SoftWhere

HYDROME
PROPOSAL

INTRODUCTION

About Us

We are a large software company based in MILAN and ROME, with 150 employees from engineer to management experts.

Since our birth, we worked with MAJOR FIRMS in different sectors in order to provide the BEST IT SOLUTIONS for innovation and management. QUALITY is an obsession for us.

Thanks to the KNOW-HOW, accumulated with the countless projects brought to completion, we can deliver FLEXIBLE, SCALABLE and AD-HOC software solution with EFFICIENCY and EFFECTIVENESS. We can also boast a long-term collaboration with MICROSOFT and their business management and cloud systems, on which many of our solutions are based.

DATA SECURITY and PRIVACY are among our main concern: a team of specialists contributes to each of our projects to ensure top CYBERSECURITY standards, furthermore, our collaboration with large law firms guarantees compliance with the increasingly important GDPR regulations.

Our new RESEARCH SITE in ROME allows us to use STATE-OF-THE-ART technologies for DATA MANAGEMENt and ANALYSIS, as well as the use of innovative MACHINE LEARNING and ARTIFICIAL INTELLIGENCE solutions for INDUSTRY 4.0.

In times of crisis, like the one we are experiencing today, it is important to rely on companies based on SOLID FOUNDATIONS.

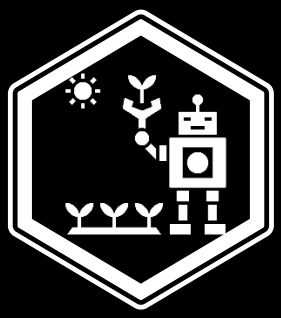
When you will discover our solutions,
you will know that they are the perfect ones for you

PROJECT OVERVIEW

In response to HYDROME RFP, SOFTWHERE is pleased to offer ad-hoc designed solution consisting of the following modules:

- SOFTWHERE CULTIVATION MANAGER
- SOFTWHERE CULTIVATION SUPERVISOR
- SOFTWHERE CULTIVATION AUTOMIZER
- SOFTWHERE INFORMER

SoftWhere Cultivation Manager



SOFTWHERE CULTIVATION MANAGER is the first of the four modules on which our solution is structured. This package reinvents the hydroponic modules management application of HYDROME with the addition of:

- A new and endearing GRAPHIC INTERFACE that will reflects the quality of HYDROME products.
- A DATABASE structured to contain instructions and settings for the various types of cultivation supported by the hydroponic modules.
- The ability to SAVE FAVORITE cultivations and settings.
- A STEP-BY-STEP GUIDE FUNCTIONALITY for help users in manual cultivation.

Thanks to the new features, the user will be able to select the type of cultivation for which he intends to use the various hydroponic modules at the level of each individual line and will be comfortably guided by the application during the entire cultivation.

The chosen configurations will be easily saved and reused for future cultivation.

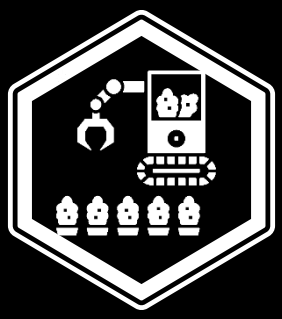
SoftWhere Cultivation Supervisor

The SOFTWHERE CULTIVATION SUPERVISOR enormously increases the potential of the set of sensors already existing in the hydroponic modules with the addition of the following functionalities:

- The ability to STORE locally the HISTORY of the MEASUREMENTS and show them to the user thanks to a large variety of GRAPHS.
- REAL-TIME MONITORING of the state of the cultivation in order to promptly NOTIFY the user in case of anomalies or necessary interventions.

Through the application the user can check, in addition to the current values of the parameters, also their history in the past days. If one parameter remains outside the limits for too long or if a manual intervention of any type is required from the user, a warning will be displayed by the application in order to allow promptly intervention.

SoftWhere Cultivation Automizer



This module exploits the functionalities added by both the CULTIVATION MANAGER and SUPERVISOR to implement COMPLETE AUTOMATION of the cultivations.
Using the CULTIVATION MANAGER, the user can choose the type of cultivations and decide whether to start their automatic management.

If set, the SOFTWHERE CULTIVATION AUTOMIZER will use the SENSORS and ACTUATORS APIs manage the cultivation. In particular, it will intelligently process the information collected by the SENSORS, also thanks to MACHINE LEARNING and ARTIFICIAL INTELLIGENCE solutions, and then use the ACTUATORS in the best possible way and not only through a simple system of response to parameter changes, which may require continuous and superfluous adjustments as well as a waste of resources.

Exploiting the system' s intelligence, the CULTIVATION SUPERVISOR will WARN the user only if his intervention is really required.

The TUNING of the module, as it requires a lot of time and data to be carried out, can be done by your R&D department using the training included in our offer.

SoftWhere Informer

SOFTWHERE INFORMER collects useful data from the modules dedicated to cultivation in order to send them to a CENTRAL DATABASE that can be accessed by the company's R&D department. This module:

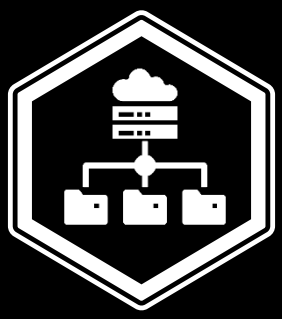
- Periodically collects data from the SENSORS integrated in the hydroponic modules.
- Retrieves the SETTINGS used by users, including the CULTIVATION PATTERNS.
- Collects USAGE data from the application to improve its USABILITY.

The PRIVACY BY DESIGN principle will be used for the development of this module: the data will be partially PREPROCESSED WITHIN the APPLICATION and sent to the central database WITHOUT any REFERENCE that could lead to their origin.

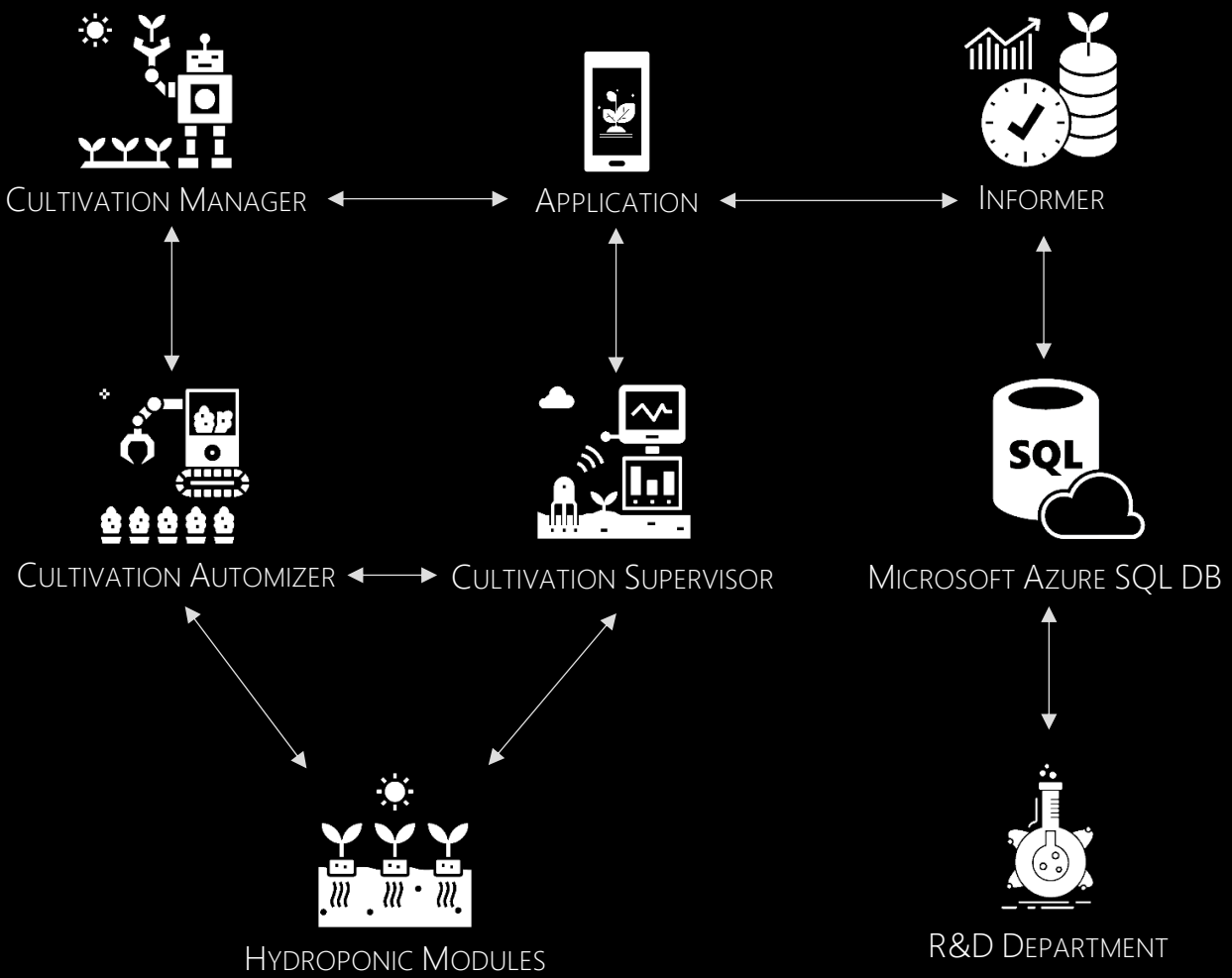
The collected data can then be used for a CONTINUOUS DEVELOPMENT of the products in order to MAXIMIZE the USEFULNESS and SIMPLICITY of them in addition to customer SATISFACTION.

TECHNICAL OVERVIEW

Architecture



The following scheme reflects the architecture of the proposed solution:



SoftWhere Cultivation Manager and SoftWhere Cultivation Supervisor

The core of the entire infrastructure is the hydroponic cells management APPLICATION. Starting from the left side, the APPLICATION is integrated with the new SoftWhere Cultivation Manager and SoftWhere Cultivation Supervisor modules: the first one allows to organize the cultivations and the second to keep an eye on their parameters thanks to the sensors. These two modules are independent and can operate as standalone.

SoftWhere Cultivation Automizer

The SoftWhere Cultivation Automizer instead relies on both the other modules for the choice and parameterization of the cultivations, and the collection of data from the sensors. The Cultivation Automizer is able to communicate directly with the actuators present in the HYDROPONIC CELLS thanks to the available API, in order to manage the cultivation. The use of machine learning and artificial intelligence solutions avoid waste resources and permit to obtain the best possible result.

SoftWhere Informer

The SoftWhere Informer module connects the application with the database, allowing the loading and retrieval of the informations from it. All data collected by the application and the cultivation modules are partially preprocessed within the application and sent in batches to the central database. To avoid excessive consumption of internal and network memory by the application, preprocessing is essential in order to create compressed reports. Our best engineers will be able to guarantee that this process will take place with extreme efficiency, in order to avoid the overload of the internal resources of the device on which the app runs.

Microsoft Azure SQL Database

We know that this project is fundamental for the development of your core business, therefore we will use one of the best cloud databases on the market: Microsoft Azure SQL Database (Its technical characteristics will be specified in the next paragraph). The database allows to store the data from customer APPLICATIONS to be processed by the R&D DEPARTMENT. At the same time the R&D DEPARTMENT can periodically upload the

information necessary for cultivations managment, allowing a continuous improvement of customer experience and product quality.

Database

As anticipated in the architecture description, we know how important this project is for your company and therefore we propose to rely on SOLID SOLUTIONS that are commonly and successfully used by many companies.

MICROSOFT AZURE SQL DATABASE is a smart database cloud service that provides high scalability and compatibility with SQL SERVER ENGINE. MICROSOFT AZURE SQL DATABASE includes built-in intelligence that learns app patterns and adapts to maximize performance, reliability, and data protection. One of its typical use cases is to manage app databases.

Among the most important features MICROSOFT AZURE SQL offers:

- Data management and transfer security. Information theft from external sources is not possible thanks to the ALWAYS ENCRYPTED TECHNOLOGY.
- High SCALABILITY and AVAILABILITY that allow to always maintain maximum performance.
- An AGILE ARCHITECTURE that makes easy to add and remove resources when needed.

In case you already have the license for another type of cloud service, our engineers have a great experience of integrating our solutions with each type of cloud storage, however we strongly recommend to consider to switch to this database as it offers the best features for your needs.

Technical Support

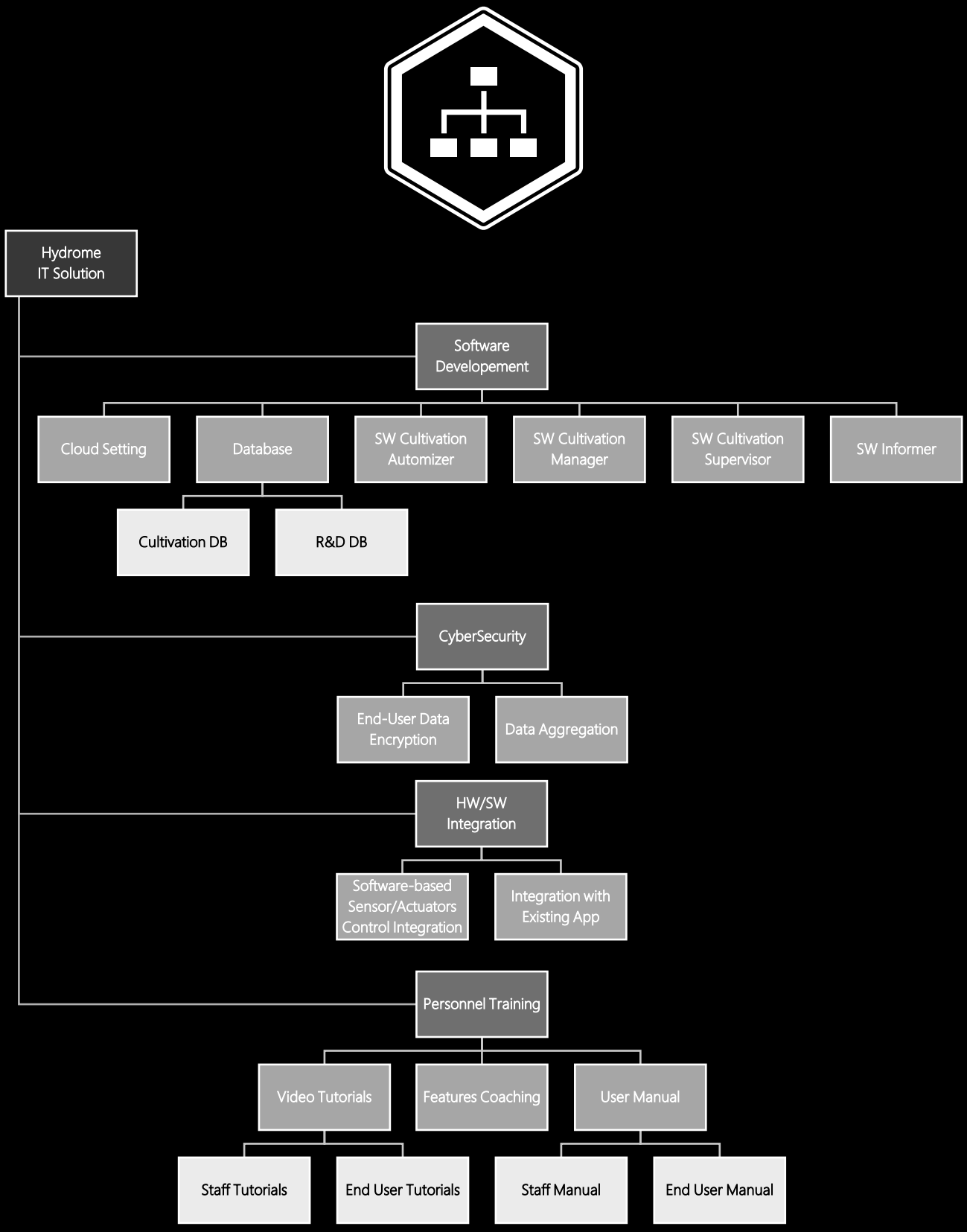
At SOFTWHERE we believe that the quality of our solutions also passes through the RELATIONSHIP with our CUSTOMERS.

Our TECHNICAL TEAM is specialized in the training of personnel. We are so confident in our ability to make our software easy to use for our clients, that all the training necessary, up to three months from deployment, will be included in our offer. They will also provide TUTORIALS AND TECHNICAL GUIDES for you and your customers.

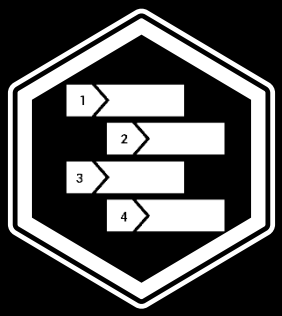
In case you are interested in an even more PERSONALIZED and LONG-TERM SUPPORT, we offer a PREMIUM PACKAGE that guarantees 360 ° assistance and availability for every possible technical need, with guaranteed resolution in the shortest possible time.

Project Managment

Work Breakdown Structure



Gantt Graph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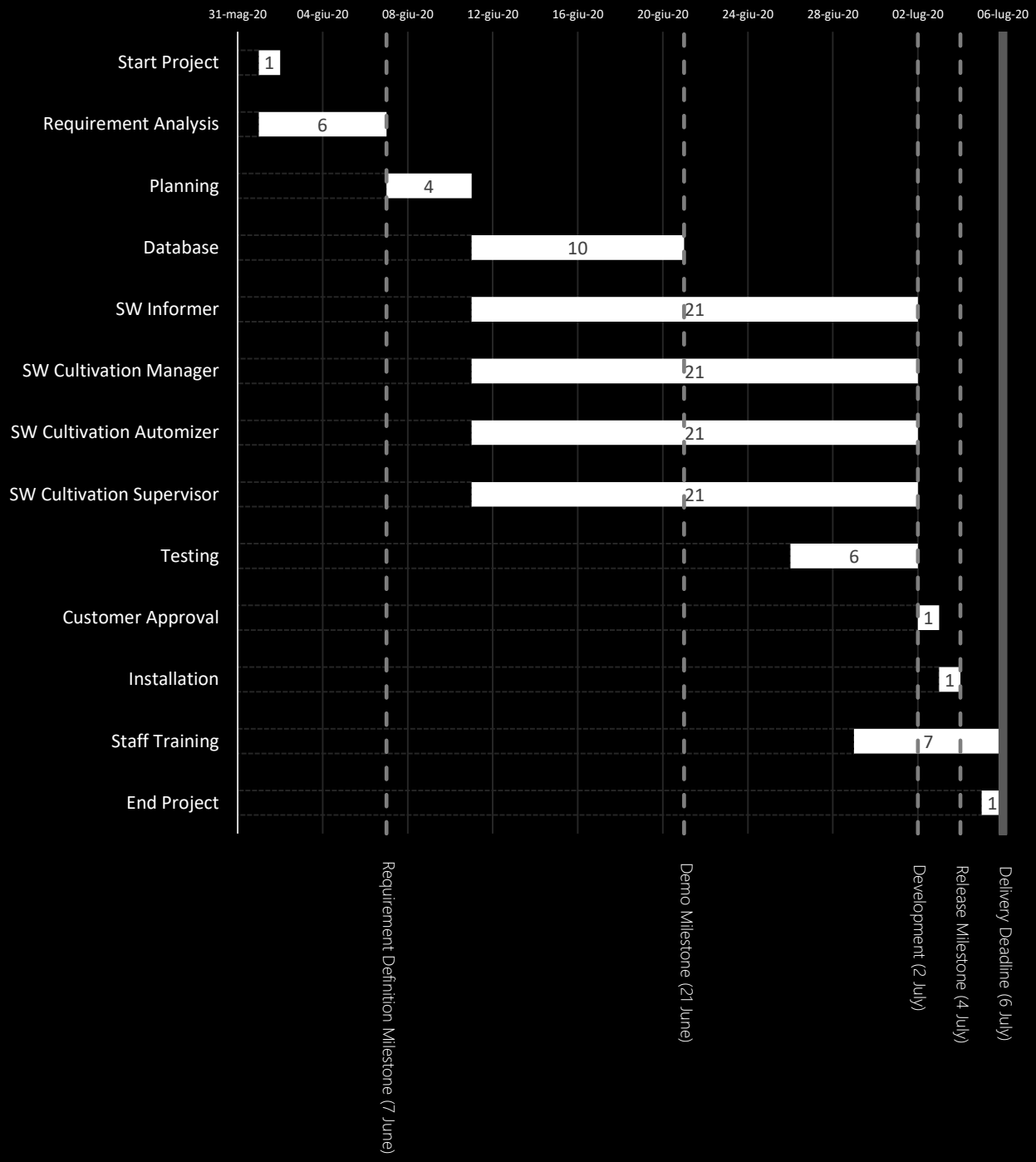
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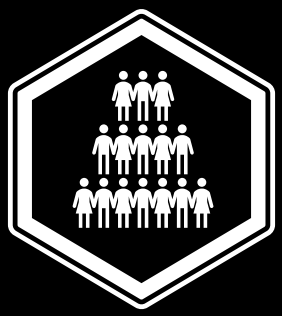
08-giu-20
12-giu-20
16-giu-20
20-giu-20
24-giu-20
28-giu-20
02-lug-20
06-lug-20
Start Project
Requirement Analysis
Planning
Database
SW Informer
SW Cultivation Manager
SW Cultivation Automizer
SW Cultivation Supervisor
Testing
Customer Approval
Installation
Staff Training
End Project
1
6
4
10
21
21
21
21
6
1
1
7
1
Requirement Definition Milestone (7 June)
Demo Milestone (21 June)
Development (2 July)
Release Milestone (4 July)
Delivery Deadline (6 July)

Personnel



For each phase listed in the WBS the following personnel has been planned:

- REQUIREMENT ANALYSIS: Project Manager (2), Senior Developer (2), System Engineer (1), Junior Developer (3) → Total (8)
- PLANNING: Project Manager (1), System Engineer (2) → Total (3)
- DATABASE: Junor Developer (4), Senior Developer (2) → Total (6)
- INFORMER: Senior Developer (4), Junior Developer (6), Designer (1) → Total (11)
- CULTIVATION MANAGER: Junior Developer (6), Senior Developer (4), Designer (2) → Total (12)
- CULTIVATION AUTOMIZER: Junior Developer (6), Senior Developer (8), Data Science Expert (4), Designer (1) → Total (19)
- CULTIVATION SUPERVISOR: Senior Developer (4), Junior Developer (8), Designer (1) → Total (13)
- CUSTOMER APPROVAL: Project Manager (1)
- TESTING: Technical (3)
- INSTALLATION: Technical (3), System Engineer (1) → Total (4)
- STAFF TRAINING: Technical (5)

To guarantee our quality standards for such an extensive work, that is necessary to redefine your core business, a great effort is needed. The number of employees (up to 61 at the same time working on this project) allows us to PARALLELIZE the work.
This allows us to DELIVER the complete project WITHIN the established TERMS, moreover the efficiency due to the long experience in developing ad-hoc solutions allows us to fit perfectly even WITHIN the ESTABLISHED budget LIMITS.

OFFER

One Time Costs

MODULE	COST (€)
S.W. Cultivation Manager	75 000.00
S.W. Cultivation Supervisor	75 000.00
S.W. Cultivation Automizer	75 000.00
S.W. Informer	75 000.00
TOTAL	~~300 000.00~~
One-year license discount	- 23 256.00
OUR OFFER	276 744.00

We would like to emphasize that a large part of our company's potential will be at your disposal during the required period, in order to PARALLELIZE the DEVELOPMENT of the modules and guarantee the respect of delivery times and quality standards.

Furthermore, we have decided to subtract from the final offer the cost of an ENTIRE YEAR of MICROSOFT AZURE SQL LICENSE.

License Costs

The only RECURSIVE COSTS are those related to the MICROSOFT AZURE SQL LICENSE, which amounts to a total of € 1 938.00 per month, using the current configuration.