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Note: Smaller font indicates content applicable only to service providers, while blue colour indicates content which is still not available for app users, but which will be available after the launch.

0. INTRODUCTION

Welcome to LorisQ - a smart, powerful and unique platform for measuring equipment management.

So from now on:

- all of your documents (certificates, reports, manuals etc.) will be in **cloud database 24/7**, available to you and your team members anytime from anywhere on any computer, tablet or smartphone
- **news and updates** about your instruments will be **shared in real-time** with all of your team members on the LorisQ dashboard (e.g. whenever a new certificate or report for a particular instrument is issued, whenever someone writes a note about particular instrument, whenever a deadline for calibration is missed etc.)
- individualized alarms and notifications for every member of your team (lab, department or company) will take away your worries; both for external services you have to organize (e.g. accredited calibration, qualification, regular maintenance etc.) and internal tasks you have to perform (e.g. internal checks); LorisQ helps you manage <u>everything</u> you do with your measuring equipment.
- you will be able to predict failures (when your instruments will go out-of-tolerance), make smarter purchases in the future based on long-term trends analysis and measure more accurately without investment in new instruments by using corrections calculator; all of these powerful and advanced features will make your equipment much more valuable and save you money even in short-term
- uniquely, and unlike any other equipment management app, you will be able to **connect with your external service providers** (e.g. companies that calibrate, qualify, and generally perform any of the maintenance services for your equipment), and those providers will perform most of the updates for you; for example, this means you will have trends analysis updated after each calibration without any work required from you; of course, if you are also a maintenance service provider of any kind, you will be able to perform all these fantastic things for your clients
- and much more...

But lets move on to the app itself and find out how...

1. FIRST THINGS FIRST. SETTLE IN... SETTINGS.

As soon as you register and log in, click on a circle with your initials in the upper right corner to go to Settings and see what your role (or access level) in LorisQ is.



1.1. Simple individual access levels

There are **three levels (roles)** of user access individual team members can have in LorisQ – Manager, Supervisor, or Technician.

a) **Managers** have the highest level of access and are the only ones that can edit Settings for the team. They are the only ones who can assign access levels (roles) to other team members as well as invite others to join your team or connect with your team in LorisQ network. It is possible to have one or multiple *Managers* in your team.

b) **Supervisors** can't edit Settings (unlike Managers), but can approve new certificates and reports (both external and internal) for your equipment.

If you also provide equipment maintenance services for others, Supervisors (as well as Managers) can sign new certificates and reports for your clients.

c) **Technicians** can't edit Settings or approve new certificates and reports, but they can still enter and edit all kinds of records about equipment throughout the app. The author and exact time of every change is visible, so there is no need to worry about subversive rogue technicians. :)

To summarize:

Managers can do everything.

Supervisors can't edit Settings, but can approve/sign new certificates and reports. Technicians can't edit Settings or approve/sign new certificates and reports.

1.2. MY PROFILE - your basic info and notification settings

| Settings | | | |
|--------------|---|-----------------------------|------------------|
| My profile | > | Personal | |
| My Team | | FIRST NAME | LAST NAME |
| Team members | | Harry | Potter |
| icum members | | PASSWORD | CONFIRM PASSWORD |
| Tags | | | |
| Activities | | ROLE | |
| | | Manager | |
| General | | Receive notification emails | |
| Providers | | | EDIT |
| Clients | | | |
| | | | |
| | | | |

Under My Profile, you can see (and edit) your first and last name and password. Additionally, you can turn **notification emails** on and off (which are an addition to in-app notifications which you will receive nonetheless);

Notification e-mails are sent whenever:

- you have some new activities to perform soon
- you have reached your due date on particular activity
- you are overdue on particular activity
- you have new external or internal certificates or reports to review and approve
- your service provider declined to perform a certain activity
- your team member canceled particular activity which was already initiated

- LorisQ detects an exceeded tolerance limit on particular instrument

- something happened related to connecting with your service providers (Managers only)

If you are a service provider (calibration lab etc.), notification e-mails are sent whenever:

- your client initates new activities for you
- your team receives instruments from your client
- you are personally assigned to perform some activity on some instrument for your client
- your team member uploads new report or certificate for Manager or Supervisor to sign
- Manager or Supervisor rejects to sign a new report or certificate for activity you performed
- your client shares a note with you
- your client cancels activity which he earlier initiated for you to perform
- your team member declines an activity initiated for you by your client

Notification e-mails are not sent (only in-app notifications appear) whenever:

- your providers receive a particular instrument from you
- new certificates and reports are available for your equipment
- Supervisors or Managers reject new certificate or report
- your provider shares a note about particular instrument with you

IMPORTANT: Not all notifications are sent to everyone. LorisQ makes smart choices depending on team member's access level and role in particular activity.

1.3. MY TEAM - define your team and its role in LorisQ network

Under **My Team** *Managers* edit general information about the team (lab, department, company or organization). It is important to choose correct **Team Role**. Your **Team Role** can either be

| Settings | | | |
|--------------|---|--|-----------------|
| My profile | | General | |
| My Team | > | TEAM NAME | VAT |
| | | Fiktiv d.o.o. | VAT |
| Team members | | ADDRESS | SECOND ADDRESS |
| Tags | | Vodenica 2, 10 000 Zagreb | Second address |
| Activities | | CITY | POSTAL/ZIP CODE |
| | | • | Postal/ZIP code |
| Soon | | STATE | COUNTRY |
| Providers | | | Croatia |
| | | ROLE © Clients [©] O Clients & Providers [©] | |

a) **Client...** you manage your own equipment without performing equipment maintenance services (e.g. calibration, qualification, repair etc.) for other organizations or teams

b) **Client and Provider**... you both manage your own equipment and perform equipment maintenance services (e.g. calibration, qualification, repair etc.) for other organizations or teams; in this case you will have an extra tab (**Provider View**) on the LorisQ Dashboard which you will use when providing your services for others.



1.4. TEAM MEMBERS - invite your colleagues and build your team

Settings **Team members** My profile My Team ROLE E-MAIL Team members > Antonia Lupis antonia.lupis@metroteka.com Technician 0 🖨 Tags Lidija Sarta Technician 0 lidija.sarta@metroteka.com Activities Marija Pavlović Supervisor marija.pavlovic@metroteka.com Ø 🖨 Soon Martina Šnajder martina.snajder@dream-Manager 0 implementation.com Providers Miro Turčinović Technician miro.turcinovic@metroteka.com Ø 🖨 Clients 1 2 >

Under **Team Members**, *Managers* can invite colleagues to join your LorisQ team and assign them one of the three access levels mentioned earlier (see 1.1.)

1.5. TAGS - define how your team will organize and filter equipment

Under **Tags**, *Managers* define all possible tags that everyone in the team can later attach to individual instruments, in order to group and sort them in any desirable way - by hierarchy, by location or by any other subcategory (e.g. Lab1, Room8, LevelA). Team members will not be able to add tags that are not defined in Settings by *Managers*. This restriction helps to keep your database clean and well organized and enables easy filtering during search.

| My profile | Team tags | |
|--------------|--|--|
| My Team | Define your tags here to mark your instruments and filter them more easily. Write your tags comma-separated. | |
| Team members | | |
| Tags | | |
| Activities | | |
| Soon | ADD TAGS | |
| Providers | 1 st Elser | |
| | | |
| | | |
| | Gur-on-onder | |
| | Standard | |

1.6. ACTIVITIES - define all your equipment-related recurring activities

Under **Activities**, in addition to LorisQ five system-defined default activities for your instruments (Calibration, Qualification, Repair, Temperature mapping and Validation), *Managers* can define all other recurring custom activities that your team organizes and performs on your equipment (e.g. "Internal check", "Sterility check", "Cleaning" etc.). Same as with Tags, team members will not be able to add and assign activities on individual instruments if the given sort of activity is not defined in Settings by *Managers*.

| My Team | | NAME | DESCRIPTION | | |
|--------------|---|---------------------|----------------|---|--|
| Team members | | Calibration | No description | | |
| Tags | | Qualification | No description | | |
| Activities | > | Repair | No description | | |
| Soon | | Temperature mapping | No description | | |
| Providers | | Validation | No description | | |
| | | | | | |
| | | Custom Activities | ٥ | | |
| | | | | • | |
| | | NAME | DESCRIPTION | | |
| | | Cleaning | No description | • | |
| | | Internal adjustment | No description | • | |
| | | Sterility check | No description | • | |

1.7. GENERAL - final customization of your LorisQ team settings

Under General, Managers can:

- a) define how much in advance your team members will be informed about activites' due dates (for example, let's say the given activity is the calibration of glass thermometer serial number 1394, it should be done once a year and it was last performed on October 25th 2018; if your Soon setting is 14 days, on October 11th 2019 you will be informed that the calibration of the thermometer in question is due soon).
- b) choose your **Date format**;

1.8. PROVIDERS - connect with external teams that perform services on your equipment Under **Providers**, Managers can connect your team with external service providers for your equipment (e.g. calibration labs, external maintenance providers...) through simple search. If your given Provider still isn't a member of LorisQ network, Managers can simply send him an invitation.

| Settings | |
|--------------|--|
| My profile | Connect with your providers $^{\circ}$ |
| My Team | Croatia • (Met |
| Team members | NAME VAT ADDRESS CITY |
| Tags | Metroteka d.o.o. HR57495737984 Ulica Kreše Golika Zagreb |
| Activities | |
| General | |
| Providers > | My LorisQ providers ® |
| Clients | Search |
| | COUNTRY © NAME © VAT © ADDRESS, CITY © |
| | LorisQ connection requests [®] |
| | COUNTRY © NAME © VAT © ADDRESS, CITY © |
| | There are no providers |
| | Invited LorisQ providers ^o |
| | Search |
| | COUNTRY © NAME © VAT © ADDRESS, CITY © |
| | There are no providers |
| | Providers outside LorisQ network [©] |
| | Search |
| | COUNTRY © NAME © VAT © E-MAIL © |
| | There are no non-LorisQ providers |

Connecting with Providers means that from that moment on, they will be able to upload their certificates and reports to your database and save you A LOT of time. And calibration labs specifically will additionally be able to enter basic calibration data into simple forms (depending on instrument category) and update your calibration trends and correction graphs which you can then analyze immediately. (BTW, if your instrument goes out of tolerance or is dangerously close to it, LorisQ will notify you about it by itself.)

Of course, your service providers won't see your database or be able to access it in any way. They will be able to access only certificates and reports THEY made for you, completely mirroring physical access to certificates and reports before you went all digital & cloud with LorisQ.

1.9. CLIENTS - connect with external teams that you perform services for

If your team is in the Category - Client and Provider, under **Clients** your Managers will be able to connect with all of your clients and thus provide a much higher level of service to them by uploading certificates and reports directly to their database. If you are a calibration lab, you will be able to supply even more information alongside calibration certificates, enabling your clients to analyze calibration trends, calculate corrections based on calibration data etc. Again, if your given client still isn't a member of LorisQ network, Managers can simply send him an invitation.

2. DASHBOARD - OVERVIEW

← → C Secure https://app.lorisg.com/dashboard ☆ 6 ∞ : lorisQ ut (MF) My Instruments Enter instrument info ρ Maintenance Loop [®] 3 1 \bigcirc 0 STEP 1 STEP 2 STEP 3 STEP 4 STEP 5 Under Waiting for Initiated In progress Complete our review QBook [®] Older NOTE INSTRUMENT MANUFACTURER, MODEL AND DATE & TIME UNIQUE ID 4 12, 04, 2018, 10:26 Instructions for use Thermohygrometer Rotronic midity

Clicking on the LorisQ logo will always take you to the dashboard.

2.1. My Instruments is where you will find all your instruments once you enter them in LorisQ database. Apart from searching for them in the search bar or using an advanced search, you can click on the right orange button and see a complete listing of your equipment. If you were just invited to LorisQ by someone in your team, you can quickly check if some of the equipment is already in the database.

When you choose a specific instrument, on its page you can enter, edit and later find all the certificates, reports, manuals, activities, notes, trends and in some cases corrections. You can also see the complete chronological history of your instrument. (see more under 4. INSTRUMENT CARDS)

2.2. Maintenance Loop (see more under 5. MAINTENANCE LOOP) is your real-time overview of all recurring maintenance activities related to your instruments. Once you enter all your equipment in the database, this will be your information hub about what's happening with your equipment right now. The numbers in the large droplets refer to the number of tasks you are personally responsible for, while the numbers in the small droplets refer to the overall number of tasks within your team. Clicking on these droplets will take you to a detailed table view, where you will find more information. It's like a game where your goal is to, step-by-step, resolve all of your personal tasks within the team.

2.3. QBook is your team's shared logbook of all individual notes related to your instruments. These QBook notes can be entered by your team members, in some cases by LorisQ itself (for example when LorisQ detects you are late for some activity), and sometimes even by your external service providers who for the first time have the ability to permanently share useful information with you in your database. To keep everything neat and organized, each note contains info about who and when wrote it. It will keep everyone informed about anything that

needs to be shared amongst the team. You can even share each individual note with your chosen service provider(s) if you want to, just like they can do the same for you.

2.4. Provider View Dashboard

| | | | | Owner View | Provider View |
|----------------------|-------------------|---------------------------|--------------------------------------|-----------------|---------------|
| My Client's | Instruments | | | | |
| Enter instrument inf | ō | | | Advanced search | (|
| Work prog | ress [®] | | | | |
| 2 | 0 1 | | 6 | | |
| Un the way | Received Assigned | d Waiting for approval | STEP 4 Completed | | |
| QBook [®] | | | | | |
| Today | NOTE | INSTRUMENT | MANUFACTURER, MODEL AND UNIQUE ID | DATE & TIME | • |

If you are a maintenance service provider, on your other tab view (**Provider View**), instead of searching for your instruments (see 2.1.) you can search your clients' instruments. Of course, only those instruments that you serviced in any way are visible to you, and only those records that your team made for those instruments are visible to you. You are not able to see anything you wouldn't see before you joined LorisQ network (e.g. other service providers' documents for a given instrument, client's internal documents for a given instruments, notes, or anything else.)

Instead of Maintenance Loop, you have **Work Progress (see 7.)**, which internally tracks progress of your team's service activities for others, in the way that mirrors Maintenance Loop for maintaining your own instruments.

And of course, **QBook in Provider View** is a shareable logbook for your team's notes about your clients' instruments.

3. BUILDING YOUR LORISQ SMART DATABASE

Of course, to make the most of all LorisQ's wondrous features, your database have to contain your team's instruments. To **add your instruments** click on the (+) sign next to the search line on the Dashboard after which you can enter all the essential information regarding your equipment.

3.1 General info and tags

Under **Instrument** enter the name you normally use for that particular instrument, e.g. "Digital thermometer", "Analytical balance" etc.

Under **Category** you must tell the database what kind of measuring or monitoring equipment your instrument is. It is absolutely essential that you choose the correct "category" for each single instrument, to ensure correct calibration data collection and interpretation, including trend analysis!

First, you choose from the following physical parameters your instrument measures or monitors:

Angle / Chemical Quantities (pH, conductivity...) / Density / Electrical quantities / Force / Humidity (with optional temperature) / Length / Mass / Pressure / Roughness / Temperature /

Time and Frequency / Torque / Volume / Other

| Ade | d new instru | ment |
|------------------------------|------------------------------|------------|
| 1 st | | |
| General info and tags | Documentation | Activities |
| Instrum | ent * | |
| Enter instrum | nent name | |
| PHYSICAL PARAMET | TER • | |
| Mass | | • |
| INSTRUMENT * | uninking instrument | |
| Weighing instru Weight(s) | weigning instrument iment | |
| Other, | | |
| MANUFACTURER * | ent manufacturer | |
| | | |
| Enter instrum | ent model/type | |
| UNIQUE ID * | | |
| Enter instrum | ent unique ID | |

Then, depending on the physical parameter, you choose from the list of available instruments, which will put your instrument in the predefined category. If you can't find your instrument among the available ones choose *Other*. As mentioned before, that's very important to ensure correct data analysis for particular instrument category.

Under **Manufacturer**, **Model/Type** and **Unique ID** enter more info for the particular instrument in question. For **Unique ID** you can use the serial number, inventory number, a combination of the two, or any other designation of your choice.

Under **Add tags**, by clicking the (+) sign you can assign tags to the instrument which were predefined in Settings by the *Manager(s)* in your team.

| Add ta | ags | | |
|--------------|-----------------|------------------|--------|
| Just start t | yping | | |
| 🕑 Multicha | nnel instrument | | |
| Add ch | nannels | | |
| MEASUREMENT | TUNIT | | |
| mV | Ŧ | Apply to all cha | annels |
| CHANNEL 1 | | MEASIIDEMENTI | UNIT . |
| Voltage | | mV | • |
| CUMMUSI 2 | | | |
| Current | | mA | • X |
| | | | |
| CHANNEL 3 | | MEASUREMENT | UNIT * |
| Resistance | | kΩ | • 3 |

For certain instrument categories (e.g. piston pipettes, multimeters, thermometers...) a checkbox named **"Multichannel instrument**" will appear between tags and the "Continue" button. Check this box when your instrument is indeed a multichannel one, such as a 12-channel piston pipette, or an 8-channel digital thermometer.

Note: For "Multimeters" it is always necessary to check this box, because they might or might not have more than one physical channel, but they measure few different electrical quantities (such as current, voltage, resistance etc.), and as such are considered "multichannel" in LorisQ database.

After that you will be able to enter additional data for the channels, which is also essential for correctly analyzing calibration trends later on.

Now you can click the Continue button and begin the 2nd stage of adding your instrument in LorisQ database.

3.2 Documentation - certificates, reports, manuals

In the second part of adding your instrument you can **upload certificates (and reports) as well as manuals**. It is always possible to upload all of these in the database later. But only if you are in a hurry. :)

| | 1st 2nd 3rd General info and tags Documentation Activities | |
|-------|---|--|
| Uploa | ad certificates | |
| | You don't have any certificates for this instrument yet | |
| | Drop certificate here | |
| Uploa | ad manuals | |
| | Drop manuals here | |

| Uploaded | | | |
|--|--------------------------|---|--|
| Screen Shot 2019-03-25 at 21.28.36.png | | | |
| CERTIFICATE/REPORT NUMBER * | CERTIFICATE VALID FROM * | | |
| Certificate/report number | Certificate valid from | # | |
| ACTIVITY * | PROVIDER * | | |
| Calibration | Metroteka d.o.o. | • | |
| SO 17025 accredited calibration | | | |
| Instrument was adjusted | | | |
| COMMENT | | | |
| Comment | | | |
| | | | |
| CHANNELS RANGE | MAX. ERROR | EXPANDED (K=2) MEASUREMENT UNCERTAINTY | |
| Voltage 🔻 | | | |
| | | | |
| Current | | | |
| | | | |
| Resistance | | | |

It is <u>essential you always enter the correct **date** from which certificates (or reports) are valid, because this date will be used to calculate given activity's due date and generate personalized notifications and alarms for your team members.</u>

Under **Activity** choose from LorisQ default activities and your team's custom activities predefined by your *Manager(s)* in Settings. If you are uploading certificate or report for some type of activity which is still not available to you in the drop down menu ask your *Manager* to add it in *Settings*.

Under **Provider** choose the company that issued given certificate or report. It can be an external provider (if your *Manager* added him in *Settings*) or it can be your own team who performed the activity and issued the document. Again, if provider in question is still not available to you in the drop down menu ask your *Manager* to add it in *Settings*.

You also have the option of writing a **comment**, regarding anything in connection with this certificate or report, if you want to share it permanently with your team members.

If your certificates or reports have important **attachments** (e.g. raw data, graphs etc.) you can add them all in the attachment drag-and-drop field.

In the case of **calibration certificates** specifically, after you drag-and-drop them, for most instrument categories you will be asked to enter additional data in order to create calibration trends.

| TEMPERATURE | ERROR | EXPANDED (K=2) MEASUREMENT UNCERTAINTY | |
|-------------|-------|---|--|
| -30 | -0.4 | 0.22 | |
| 0 | -0.2 | 0.22 | |
| +35 | 0.3 | (0.15) | |
| + add New | ROW | | |

Although it is not mandatory to do it, this **data enables trend analysis** (and sometimes corrections calculator) at no additional cost, so it would be smart to use it and enter the data for your past calibration certificate. And for your very next calibration certificate your calibration

provider will be able to do it for you, both uploading the certificate and entering the data (if you connect with him, of course).

3.3 Activities - calibration, validation, repair etc.

In the 3rd stage of adding an instrument, you have to define ALL the **recurring maintenance activities** on this instrument, both external (if you use external service providers) and internal ones (if your team performs it). In order to add activities, you must click on the (+) sign and enter required details. (*Note: The Repair activity is present on each and every instrument by default, but it's not something you perform in regular intervals.*)

| | | | V |
|--------------------------------|--|------------------------|----------|
| | ACTIVITY INTERVAL | ACTIVITY INTERVAL UNIT | |
| ✓ Repair | | | |
| ∧ Calibration | ACTIVITY INTERVAL | ACTIVITY INTERVAL UNIT | |
| | 24 | months | |
| LAST DATE | ALLOWED DELAY INTERVAL | ALLOWED DELAY UNIT | |
| 20.6.2017. | 2 | months | |
| ACTIVITY INITIATOR | CERTIFICATE APPROVER | PROVIDER | |
| Harry Potter | Harry Potter | LME Thuringen | |
| CALIBRATION POINTS | | | |
| No calibration points | | | |
| DOCUMENTS | COF | MMENT | |
| You don't have any SOP this | k, protocols, guidelides etc. for activity yet | comment yet | |

In place of "**Last date**" enter the date when the given activity was performed last time. "**Interval**" is the time interval in which the activity has to be regularly performed and "**Allowed delay**" is the activity's tolerated delay in accordance with your quality system (e.g. if the activity has to be performed every 12 months, and you tolerate a 1 month delay, your time interval is 12 months and your allowed delay is 1 month).

After these time variables, you choose the team members responsible for this activity. The "**Activity initiator**" is responsible to ensure the activity will be performed on time, and the "**Certificate approver**" is responsible for reviewing and approving certificate or report after the activity is performed. Now you can relax and be sure that they will be notified about their responsibilities when the time comes.

Under "**Provider**" choose the external company which performs this activity for you by default or choose your own team if it is an internal activity. You can always change the chosen provider before you initiate the activity next time. This will serve only as a suggestion at the time this activity should be performed.

You can also drag-and-drop any **document** related to the activity (e.g. work instructions, guideline or protocol) so it is available to all of your team members. It will not be available to the external provider, it is just for your internal use.

When you've finished adding all the activities related to the instrument, you can click on the "Finish" button and repeat everything for the rest of your instruments.

Now the Maintenance loop can serve its purpose beautifully and inform you just in time regarding all the activity stages and tasks your team has to perform.

4. INSTRUMENT CARDS

Clicking on particular instrument's name, from anywhere within LorisQ, leads you to its instrument page, or as we call it - **Instrument Card.**

| C lorisQ × | | | | |
|---|-----------|--|------------|------------------------|
| | | QlorisQ | | Mirna Fakin Log out |
| IR kalibrator | | | Owner View | Provider View |
| GROUP Temperature / Thermal baths MANUFACTURER Wika MODEL CTI 5000 UNIQUE ID 11056154, inv.br. 191 | | There are no tags on this instrument Image: Certificates Image: Manuals Image: Warnings • Overdue warning | > | |
| Activities [®] | —— Info — | History | | |
| V Repair | LAST DATE | ACTIVITY INTERVAL 0 | | • |

4.1. Basic Info

On the top of an instrument card you can find the **basic info** about the instrument (name, category, manufacturer, model and unique ID), plus all the uploaded **certificates and manuals**. If there is something going on that LorisQ wants to warn you about (either a problem with maintenance deadlines or with accuracy/tolerance limits), additional **warnings** appear.

4.2. History

Below the basic info you can choose between Info (by default) and **History.** If you choose History, you will be able to see chronological record of this instrument's basic info, certificates and reports, manuals, required maintenance activities, QBook notes, tolerance limits and warnings, plus the history of all maintenance activities performed. In essence, everything that was entered, edited, deleted, performed and things you were warned about will be there, including who did it and when.

| | Info — History — | | | | | |
|----------------|---|-----------------|--|--|--|--|
| History | | | | | | |
| All Basic Info | Activities QBook Tolerance limit Warnings | | | | | |
| ~ • | LorisQ issued an "activities overdue" warning. | 4.9.2019 20:25 | | | | |
| ^ • | Calibration activity was finished | 13.6.2018 08:57 | | | | |
| | Calibration was initiated by Marija Pavlović on 02. 05. 18 Certificate/report 872A742 from Sartorius Croatia Libra Elektronik d.o.o. was uploaded by Sartorius Croatia Libra Elektronik d.o.o. for approval on 02. 05. 18. and became visible to everyone on 13. 06. 18. after being approved by Marija Pavlović. | | | | | |
| ~ • | Calibration certificate/report 8715006 information was edited. | 11.4.2018 11:59 | | | | |
| ~ • | Calibration certificate/report 8715007 information was edited. | 11.4.2018 11:58 | | | | |
| ~ • | Calibration certificate/report 8710001 information was edited. | 11.4.2018 11:57 | | | | |
| | | | | | | |

If you switch back from History to **Info**, you will see this instrument's activities, QBook notes, in most cases Trends, and in some cases even Corrections (see 4.3.-4.6.).

4.3. Activities

Here you can add, edit or delete required maintenance activities for this instrument, in the same way you can do it while adding a new instrument (see 3.3.)

4.4.QBook

Here you can add, edit or delete QBook notes only for this instrument (after all, this is its instrument card). For information on QBook see 2.3.

4.5.Trends



If the given instrument has calibration data (entered by either you or your provider) alongside its calibration certificates, a **Trend** graph(s) of one or more important parameters will appear for most of the instrument categories. What particular parameter will be shown for the given instrument, depends on the particular instrument category. This is why choosing the correct instrument category for given instrument group is absolutely essential. For depth gauges, micrometers or pressure gauges it will be the maximum error in its entire measuring range, for thermometers the errors at each temperature, and for piston pipettes the key parameters to track are systematic errors and coefficients of variation. At this moment, LorisQ enables trends for over 60 instrument categories, which represent more than 95% of all measuring instruments.

For each instrument, you can define the "tolerance limit" for given key parameters (which depend on instrument category, e.g. maximum permissable error for micrometer, or maximum permissible coefficient of variation for piston pipette, or maximum permissible temperature stability for thermal bath etc.). By entering values and clicking the **Set** button you can visually assess the relationship between the real parameter and the tolerance limit you entered, and when you click **Save**, value for the limit entered will be saved in your LorisQ database. This means that next time you or your external provider enters new calibration data, it will not just be visible here right away, but a warning will be set off if the limit is exceeded or even if the result is just dangerously close (more than 80%) to the limit. This way you can prevent many unwanted events and make smarter purchases in the future, since you will be able to see the long-term performance for any specific instrument.



4.6. Corrections

Underneath the Trends, a **Corrections** graph is shown for some of the instrument groups (currently: contact thermometers and probes, infrared thermometers, liquid-in-glass thermometers, temperature indicators, temperature simulators, thermohygrometers and hygrometers, pressure calibrators, hydrometers and force gauges). Now whenever you make important measurements using particular instrument, here you can enter the value from

the instrument display, and LorisQ will show you a much more accurate value, taking your last calibration certificate into account. Our big data analysis results show that for thermometers and (thermo)hygrometers you will increase the value of your measuring instrument 2-3 times on average, without any investment, just by using this LorisQ feature.

4.7. Instrument Card for clients' instruments in Provider View

If you are a service provider, in Provider View you will have Instrument Cards of your clients' instruments you worked on, but the information will be different than on owner's Instrument Card for the same instrument, having in mind confidentiality of information.

4.7.1. Basic Info will be the same as owner's.

4.7.2. History will be the chronological record of your certificates and reports, maintenance activities you performed and QBook notes (yours and those that the owner of the instrument shared with you).

4.7.3. There will be no activities, since they are defined by the owner, and should not be visible to provider.

4.7.4. QBook will contain only your notes, and those that the owner of the instrument shared with you.

4.7.5. Trends will be drawn based only on your calibration data, not other providers'.

4.7.6. Corrections will be based on YOURS last calibration data.

5. MAINTENANCE LOOP

After adding all your instruments and their recurring activities to the LorisQ database, you will be notified every time you have to perform some action. All you have to do then is move the activities in the droplets from the left side to the right by performing tasks.

| | Main | itena | nce Loop |) 🤊 | | | |
|---|------|-------|--------------------------|---------------------|-----------------------|-------------------------------------|---------------------|
| | 1 | I | 1 | 0 | 3 | 0 2 | 13 |
| S | Soon | | STEP 1 Under alarm | STEP 2 Initiated | STEP 3 In progress | STEP 4 Waiting for our review | STEP 5 Completed |

The numbers in the **large droplets** refer to the number of tasks you are personally responsible for, while the numbers in the **small droplets** refer to the overall number of tasks within your team. Clicking on these droplets will take you to a detailed table view, where you will find more information. It's like a game where your goal is to, step-by-step, resolve all of your personal tasks within the team.

When the activity due date is near, it will appear in the **Soon** droplet. (*Note: Manager(s) define how soon in Settings.*) The activity can be initiated from the Soon droplet after which it will move into the **Initiated** droplet.



In case you miss your due date, the task will automatically move itself to the **Under alarm** droplet, your instrument will get an "overdue warning" flag on its Instrument card and a note in QBook will be generated.

If your external provider is also a LorisQ user and you're connected, after you initiate the activity you want him to carry out, they will be notified about it by LorisQ. After they confirm receiving your instrument, your activity will move to the **In Progress** droplet.

When the certificate or report for the given activity is uploaded (either by your provider or your team), it will move to **Waiting for our review** droplet. From here, *Supervisors* and *Managers* can approve it, and then (and only then) it become visible to everyone else in your team as a part of the instrument's documentation on the Instrument card. (If you reject particular certificate or report, it won't become visible. You are then free to re-initiate activity, if you want.)

| | CERTIFICATE/REPORT ID | INSTRUMENT INFO | ACTIVITY | CERTIFICATE APPROVER | PROVIDER |
|---|-----------------------|---|-------------------------------|----------------------|------------------|
| 0 | ∧ 2016645454 | Thermocouple type T + multichannel digital thermometer Temperature / Contact thermometers and probes RS Components (thermocouple) + Pico Technology (data logger) type T (thermocouple) + (data logger) Inv.br. 297 (termopar) + inv.br. 152 - Anal 1 (data logger) | Calibration APPROVE REJECT | Marija Pavlović | Metroteka d.o.o. |
| 0 | ✓ 98345763 | Thermocouple type J + multichannel digital thermometer Temperature / Contact thermometers and probes Cole Parmer (thermocouple) + Pico Technology (data logger) type J + (data logger) inv.br. 353 (termopar) + inv.br. 514 - kanal 7 (data logger) | Calibration | Marija Pavlović | Metroteka d.o.o. |

Finally, instrument and activity end up in Completed in last 30 days droplet.

Note: If you perform this activity yourself (internally), or you're chosen provider is still not connected with you through LorisQ platform, you can upload the certificate or report in the **Initiated** droplet in which case it skips directly to **Waiting for our review** droplet. Also, there is a possibility to finish the activity without uploading any certificate or report, which can be handy for some simple activities you want your team to be regularly reminded of, but you don't want to keep any serious records about. Bear in mind that in History (on the Instrument card), basic record about starting and finishing activity without uploading certificate or report WILL be kept, which is, of course - a good thing.

6. WORK PROGRESS IN PROVIDER VIEW

In place of Owner View's Maintenance Loop, in Provider View there are **Work Progress** droplets. While Maintenance Loop tracks your instruments' regular maintenance, Work Progress tracks service activities you perform for others (e.g. calibration, qualification etc.)



When your client initiates particular activity for his particular instrument with you being selected as a provider, that instrument coupled with that activity will appear in the **On the way** droplet. When you click on that droplet you will be able

to acknowledge when you receive those instruments, and the client will be notified about it. (In his "Maintenance Loop" the instrument will skip from "Initiated" to "In Progress" droplet.)

In the **Received** droplet you will be able to assign individual service activities ordered by your client to your particular team members.

The **Assigned** droplet consists of the big one, and the small one. Just like in Maintenance Loop, the big numbers represent the tasks assigned to you personally, and the small numbers all the tasks assigned across your team. If you click on the small droplet, you will be able to see currently assigned tasks for everyone. When a team member finishes his certificate or report for a given task he can upload it while in this droplet for supervisors and managers to sign (or reject), and the instrument with its task skips to the next droplet.

Waiting for approval droplet is where certificates and reports wait for your team's supervisors' and/or managers' signatures, after which they will appear in owner's Maintenance Loop in his Waiting for our review droplet. At this moment the providers workflow is **Completed.** (If the supervisor or manager doesn't like the certificate/report, he can reject it, and assign a new team member to do it all over again.)

LorisQ team