# High Level Design

Partner in Quality

**Internal network**

Client side
WEB browser
Firefox; Chrome – KIOSK Mode

Integration layer
QSMC – software solutions

Internal company mail system
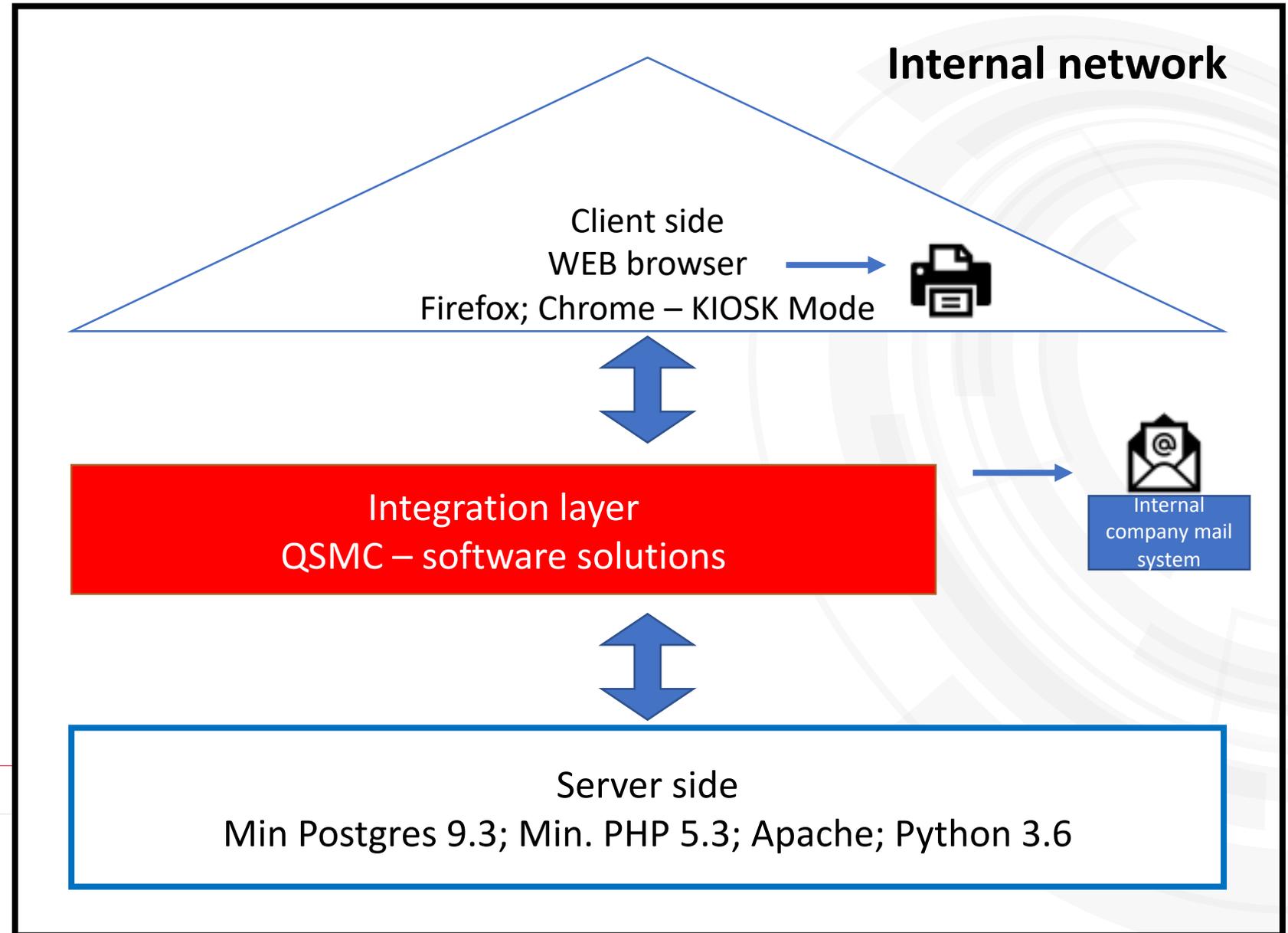
Server side
Min Postgres 9.3; Min. PHP 5.3; Apache; Python 3.6

Web browser with allowed access to the server side application on the internal network. As far as possible use the browser in kiosk mode. (Firefox; Chrome). It is important for example the terminals in metrology to prevent the operators from exit the application. On these terminals a label printer prints a unique label after the measuring request for the part identification.

The label printing is not allowed from other computers or phones, only the employees in metrology can print again a missing label.

The application use cookies for identificate the dedicated computers, and for the personal settings. (theme and language)

The users can login with pin code and with password too. The system administrator can generate these. The access levels can be set per person. There are three access level for the modules: none, read, write.

GDPR: the system store the following datas only: login name, name, password, pin code, e-mail address, job.

Client side
WEB browser
Firefox; Chrome – KIOSK Mode

The application provides access to the collected data through a web interface corresponding to the authorization levels.

- **In general:** set requests, processing requests, querying statistical results, administrative rights.

- **Measurement request module:** tracking request for metrology rooms and labs. Analyze the lead times, measurement times, and give feedback with result for the user who requested the task. No documents stored in the system. If enabled the system also send a message to the user via the company mailing system about changes in the status of measurement requests (completed, deleted, transferred to another area)

- **Information module:** display relevant informations in slideshow. (claims, accidents, KPIs, weather, HR infos, news etc.) It's recommended to use on large screens in many areas of factory.

- **Maintenance module:** Requests for maintenance. Similar to the measurement request module.

Integration layer I.
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- **Inventory module:** inventory for metrology, maintenance etc. Min-Max inventory with levels, purchasing locations, and incoming, outgoing data. Created to optimize orders.

- **Measuring device registry:** Trace calibration, location, and all important data of measuring devices included in the system. The system san store documents in this module. (evidence of calibrations, invoices etc.).

- **Work time record module:** RFID login, logout, work time tracking, leave request.

- **Reception, concierge module:** Reporting visitors to the recepctioninst or concierge service. Safety training for visitors and tracking equipments.

Integration layer I.
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- **Data collection module:** monitoring, storing and printing the measurement results of measuring machines in a standardized format.

  Under construction: entering manual measurements into a database via a web interface or target machines.

  The system should see the outputs of the measuring machines.

  We recommend that the machines save the protocols to a network location, as the system can extract and store data from it.

Integration layer I.
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**Minimum requirements:** Postgres 9.3; PHP 5.3; Apache; Python 3.6

The program can also send messages to the corporate mail network if the internal protocol allows it. Users can specify an email address to which their messages will be sent. Otherwise, it uses an internal surface for this. If your company has a GSM module, messages can also be forwarded to it.

**Data collection module requirements:** Computers for measuring machines generally do not meet the IT requirements of company because it is not installed with the corporate operating system or cannot be upgraded, etc.

There are two possible solutions:

• The existing network has a subnet for measuring machines from which they cannot exit.
• A dedicated server for the metrology room and labs that is accessed by the devices, and this dedicated server can communicates with the central server.

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