















Logilab ELN

A generic Lab Notebook for Quality and Research Laboratories

I N D U S T R I E S

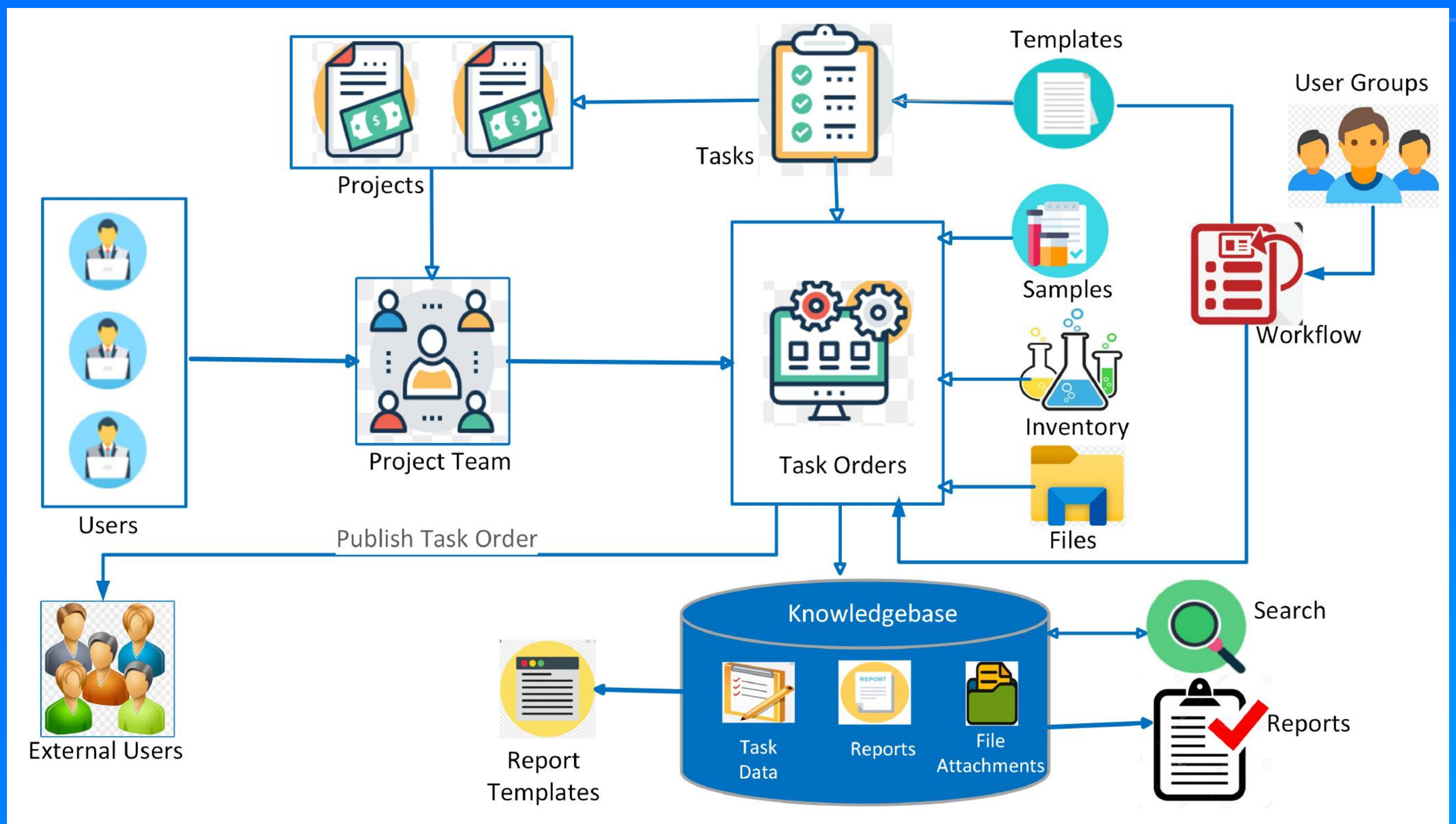
-  Pharmaceuticals
-  Life Sciences
-  Biopharmaceuticals
-  Drug Discovery
-  Clinical Research
-  Contract Research Organization
-  Healthcare and Diagnostics
-  Oil and Gas
-  Dairy, Food & Beverages
-  Chemicals
-  Agriculture
-  Bio-banking

About Logilab ELN

Logilab ELN is Agaram Technologies' time-tested generic Electronic Lab Notebook (ELN) Application to transform laboratories to perform their tasks in digital and paperless manner.

It is used by laboratories conducting tests/experiments and research in various disciplines like chemistry, biotech, healthcare, life-sciences, energy, agriculture, engineering, metallurgy, environmental science etc. It has specific functionalities to help GxP regulated facilities to achieve compliance to Data Integrity guidelines.

Logilab ELN has been certified with OWASP/SANS25 standards as a highly secure web application



Core Product Functionalities

- Sample Management
- Task Management
- Template Management (Worksheet/Protocol)
- Template Evaluation & Validation
- Worksheet Management (using Excel)
- Data Identifiers for integration and Reporting
- Project Management & Workflow
- Protocols Management
- LIMS Integration
- Instrument Integration using SDMS
- Advanced Document Editor
- Lab Inventory Management
- Document Editor for Custom reports
- SOP Management

How Logilab ELN helps Labs to go paper-less



✓ Easy-to-Use User Interface

Logilab ELN has Excel look-alike simply-designed user interface with WYSIWYG format. It enables easy search and view by filtering the data based on various parameters namely dates, order, tests, user, etc. along with excel import. It ensures better user experience and considerable time-saving during user operations.

✓ Workflow for Review and Approval

Logilab ELN provides the functionality to setup a review and approval workflow for data to be published or change the status of data from one status to another. Data residing in the server can be checked, reviewed and approved by authorised personnel with an electronic signature.

It ensures better collaboration, user accountability and control of data to ensure error-free operations.

✓ Easy-to-use Reporting Tool

Logilab ELN provides a user-friendly configurable report tool using ONLYOFFICE Document Editor to generate reports with complex summary and calculation logic and also with features like drill-down, cross-tab, charts, etc.

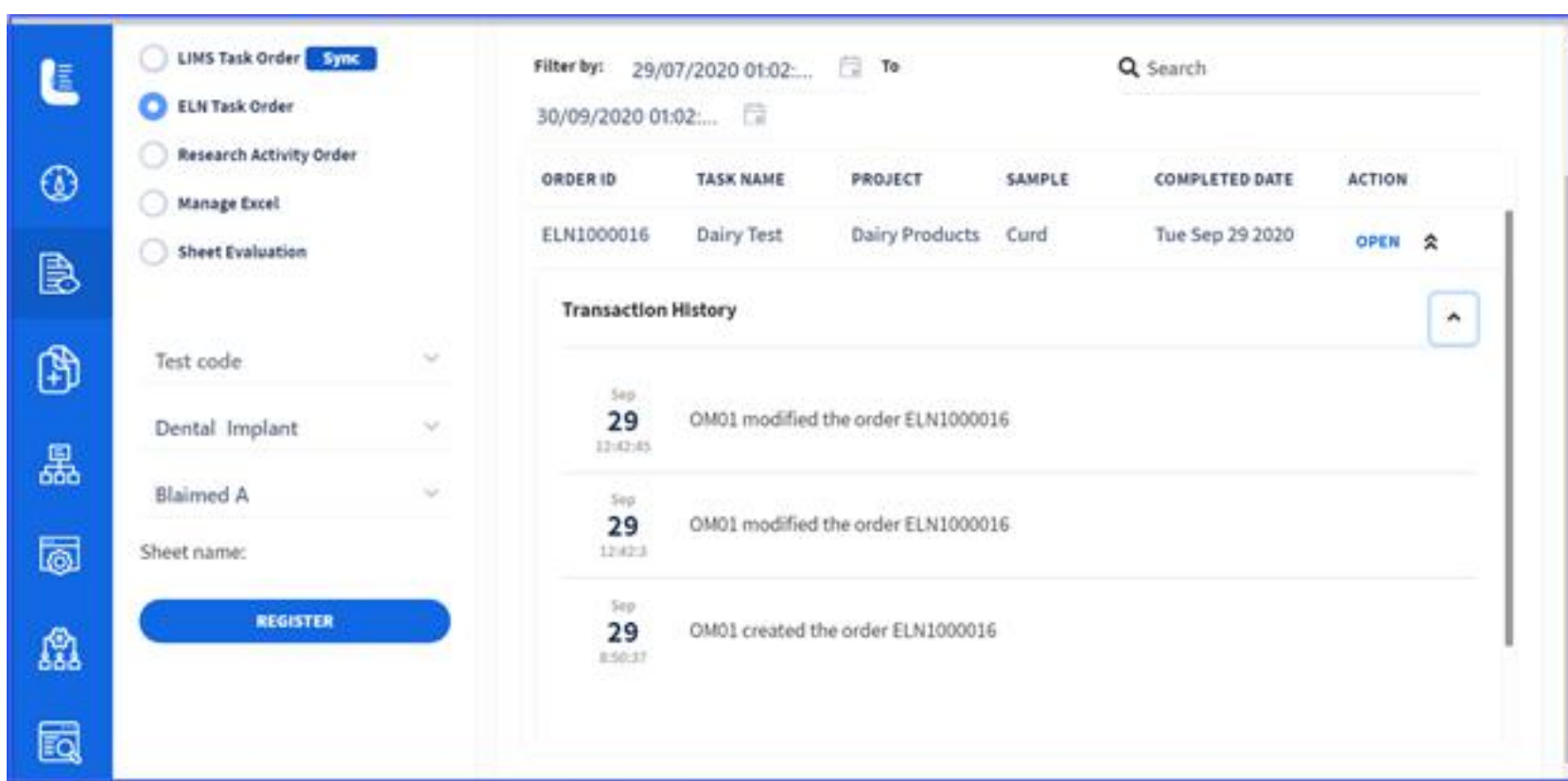
It ensures better user experience and considerable time-saving for the user operations.

✓ Easily configurable Dashboard

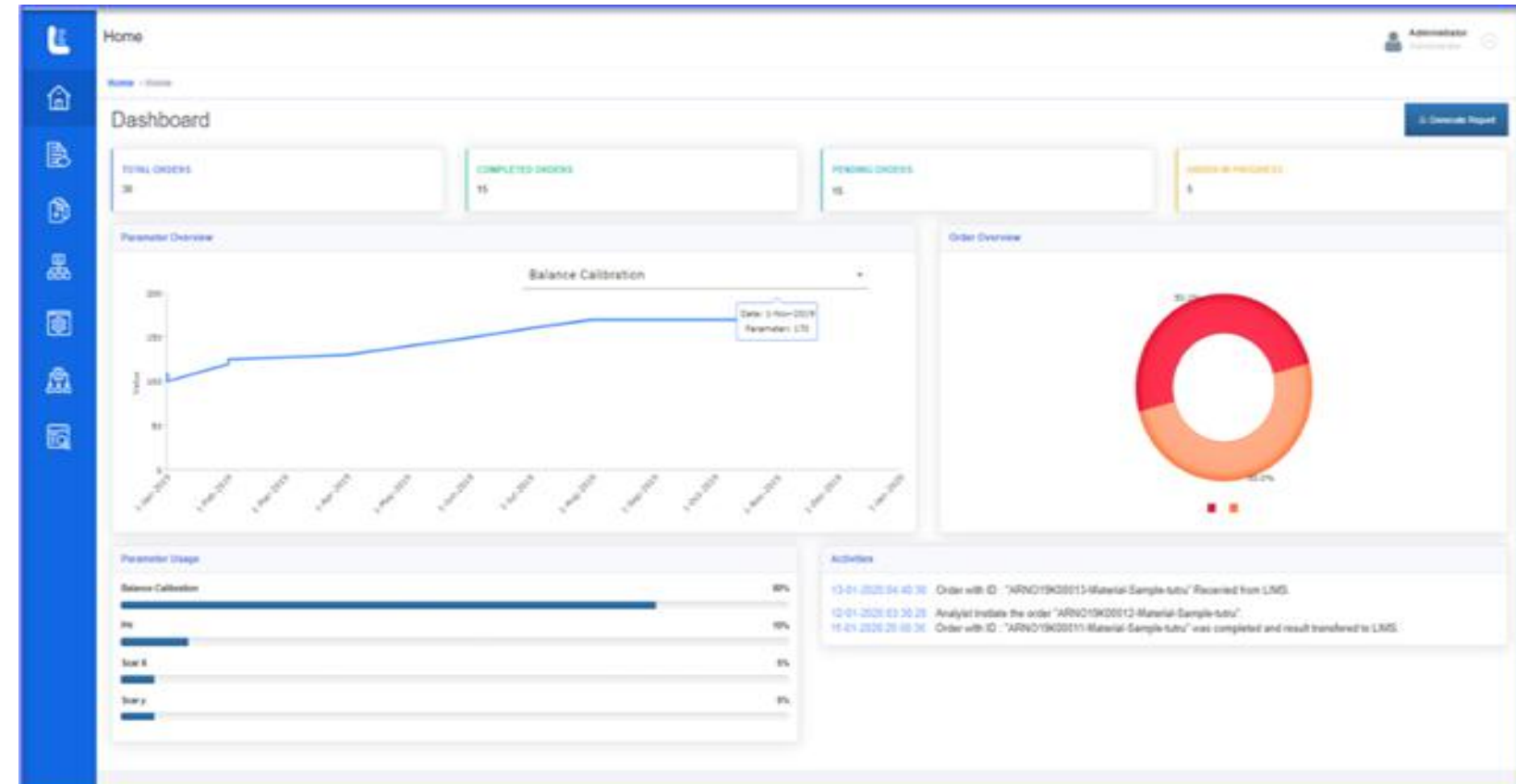
Logilab ELN provides easy-to-configure user-role-based dashboard which displays the information that are necessary for a specific user role to act upon as a ready-reckoner. This helps the user to see the overall pending list & configure the trend chart of specific research test results/data logger that helps to make a good decision without getting into the modules.

It ensures focussed and timely action and improving the service quality for the users.

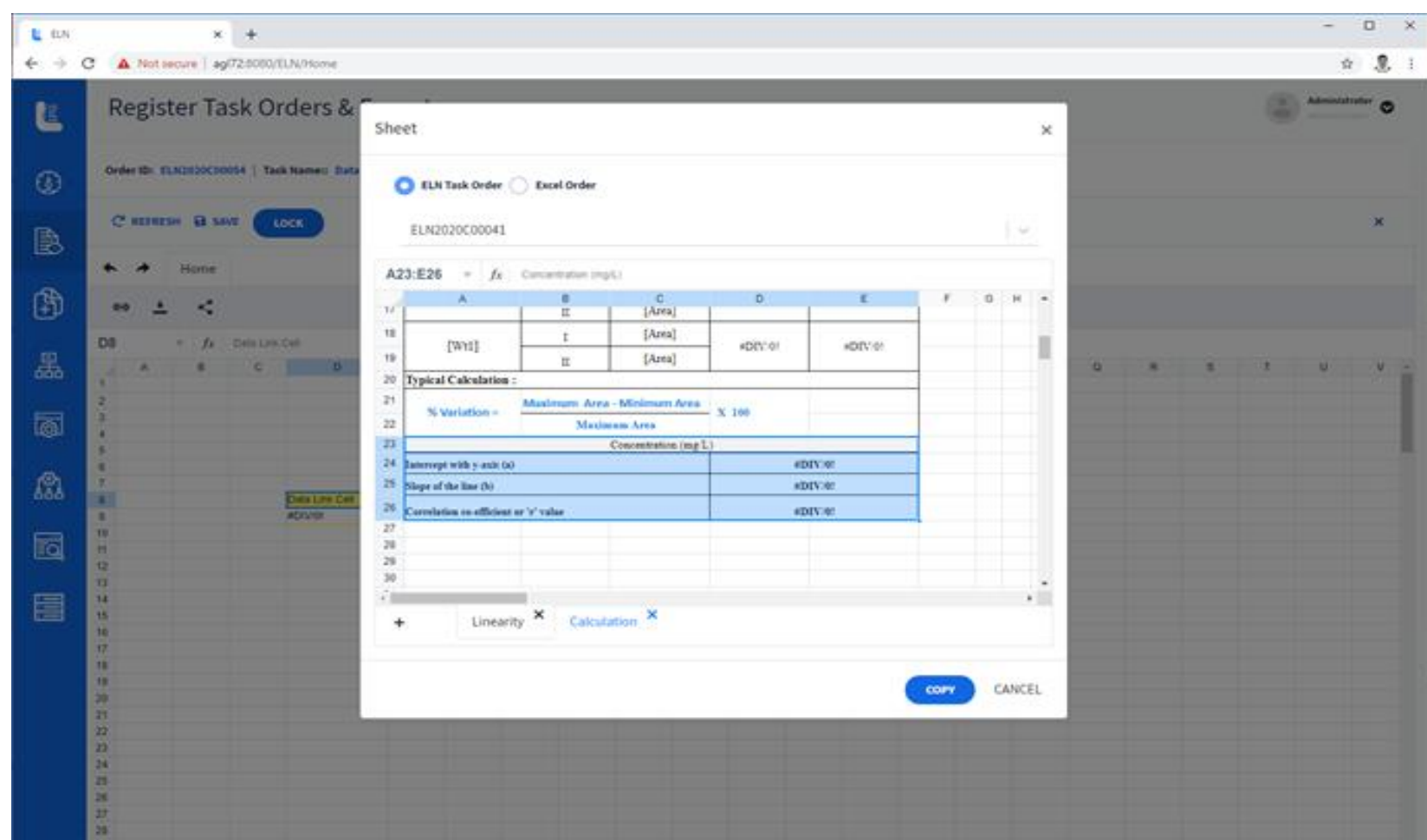
Easy-to-Use User Interface



Easily Configurable Dashboard



Data Analytics and Report Creation



✓ Integration with Other systems

Logilab ELN is designed with a configurable/Customizable middleware Integration engine that can send/receive data from any external systems like LIMS and ERP using easy-to-use mapping tool. Samples, tests and Orders from Qualis LIMS can flow to Logilab ELN. After data capture, specific data or results can be seamlessly transferred from Logilab ELN to LIMS.

It ensures the time and cost savings and better user experience due to reduced complexity of operations and maintenance. It also ensures error-free operations, uniformity and consistency of data extraction and processing.

✓ Active Directory Services (ADS) Integration

The system allows users to maintain local application users with a powerful password policy that is on par with the industry requirement. Also, it has features and tools that can synchronize the users' AD group information. The user password can be authenticated using LDAP service in ADS.

IT Administrators can better manage the user's policies using ADS integration. Enabling and disabling the user accounts are very easily done at a single place rather than doing it in different applications.

It reduces the complexity of operations, time and cost saving, reduction of errors, uniformity and consistency of data extraction as well as better user experience.

✓ Data Capture and Formula calculation in Labsheets

Logilab Labsheets enables users to enter data manually as well as can be designed with instrument parsed data fields, to which the data from SDMS can be transferred seamlessly. Lab sheets can hold formula fields using which standard functions (mathematical, statistical and logical) calculations can be easily performed.

It reduces the complexity of operations, time and cost saving, consistency in data processing, reduction of errors as well as better user experience.

Formula Calculation in Labsheet

Standard Extraction					No.	Ret. Time	Standard area
					1.00000	0.79700	418.00000
					2.00000		
Std. wt.	4.8730	→	1.0	ml with diluent	3.00000		
Std. 2nd dilution		→	1.00	ml with diluent	4.00000		
Std. 3rd dilution	1.00	→	1.00	ml with diluent	5.00000		
Std. 4th dilution	1.00	→	1.00	ml with diluent	6.00000		
Std. Purity	100.00 %		Std Concentration		Mean	0.80000	418.00000
					SD		0

Instrument Data Manual Data Entry Calculations Performed

Integration with LIMS (Mapping Interface)

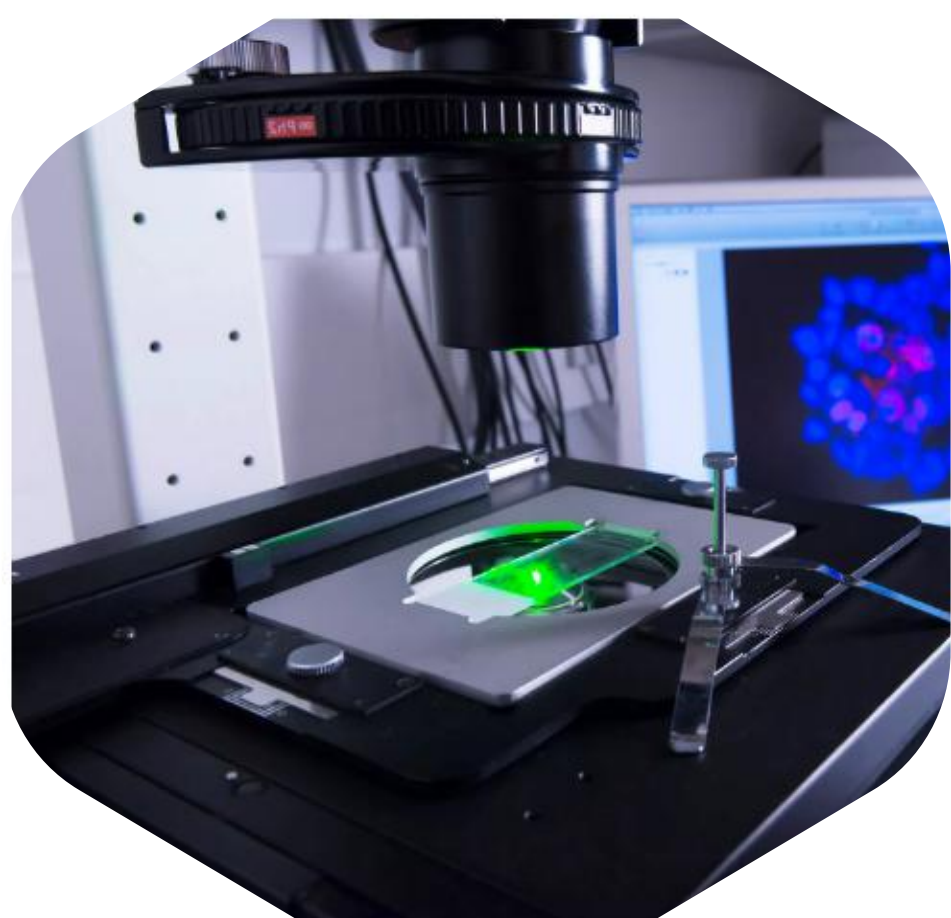
WEAR SCAR METHOD SHEET

Order Processing
 Material Management & ELN Order Processing

LIMS Test Name

Test Code

Sheet Number	Cell Matrix	Parameter Name	LIMS Parameter
1	[10, 4]	SCAR AVG	none
1	[6, 4]	SCAR X	none
1	[8, 4]	SCAR Y	none



✓ Browser-based application architecture

Logilab ELN is a Browser-based application that can be run using any of the standard web browsers such as Chrome, Internet Explorer and Firefox, etc. It offers easy access on a computer device in the network.

It eliminates the need to install software on each and every instrument client as well as users' computer systems, thus saving a lot of time and efforts and ensuring error-free installation and maintenance.

✓ Multi-site architecture

Organisations with multiple sites can have a single instance of ELN instead of multiple ones. This facilitates easy and quick installation and maintenance combined with reduced cost of ownership.

✓ High Availability

Logilab ELN can be configured to work on high availability architecture to reduce the risk of non-availability. Also, DA/DR systems can be used to meet specific criteria for individual customers.

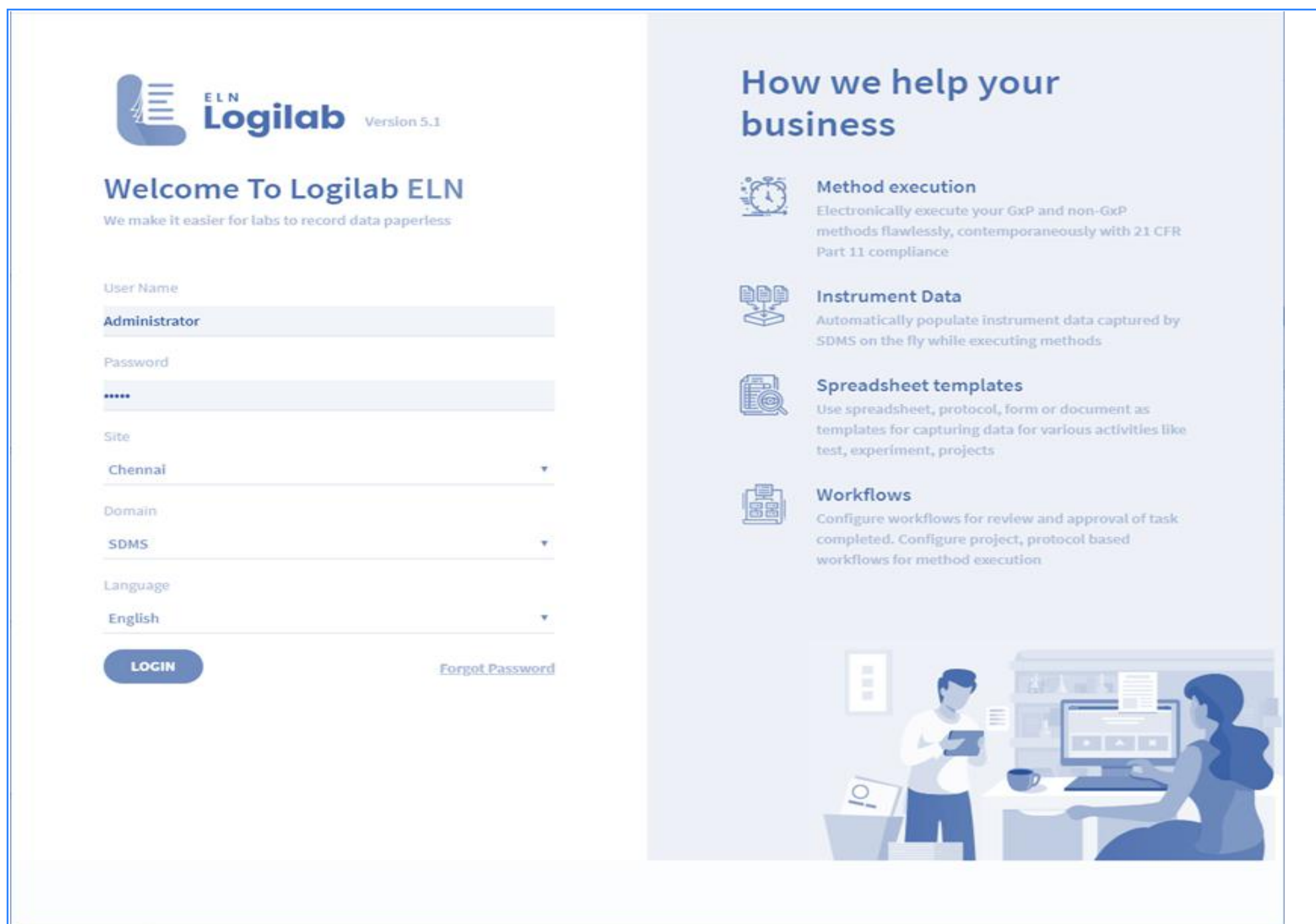
It ensures improvement of the availability, negligible or zero downtime and increase in the customer confidence.

✓ Easy Scalability

Logilab web servers can be clustered to handle scalability. The system can be deployed through virtual servers. The application or web servers can be scaled quickly and easily to manage even 1000s of users simultaneously.

It ensures high flexibility, reduced time to make the system operation, reduced cost and efforts, improvement of the availability and increase in customer confidence.

Browser-based Application User Interface



How Logilab ELN enables Data Integrity and Standards Compliance



✓ Versatile and Flexible Instrument Data Handling

Logilab ELN is designed to capture data from any analytical instrument that has RS232, TCP/IP and from PC-based instruments. The results can be exported in ASCII, Excel, CSV formats. It has the capability to can print a result report. Logilab ELN uses standards-based devices available in the market to communicate through RS232 and TCP/IP.

It ensures easy adaptability, time-savings due to faster configuration and operations and Reduced complexity to use resulting in better customer experience.

✓ Statutory/Regulatory Standards Compliance

Compliance to 21 CFR Part 11, Eudraex Annex 11 and other industry standards is ensured by Logilab ELN by providing paper-less record-keeping process combined with document security and adequately maintained authenticity.

The main advantages are: High availability and easy access of records, validation and tracking of records, data integrity, Audit trail information, authorised user access to data.

It ensures that users can have an accurate, secure, standard-compliant and paper-less transaction system, which is highly reliable for easy Patent filing process and handling patent disputes (if any).

Versatile Instrument Data Handling

User Management for Controlled access

Order ID: ELN2020C00039 | Task Name: Record for Daily Pipette Calibration

Buttons: REFRESH, SAVE, LOCK, Completed, Approve, SUBMIT, Version: Latest

Record for Daily Pipette Calibration

1. Acceptance Criteria

Type	Criteria (g)	Type	Criteria (g)	Type	Criteria (g)	Type	Criteria (g)
P 2	0.0019 - 0.0021	P 2.5	0.0024 - 0.0026	P 10	0.0098 - 0.0101	P 20	0.0197 - 0.0202
P 100	0.099 - 0.101	P 200	0.198 - 0.210	P 300	0.296 - 0.302	P 1000	0.987 - 1.006
P 1200	1.185 - 1.207	P 5000	4.937 - 5.029	P 10000	9.940 - 10.060		

Used Pipette: [Manual Field] Criteria: [Manual Field] to [Manual Field]

2. Record

Date	Pipette Eq. Number (EQ-)	Category S/M/A+Volume - S: Single - M: Multi - A: Auto	Measurement Result			Multi-channel Visual Inspection	Result	Analyst (initial)
			1st (g)	2nd (g)	3rd (g)			
17, 2020	EQ-66	1.5	1.19550			[ComboBox]	Fail	Administrator
[Manual Date]	[Manual Field]	[Manual Field]	1.20			[ComboBox]	Fail	[Signature]
[Manual Date]	[Manual Field]	[Manual Field]	[Wt1]			[ComboBox]	Fail	[Signature]
[Manual Date]	[Manual Field]	[Manual Field]	[Wt1]			[ComboBox]	Fail	[Signature]
[Manual Date]	[Manual Field]	[Manual Field]	[Wt1]			[ComboBox]	Fail	[Signature]
[Manual Date]	[Manual Field]	[Manual Field]	[Wt1]			[ComboBox]	Fail	[Signature]
[Manual Date]	[Manual Field]	[Manual Field]	[Wt1]			[ComboBox]	Fail	[Signature]

User Management

USER GROUP, USER MASTER, USER RIGHTS, PROJECT TEAM, WORKFLOW

User Group Name: Administrator

Q Search

1 - 30 RECORDS

Module name	Task Name	Create	Edit	Delete	Allow
Dash Board	Parameter Overview	NA	NA	NA	<input type="checkbox"/>
Dash Board	Order Overview	NA	NA	NA	<input type="checkbox"/>
Dash Board	Activities	NA	NA	NA	<input type="checkbox"/>
Dash Board	Parameter Usage	NA	NA	NA	<input type="checkbox"/>
Sheet View	Pending Work	<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>
Sheet View	Completed Work	<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>
Sheet View	Order Processing	<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>
Sheet View	ELN Order Processing	<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>
Sheet View	Material Management	<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>

Audit Trail of Records



Audit Trail

AUDIT TRAIL HISTORY | CFR SETTINGS

User Name: All | Module Name: All | Audit Type: All | Records Duration: Current Date

Buttons: REVIEW HISTORY, REVIEW, CREATE ARCHIVE, OPEN ARCHIVE, EXPORT, PRINT

Q Search

1 - 50 Records

Select	Module Name	Actions	Transaction	Comments	Review Status	Reason
<input type="checkbox"/>	Audit Trail	View AuditTrail History	17 Jan 2020 09:46:52	Allow to view AuditTrail History		
<input type="checkbox"/>	CFR Settings	View CFR settings	17 Jan 2020 09:46:52	Allow to view CFR settings		
<input type="checkbox"/>	User Management	View User Rights	17 Jan 2020 09:44:37	Allow to view User Rights		
<input type="checkbox"/>	User Management	View User Rights	17 Jan 2020 09:38:29	Allow to view User Rights		
<input type="checkbox"/>	User Management	View User Rights	17 Jan 2020 08:58:32	Allow to view User Rights		
<input type="checkbox"/>	CFR Settings	View CFR settings	17 Jan 2020 08:35:46	Allow to view CFR settings		
<input type="checkbox"/>	Audit Trail	View AuditTrail History	17 Jan 2020 08:35:46	Allow to view AuditTrail History		

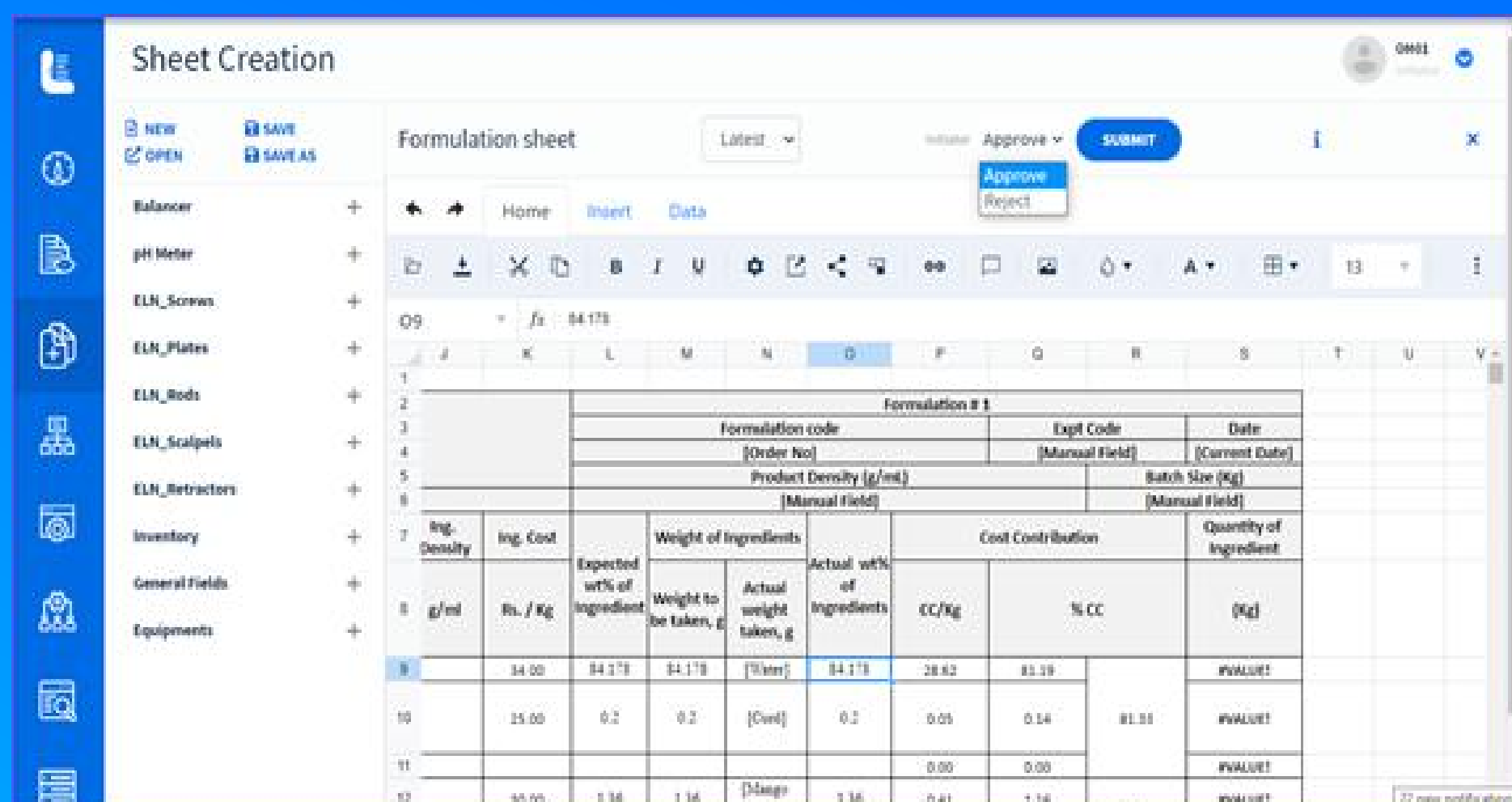
Labsheet Design and Features

Logilab ELN is designed to capture data in a spreadsheet like template called as Labsheet or lab notebook. Labsheets templates can easily be designed by scientists by dragging and dropping generic fields into the Labsheet and creating a form-like input template depending on the type of test, experiment or research task.

This makes the ELN usable for any digital data capture application for lab personnel, research scientists and process research personnel.

Labsheets can be designed with data fields like text, numeric, drop-down list, date, time, formula, image, hyperlinks etc.,

Salient Features of Labsheets:



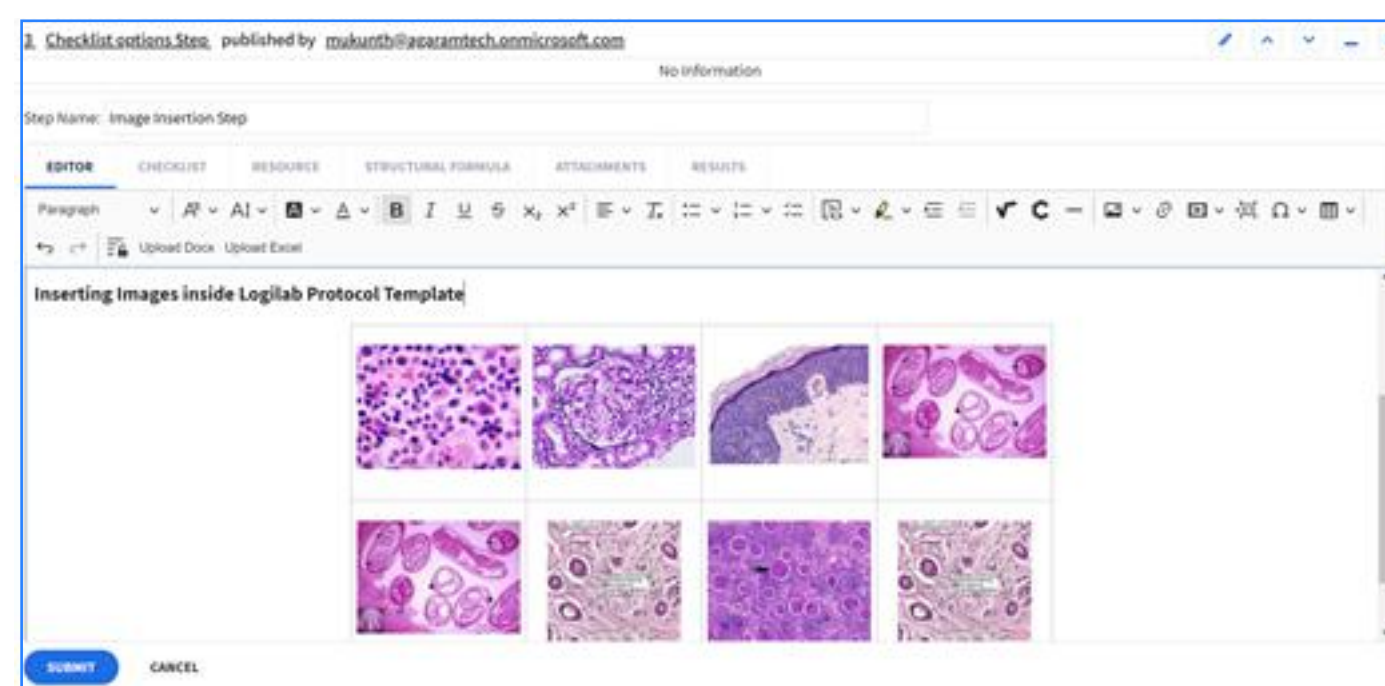
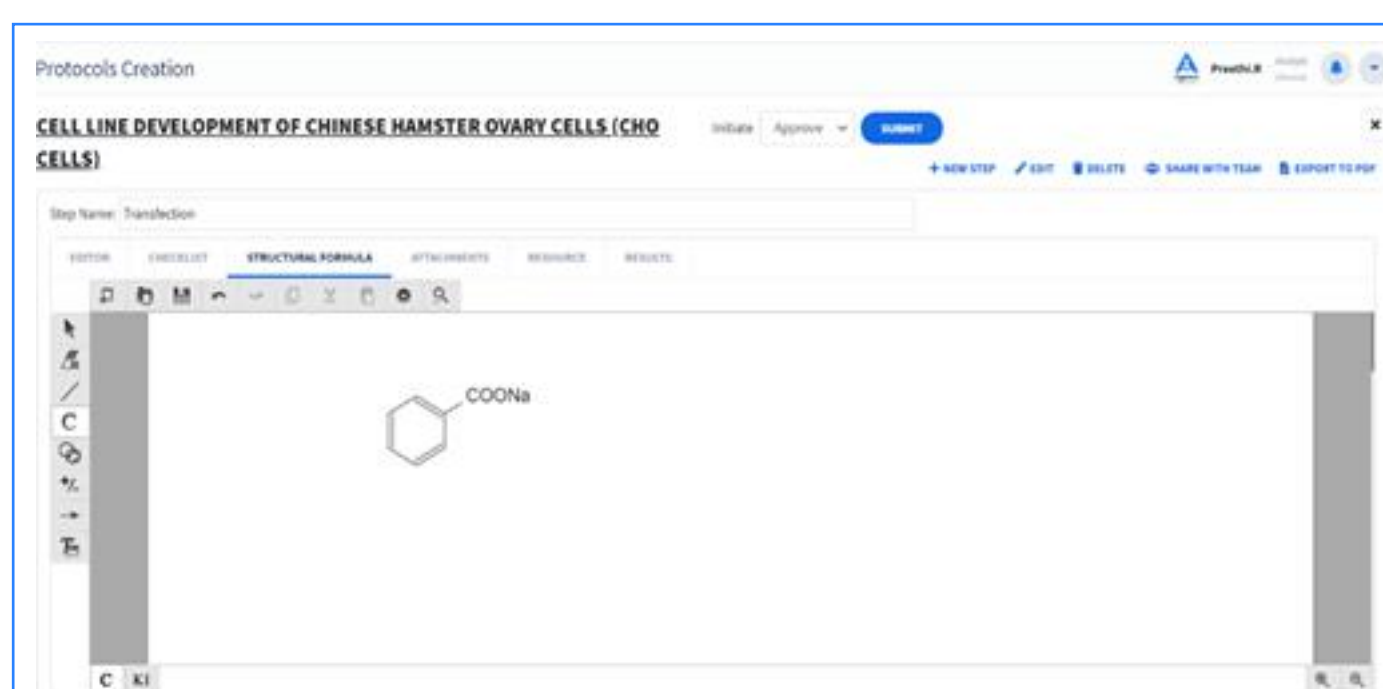
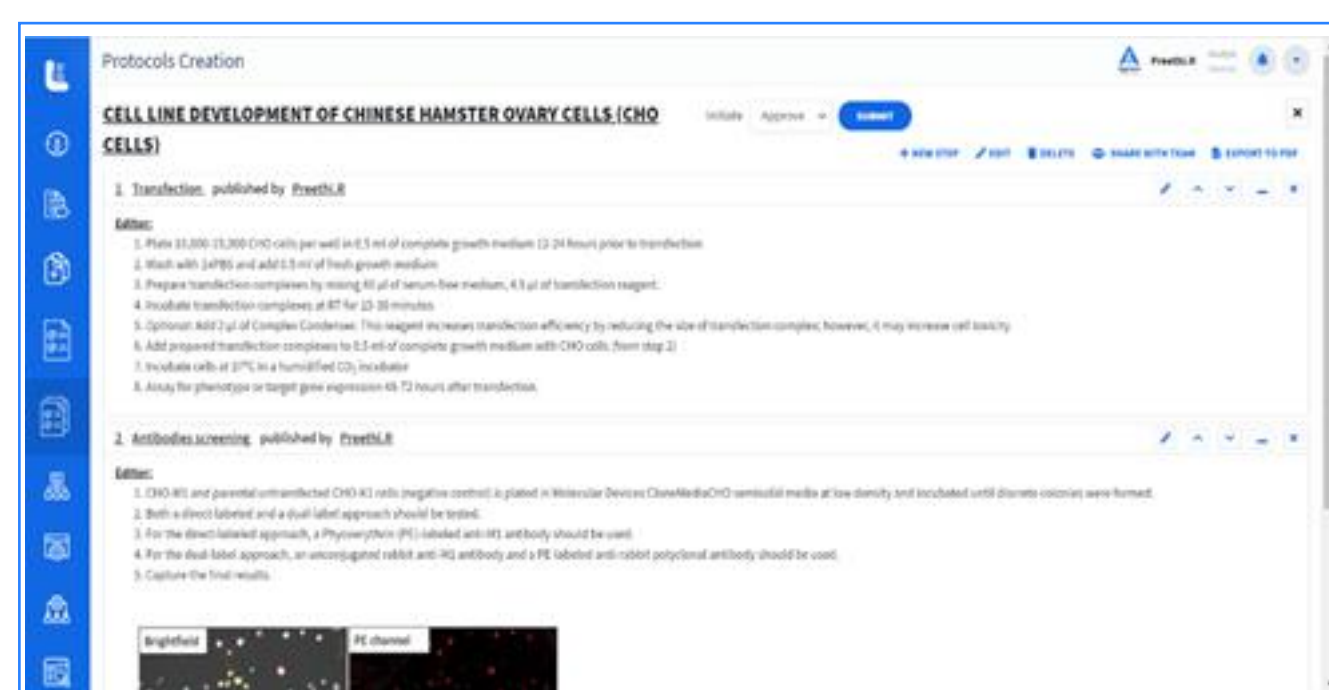
- ✓ Design, Review & Release of Labsheets
- ✓ Formula creation (like excel)
- ✓ Linking of SOPs to Labsheets
- ✓ Multi-sheet capability
- ✓ Creation of charts (based on sheet data)
- ✓ Import of excel sheets to design templates
- ✓ Chemical Diagram functionality
- ✓ Integration of instruments (via SDMS)
- ✓ Switching of instruments
- ✓ Version control for Labsheets
- ✓ Validation of input
- ✓ Calculation across sheets/samples
- ✓ Link to multiple sheet
- ✓ Sheet Export

Design of Protocols and Features

Logilab ELN has been designed with unique feature of designing Protocols. The Results can be captured while executing the protocols.

Salient Features of Protocols:

- ✓ Document type data input
- ✓ Insert instrument fields
- ✓ Insert tables
- ✓ Insert Images
- ✓ Insert Charts
- ✓ Insert tag fields automatically
- ✓ Store documents in a meaningful manner
- ✓ Insert Chemical diagrams



Use of Logilab ELN in Different Labs

Logilab ELN addresses several pain points and vulnerabilities in laboratory tasks particularly the challenges of data integrity, data loss, inaccuracies, duplicity, inconsistencies, etc. in several industries. It saves more than 50% of time and human effort with respect to data capture, review and approvals in addition to addressing GLP, GMP, 21 CFR Part 11, Eudralex Annex 11 and other standards/guidelines compliance. A few of them are:

- ✓ Analytical Development Labs can record and process all tests and experiments using Logilab ELN in paper-less manner.
- ✓ Research & Development Labs can record the research data on a single unified platform so that scientists can collaborate easily and effectively.
- ✓ Quality Control (QC) labs can record all kinds of instrument data, raw-data, method files, reports, SOPs, audit trails, etc. electronically to the central server and retrieve them on-demand in a highly productive manner so that accuracy and reliability can be improved.
- ✓ Drug Discovery Labs can use this as a central repository for all data created so that Protection of Intellectual Property and company's business interests can be ensured effectively. It also ensures full compliance of statutory regulations and data integrity.
- ✓ Clinical Research organization can store and refer all Bio-availability, Bio-equivalence studies (BA/BE), formulations used during trials and bio-clinical data electronically in a must faster and accurate manner.

Logilab ELN – Deployment Options

Logilab ELN is licensed based on number and type of instruments

	On-Premise	Customer owned Cloud	Agaram Hosted Cloud & Managed
1 Perpetual License	✓✓	✓✓	✓✓
2 SaaS Subscription			✓✓

Benefits of Logilab ELN

- ✓ Time savings in terms of implementation and operational perspective
- ✓ Simple and Easy-to-use application interface – Better User Experience
- ✓ Cost and time Savings due to automated paperless transactions
- ✓ Low cost of ownership due to standard technology architecture
- ✓ Low cost of compliance due to adherence to Regulatory and Industry standards of data integrity
- ✓ Minimal error due to automated processes
- ✓ Increased customer confidence due to error-free and consistent results generation

How to Contact Us



Agaram
TECHNOLOGIES

AGARAM TECHNOLOGIES PRIVATE LIMITED

Priyan Plaza, 76, Nelson Road,
Aminjikarai, Chennai 600 029, INDIA

T: +91 44 4208 2005

T: +91 44 42189406

E: info@agaramtech.com

W: www.agaramtech.com

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