The *Independent* Solution Provider for Industrial and Process Automation & IT
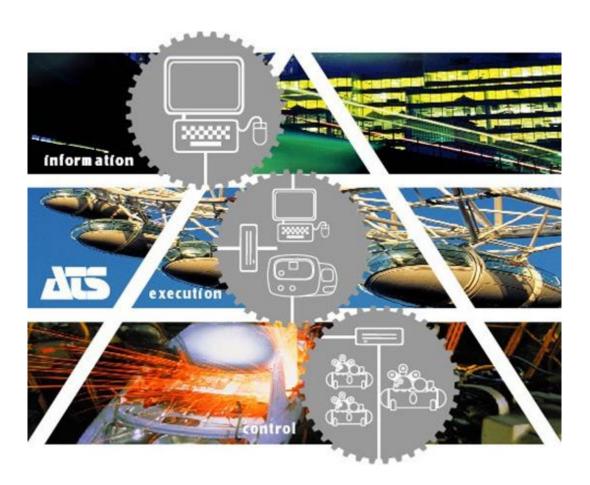
Budgetary estimate

of ATS Applied Tech Systems B.V. for

Apollo Tyres Pvt Ltd

for:

Interspec and Unilab Apollo India Scenario 1+

Revision 3

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1 Distribution & Revision

DISTRIBUTION LIST

Name	Company
Mr. S. George	Apollo Tyres Pvt Ltd (Apollo)
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Mr. Onno Meussen	Siemens
Mr. Y. Lutterop	ATS Applied Tech Systems B.V. (ATS)
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Mr. P. Sajinovic	ATS Applied Tech Systems B.V. (ATS)

REVISION LIST

Revision	Date	Comments
1.0	08-07-2020	First version
2.0	21-08-2020	Changes in text due to input from meeting
3.0	02-09-2020	Update Budget proposal and include LIMS

DOCUMENTS

This proposal is based on follow document(s):

Document

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2 Introduction

Currently the factory of Apollo in India does not have a specification system in place. The wish of Apollo is to implement a capable specification system in India.

Several scenarios have been documented. After careful considerations regarding risks and system potential we have two possible scenarios. This document describes scenario 1+.

Scenario 1+:

Within this scenario Apollo India will implement the environment of Enschede (NL). When India is working on the Enschede environment, then all the licences of Enschede can be used. Only concurrent user licences should be increased to support the amount of active users. The difference with scenario 1 is that a live mirror of the server in Enschede will be placed in India. Hereby eliminating some of the more major concerns in scenario 1+.

Within this document you will find the proposal for the analyse, design and build of this scenario. The proposal is not based on a specific statement of requirements; these are gathered by ATS through meetings and visits. There is a risk that not all requirements are known and included in this proposal. The process and cooperation during the project are setup to cover these risks by five stages of tests:

1) Analyse current configuration;
2) Unit testing (only applicable to add-on software where unit tests are included);
3) Integration Testing;
4) Functional Acceptance Testing;
5) Quick User acceptance tests at Go-live.

A fall-back strategy is included in the process.

Current applications:
- Enschede: Interspec 6.7 on servers Test and Production.

Activity:
This scenario requires configuration change in Enschede.
- India factories must be configured as plant;
- Clients (Web) must be able to get access to the site in Enschede;
- Properties, sections and frames must be changed to be compatible for India.

Benefits:
- No complex configuration is necessary;
- No complex customizations are necessary;
- Few amount of servers to maintain;
- Built in redundancy improving overall reliability.

Concerns:
- Due the distance between the main server and the various sites, the performance could be insufficient. It is wise to document what performance is acceptable;
- Licences of Interspec have extended support till end of 2024;
- Licences of Unilab have extended support till end of 2022;

3 Assumptions

- The identified Scope of Work/Scope Analysis is summarized in chapter 4 for over viewing purposes, assumed that phase 1 will be executed before phase 2.
- Configuration and functionalities for this proposal are the same as currently in Interspec 6.7 and Unilab 6.7 applications in Enschede.
- All servers are compliant to the prerequisites as described in https://support.industrysoftware.automation.siemens.com/docs/mes/interspec/manuals/6.7 _oracle/Installation/Prerequisites_Oracle.pdf . A short summary is described in chapter 2.
- Configuration of extra plants, sample types, parameters, users etc. will be done by Apollo, with assistance of ATS.
- Test scenarios for the FAT and SAT will be delivered and executed by Apollo. ATS will participate to fulfil the FAT and SAT.

4 Deliverables

The Scope of Work/Scope Analysis is a summary based on available documentation, meetings and visits during the request stage from Apollo. The scope of the project is divided into three stages. The identified Scope of Work/Scope Analysis is summarized in following table for over viewing purposes:

Phase 1 Interspec

Scope of Work / Analysis - Requirements
Analyse / design
➢ Analyse the current architecture;   ➢ Analyse the requirements;   ➢ Analyse current customisations;   ➢ Propose a design, based on current architecture and new requirements.
Build
➢ Depending on the analyse, the current application needs changes like: o Change the function which currently add or change the Life Cycle;   ➢ Migrate the builds to production   ➢ Defect solving for issues stemming from this specific project;
Others
➢ Key-User Training with demo scenario's (max 9 pers.);   ➢ Upgrade Installation and system documentation;   ➢ Training and knowledge transfer to support team ATS;   ➢ Participate in the execution of the FAT and SAT.

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Phase 2 Unilab/LIMS

Scope of Work / Analysis - Requirements
Analyse / design
➢ Analyse the current architecture;   ➢ Analyse the requirements;   ➢ Propose a design, based on current architecture and new requirements.
Build

➢ Depending on the analyse, the current application needs changes like:
    o Change the function which currently add or change the Life Cycle;
    o Update Group key and Attributes for old data to be compatible to multiple sites;
    o Change add-on's for labels.
 ➢ Data Domains:
    o Adding of user groups together with new users. This coupled to a specific site location.
 ➢ Adding of new or extra sample types, parameters, info cards, code masks, tasks, users etc;
 ➢ Adding new instrument connections (not in the budget proposed. 2 days per instrument to build)
 ➢ Build instrument connections;
 ➢ Defect solving for issues stemming from this specific project;
 ➢ Migrate the builds to production;

Others
➢ Key-User Training with demo scenario's (max 9 pers.);   ➢ Upgrade Installation and system documentation;   ➢ Training and knowledge transfer to support team ATS;   ➢ Participate in the execution of the FAT and SAT.

In following table, you can find the prerequisites and out of scope not included in this proposal:

Prerequisites / out of scope
Prerequisites
➢ ATS needs full access to work environments;   ➢ Apollo provide a dedicated team with knowledge of the Interspec environment of Enschede and production workflows of the sites in India;   ➢ Clients must be able to connect to Enschede server;   ➢ Clients must be compatible with the screenshot below, further product requirements in https://support.industrysoftware.automation.siemens.com/docs/mes/interspec/manuals/6.7_oracle/Installation/Prerequisites_Oracle.pdf.

Component	Prerequisites
Operating System	Windows 7 SP1 Windows 8 Windows 8.1 Windows 10 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 (32 & 64 bit, where applicable)
Web Browser	Internet Explorer 10.0 [6] Internet Explorer 11.0 [6]
.NET	Microsoft .Net Framework 4.0
Customization	Visual Studio 2012
Other	Acrobat Reader V4.0 (or higher)

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4.1   Prerequisites Phase 1 Interspec:

Software

RDBMS Server

Component	Prerequisites
Operating System	Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2[1] Windows Server 2016 Unix/Linux
RDBMS	Oracle Database 11.2.0.1.0 Oracle Database 12.1.0 Oracle Database 12.2.0 (64 bit) Oracle RAC
.NET	Microsoft .Net Framework 4.0

Client/Server

Component	Prerequisites
Operating System	Windows 7 SP1 Windows 8 Windows 8.1 Windows 10 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 (32 & 64 bit where applicable)
RDBMS	Oracle Client 11.2.0.1.0 Oracle Client 12.2.0.1.0 (32 bit)
.NET	Microsoft .Net Framework 3.5
Customization	PowerBuilder 11.1 Build 8204 (Enterprise)
Other	Windows Installer 3.1

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Web Server

Component	Prerequisites
Operating System	Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016
RDBMS	Oracle Client 12.1.0 Oracle Client 12.2.0 [8] (64 bit)
Web Browser	Internet Explorer 10.0 [6] Internet Explorer 11.0 [6]
Web Server	Microsoft IIS 7.5
.NET	Microsoft .Net Framework 4.5
Customization	Visual Studio 2012
Reporting	TallPDF v3

Web Client

Component	Prerequisites
Operating System	Windows 7 SP1 Windows 8 Windows 8.1 Windows 10 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 (32 & 64 bit, where applicable)
Web Browser	Internet Explorer 10.0 [6] Internet Explorer 11.0 [6]
.NET	Microsoft .Net Framework 4.0
Customization	Visual Studio 2012
Other	Acrobat Reader V4.0 (or higher)

Generic Integration Layer

Component	Prerequisites
Operating System	Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016
RDBMS	Oracle Client 12.1.0 [4][5] Oracle Client 12.2.0 [4][5] (64 bit)
Web Browser	Internet Explorer 10.0 [6] Internet Explorer 11.0 [6] Google Chrome (latest) Mozilla Firefox (latest)
Web Server	Microsoft IIS 7.5 Asp.Net MVC 3 [7]
.Net	Microsoft .Net Framework 4.0

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Hardware
RDBMS Server

Component	Prerequisites
Memory	Minimum: 8 GB + 32 MB per active user Recommended: 16 GB Notes: • For a production database, the recommended memory size is minimum 16 GB. • The memory required by the operating system is excluded.
Processor Speed	Minimum: 2.0 GHz Recommended: 3.0 GHz
Disk Space	Minimum: 10 GB Recommended: 30 GB

Note

- The memory requirements do not include the required memory for the OS or other prerequisite applications.

- The required Disk Space does not include the required Disk Space for the necessary prerequisites.

- This is the minimum Disk Space necessary for the database files of a production database.

- Demo databases can be created using less Disk space.

- The required Disk Space depends on user data; in the Installer tool, a parameterized calculation of the required disk space is available.

Client/Server

Component	Prerequisites
Memory	Minimum: 1 GB Recommended: 2 GB Notes: • The memory required by the operating system is excluded.
Processor Speed	Minimum: 1.0 GHz Recommended: 2.0 GHz
Disk Space	Minimum: 85 MB Recommended: 100 MB

Note

- The required Disk Space does not include the required Disk Space for other necessary prerequisites.

- The Client/Server Disk Space includes only the required Disk Space for the three client applications.

Web Server

Component	Prerequisites
Memory	Minimum: 32 MB per active user Recommended: 50 MB per active user Notes: • To ensure optimal performance, this should be increased as database size increases. • The memory required by the operating system is excluded.
Processor Speed	Minimum: 2.0 GHz Recommended: 2.7 GHz
Disk Space	Minimum: 200 MB Recommended: 350 MB

Note

- The required Disk Space does not include the required Disk Space for other necessary prerequisites.

Web Client

Component	Prerequisites
Memory	Minimum: 1 GB Recommended: 2 GB Notes: • To ensure optimal performance, this should be increased as database size increases. • The memory required by the operating system is excluded.
Processor Speed	Minimum: 2.0 GHz Recommended: 2.7 GHz
Disk Space	Minimum: 10 MB Recommended: 50 MB

Note

- The required Disk Space does not include the required Disk Space for other necessary prerequisites.

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4.2   Prerequisites Phase 2 Unilab

Software

Unilab Database Server (RDBMS)

Component	Prerequisites
Operating System	Microsoft Windows Server 2016 Microsoft Windows Server 2019 Unix/Linux
RDBMS	Oracle 12.2.0 Oracle 19c including any patchset/update on top of 19c.

Note

RDBMS Server

SIMATIC IT Unilab does not interact directly with the Operating System of the RDBMS server, with the exception of some scripts executed during installation.

Any version of Operating Systems (OS) can be considered, if it is supported by the Oracle version that is going to be installed / used. This applies for Unix, Linux and Windows servers. Up-to-date information about which OS versions Oracle supports must be obtained from your Oracle supplier.

For information regarding the Database Setup Utility, which is used to generate the installation scripts, please see the Unilab Installation manual and the Release Notes for this Unilab version.

Note

Oracle 12c ,19c – Built-In_user support as Oracle Home User

Due to the fact that the Oracle windows service is automatically restarted during installation, for the Oracle Home User we support only the Built-In_user.

Note

Oracle functionalities

SIMATIC IT Unilab server is running inside the Oracle RDBMS, and makes extensive use of Oracle functionalities, including, but not restricted to:

- PL/SQL packages
- DB jobs scheduler
- Java Virtual Machine
- Database alerts

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Unilab DB Installer

Component	Prerequisites
Operating System	Microsoft Windows 7 Microsoft Windows 8 Microsoft Windows 8.1 Microsoft Windows 10 Microsoft Windows Server 2016 Microsoft Windows Server 2019
RDBMS	Oracle 12.2.0 Oracle 19c
.Net	.NET Framework V4.0

Note

RDBMS is only needed for local installations (Demo DB).

Unilab Full Client

Component	Prerequisites
Operating System	Microsoft Windows 7 Microsoft Windows 8 Microsoft Windows 8.1 Microsoft Windows 10 Microsoft Windows Server 2012 R2 Microsoft Windows Server 2016 Microsoft Windows Server 2019
Oracle client	ODP.NET 4.12.2.0.1 as part of ODAC 12.2.0.1 or Oracle full client 12.2.0.1 (32-bit) ODP.NET 4.12.2.19.1 as part of ODAC 19c Release 1 or Oracle full client 19.3 (32-bit)
.Net	.NET Framework V4.0
Microsoft Redistributable	Microsoft Visual C++ 2015 Redistributable Update 3 RC (32-bit version)

Note

Oracle Client is either installed or available as a package.

A Free Oracle Web Account is needed for the ODAC download.

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Unilab Web Client

Component	Prerequisites
Operating System	Microsoft Windows 7 Microsoft Windows 8 Microsoft Windows 8.1 Microsoft Windows 10 Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2
Oracle client	ODP.NET 4.11.2.0.2 as part of ODAC 11.2.0.2 or Oracle full client 11.2.0.2
Web Browser	Microsoft Internet Explorer 8.0 Microsoft Internet Explorer 9.0 Microsoft Internet Explorer 10.0 Microsoft Internet Explorer 11.0

Note

Oracle Client is either installed or available as a package.

A Free Oracle Web Account is needed for the ODAC download.

Unilab Web Server

Component	Prerequisites
Operating System	Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2
IIS Version	Microsoft IIS 7.5 Microsoft IIS 8.0 Microsoft IIS 8.5
Oracle client	ODP.NET 4.11.2.0.2 as part of ODAC 11.2.0.2 or Oracle full client 11.2.0.2
.Net	.NET Framework V4.0
XML parser	Microsoft MSXML 6.0

Note

Oracle Client is either installed or available as a package.

A Free Oracle Web Account is needed for the ODAC download.

Custom Development

Component	Prerequisites
Development tool	Microsoft Visual Studio 2012 Professional edition or higher
Operating System	Microsoft Windows 7 Microsoft Windows 10*
Oracle client	ODP.NET 4.12.2.0.1 as part of ODAC 12.2.0.1 or Oracle full client 12.2.0.1 (32-bit)

Note

This is needed for advanced customizations in C++ or VB.NET.

Oracle Client is either installed or available as a package.

A Free Oracle Web Account is needed for the ODAC download.

* Changing the Unicf\UniChart project is only possible on Microsoft Windows 7. On Windows 10, you are unable to open the designer view for UserControls containing a ChartFx component.

XML Web Service

Component	Prerequisites
Operating System	Microsoft Windows 7 Microsoft Windows 8 Microsoft Windows 8.1 Microsoft Windows 10 Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2
Oracle client	ODP.NET 4.11.2.0.2 as part of ODAC 11.2.0.2 or Oracle full client 11.2.0.2
Web Browser	Microsoft Internet Explorer 8.0 Microsoft Internet Explorer 9.0 Microsoft Internet Explorer 10.0 Microsoft Internet Explorer 11.0
.Net	.NET Framework V4.0 MS Web Services Enhancements. V2.0

Note

Oracle Client is either installed or available as a package.

A Free Oracle Web Account is needed for the ODAC download.

MS Web Services Enhancements V2.0 can be downloaded from:

http://msdn.microsoft.com/webservices/building/wse/

Hardware

Overview

The table below lists the minimum hardware requirements for SIMATIC IT Unilab 6.7.

Unilab Database Server (RDBMS)

Component	Prerequisites
Memory	2 GB + 32 MB per active user
Processor Speed	Minimum: 2.0 GHz Recommended: 3 GHz or faster
Disk Space	6 GB

Note

- The memory requirements do not include the required memory for the OS or other prerequisite applications.
- The required Disk Space does not include the disk space needed for prerequisites.
- This is the minimum Disk Space necessary for the database files of a production database.
- The required Disk Space depends on user data; in the Unilab Server Installer tool, a parameterized calculation of the required Disk Space is available.
- Demo databases can be created using less Disk Space.

Unilab Full Client

Component	Prerequisites
Memory	1 GB
Processor Speed	Minimum: 1.0 GHz Recommended: 2 GHz or faster
Disk Space	500 MB

Note

The required Disk Space does not include the Disk Space needed for prerequisites.

Unilab Web Client

Component	Prerequisites
Memory	1 GB
Processor Speed	Minimum: 1.0 GHz Recommended: 2 GHz or faster
Disk Space	10 MB

Note

The required Disk Space does not include the Disk Space needed for prerequisites.

Unilab Web Server

Component	Prerequisites	
Memory	#users	GB
	<50	0.5
	<100	1
	<300	2
Processor Speed	Minimum: 1.0 GHz Recommended: 2 GHz or faster	
Disk Space	300 MB	

Note

The required Disk Space does not include the Disk Space needed for prerequisites.

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5 Estimated schedule

Realisation of this Work Package will be planned between ATS and Apollo after receiving the order for this Work Package.

➢ The workload for this Work Package will be 198 days.

6 Investment Work Package

This project is offered based on Fixed-price. Based on the deliverables, the investment for this Work Package is shown in this chapter, as following:

Scenario 1+

Deliverable	Days	Price (Euro)
Phase 1 Interspec		
➢ Analyse / design	25	€ 24.400,00
➢ Siemens Support	5	€ 7.500,00
➢ Build	38	€ 37.088,00
➢ Other	4	€ 3.904,00
Subtotal	72	€ 72.892,00
Phase 2 Unilab		
➢ Analyse / design	20	€ 19.520,00
➢ Build	44	€ 42.944,00
➢ Build (40 instrument connecties)	40	€ 39.040,00
➢ Other	4	€ 3.904,00
Subtotal	108	€ 105.408,00
Total	180	€ 178.300,00
Licenses	**yearly SMA**	**Price**
Phase 1 Interspec		
➢ SIMATIC IT Interspec 10 CC clients - SIT:11046	€ 6.008,00	€ 30.040,00
➢ SIMATIC IT Interspec - Standard Server SIT:11038	€ 5.340,00	€ 26.700,00
Subtotal	€ 11.348,00	€ 56.740,00
Phase 2 Unilab		
➢ SIMATIC IT Unilab - Standard Server SIT:11038	€ 5.340,00	€ 26.700,00
➢ SIMATIC IT Unilab – 10 concurrent clients SIT:11082	€ 6.008,00	€ 30.040,00
➢ SIMATIC IT Unilab – UniConnect SIT:11088	€ 80,20	€ 401,00
Subtotal	€ 11.428,20	€ 57.141,00
Total	€ 22.776,20	€ 113.881,00
Project management		
➢ Project management Phase 1	7	€ 7.075,20
➢ Project management Phase 2	11	€ 11.404,80
Total Phase 1	**79**	**€ 148.055,20**
Total Phase 1 +2	**198**	**€ 333.437,20**

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7 Payment terms:

Within the pictures below, you can find the high over planning. This planning contains the payment moments and costs.

The costs are divided in three stages per phase:

- 50% after receiving Purchase Order;
- 40% at start FAT;
- 10% after Go-Live.

Scenario 1+

Phase 1 - Interspec Payment terms		€ 79.967,20	Phase	Days	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
50%		€ 36.233,60	Analyse/Design	25	5	5	5	5	5									
Siemens Consultancy		€ 7.500,00			1													
			Build	30						5	5	5	5	5	5			
40%		€ 28.986,88	Test and defect solving	8												5	3	
10%		€ 7.246,72	Other	4												2	2	
Phase 1 Licences	**SMA**	**Price**	amount		W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
SIMATIC IT Interspec - Standard Server	€ 5.340,00	€ 26.700,00	1		1													
SIMATIC IT Interspec Full User - 10 CC	€ 6.008,00	€ 30.040,00	1		1													

€ 68.088,00

Phase 2 - Unilab Payment terms		€ 116.812,80	Phase	Days	W1	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26	W27	W28	W29	W30	W31	W32	W33	W34	W35
50%		€ 58.406,40	Analyse/Design	20		3	5	5	5	2																	
			Build	36						3	5	5	5	5	5	5	3										
			Build (40 instruments connections)	40											2	5	5	5	5	5	5	3					
40%		€ 46.725,12	Test and defect solving	8																			2	5	1		
10%		€ 11.681,28	Other	4																							4
Phase 2 Licences	**SMA**	**Price**	amount		W1	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26	W27	W28	W29	W30	W31	W32	W33	W34	W35
SIMATIC IT Unilab - Standard Server	€ 5.340,00	€ 26.700,00	1		1																						
SIMATIC IT Unilab - 10 CC	€ 6.008,00	€ 30.040,00	1		1																						
SIMATIC IT Unilab - UniConnect	€ 80,20	€ 401,00	1		1																						

€ 68.569,20

In this scenario 1+, the payment costs and moments are:

Moment	Description	Cost
Phase 1		
After receiving purchase order	50% after purchase order	€ 36.233,60
Week 1	Siemens consultancy	€ 7.500,00
Week 12	40% at start FAT	€ 28.986,88
Week 13	10% after go-live	€ 7.246,72
Phase 2		
Week 13	50% start	€ 58.406,40
Week 33	40% at start FAT	€ 46.725,12
Week 35	10% after Go-live	€ 11.681,28

Moment	Description	Cost
Phase 1 Licences		
September 2020	Licences and SMA: - 10 CC Interspec - Interspec Server	€ 68.088,00
Phase 2 Licences		
September 2020	Licences and SMA: - 10 CC Unilab - Unilab Server - UniConnect	€ 68.569,20

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