changes made in the designer to the stock CRM forms are replaced by the vendor's version when the application SQL files are re-applied;
- some strings produced by queries and scripts are shown in Russian only;
- there is no ready-made procedure for erasing all information about one individual.

6. Environment requirements

- Server: Ubuntu 24.04 LTS or 22.04 LTS; for a pilot installation 2–4 CPU cores and 4–8 GB of RAM.
- Database: PostgreSQL as shipped with the operating system, with the `pgcrypto` extension.
- Workstation: a Chromium-based browser (Google Chrome, Microsoft Edge).
- Network: one TCP port for the service (8080 by default) and a reverse proxy for HTTPS.

Detailed requirements and the installation procedure are given in the Installation and Administration Guide.

Document history

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1.0	2026-10-06	1.6.0	First issue