



wica
by epawi



INNOVATION CATALOGUE

WWW.WICABYEPAWI.COM



wica
by epawi



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This project was funded by the
European Union's COSME Programme



THE CONSORTIUM

Inno'vin, AgriFood & Bioeconomy agency, INNOVI and ADVID/CoLAB VINES&WINES are the four European clusters collaborating in the **EPAWI - European Partnership for Auxiliary Wine industry Innovation project** that, with the technical support of **VINIDEA**, has as a main objective to launch and consolidate the **Wine Innovation Collaboration Alliance - WICA**, a European strategy for innovation in the wine value chain.

Representing an important part of the wine ecosystems in France, Italy, Spain, and Portugal, the four clusters aim to boost the internationalization of the wine industry's auxiliary companies through the creation of a network of SMEs whose objective is to learn about the market and its innovation trends. To this end, a WICA network will be created, whose objectives are to promote a resilient value chain in the vine and wine sector through global cooperation of clusters and Business Support Organisations, to address the challenges presented by grape and wine producers through cross-sectoral innovation and the involvement of European auxiliary companies, and to promote and facilitate the international development of ancillary companies.

Funded by the European Union's COSME Programme and with implementation from September 2021 to September 2024, EPAWI has as target markets the wine sectors of the United States of America, Canada, Chile, Argentina, and South Africa.

INNO'VIN, ADVID, INNOVI, AGRIFOOD FVG AND VINIDEA

THE PARTNERS



With Technical Support from



THE CROWD-WRITING CONTEST

WICA's crowd-writing contest «The Wine Industry of Tomorrow» included **9 different scenarios**, with fictional characters but real stories, under **3 main themes: Grape-growing, Winemaking, and Management & Marketing**. Supplier companies in the wine sector were called to respond by completing these challenging scenarios and integrating their innovative solutions. **44 companies participated** by responding to one or more challenges, which resulted in **86 stories**.

A lot of expertise was demonstrated, various innovative solutions were presented and, ultimately, the winners have been revealed.

the WINNERS

- to minimize the challenges in grape-growing, **UV Boosting** (equipment for plants' natural defenses stimulation using UV light) and **Pulverizadores Fede S.L.U** (air blast sprayer, trailed mist blower and agronomic management digital solutions for specialty crops) were the companies that presented the most adequate technologies to the story beginnings;
- regarding winemaking, **HTS** (automatic yeast nutrition management system) and **Winegrid** (remote and real time winemaking monitoring solution) were the winners;
- and to improve the work in management & sales/marketing, **ATT** (turnkey unit traceability solutions) and **Ertus** (Process2Wine, winery and wine management software) raised the bar quite high.

And now, you will be able to **know all the participants** and their innovative solutions!

44

companies participated

86

stories

3 THEMES 9 CHALLENGES

The following pages present the solutions covering the following categories:

GRAPE-GROWING

Facing extreme weather events
Reduce use of chemicals in the vineyard
Facing the lack of personnel


WINEMAKING

Decrease energy and water consumption in the winery
Reduce use of additives in winemaking
Adapt production in response to market requests


MANAGEMENT AND MARKETING

Increase direct selling
Establish relationship with consumers
Simplify management and reduced paperwork

Info:

To go to the page where the story of that innovation is, click the icon 

To learn more about each company and its solutions, click the links to their websites

The icon  in Stories and Answers will bring you back to this page

GRAPE-GROWING

Facing extreme weather events

ELAISIAN SRL



www.elaisian.com

THEME

Grape-growing

Challenge

- Facing extreme weather events

Solution

- **DSS** - Decision Support Systems for pathogen management and soil water conditions monitoring.



ETOH



www.etoh.fr

THEME

Grape-growing

Challenge

- Facing extreme weather events

Solution

- **EtOH Suite** - Mobile application designed to diagnose and to overcome environmental, economic and social challenges, suggesting real and concrete solutions.



TAILOR'D WINE DESIGN



www.tailordwine.com

THEME

Grape-growing

Challenge

- Facing extreme weather events

Solution

- **Or'Racine** - Complex of enzymes which favors the development of soil microflora and the decomposition of organic matter.



GRAPE-GROWING

Facing extreme weather events

MYCOPHYTO



MYCOPHYTO

Cultivons l'équilibre de la nature

www.mycophyto.fr

THEME

Grape-growing

Challenge

- Facing extreme weather events

Solution

- **Targeted mycorrhiza** - It produces targeted mixes of mycorrhizas for the grapes production, which benefits are : vine biostimulation, yield boost, plant drought resistance, young vines survival rates.



GRUPO AGROVIN



www.agrovin.com

THEME

Grape-growing

Challenge

- Facing extreme weather events

Solution

- **ULTRAWINE-PERSEO** - application of ultrasound to the grapes, in order to achieve:
 - Lower organic nitrogen content due to extreme heat during ripening and veraison.
 - Dry and unbalanced wines due to high alcohol content and more astringent tannins.
 - Imbalance between phenolic and technological ripening of the grapes at the time of harvest.
 - Greater need for phytosanitary treatments due to adverse weather (storms)



GRAPE-GROWING

Reduce use of chemicals in the vineyard

AGROBIT SRL



www.agrobit.ag

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **iVine** - App to facilitate plant analysis, suggest the optimal water application volume rate for pesticides per field, and improve treatments management.



ANOVA-PLUS



www.anova-plus.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **FD/BN Flashdiag®** - Two Decision Support Systems, one dedicated to pathogen prevention and the second dedicated to vegetative and water monitoring of soils.



CASSANDRA TECH S.R.L.



www.cassandrarech.it

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **PocketSPRAY** - Mobile solution for optimising chemical treatments in vineyards like quantitatively measuring the Leaf Area Index (LAI), and more.



GRAPE-GROWING

Reduce use of chemicals in the vineyard

ELAISIAN SRL



www.elaisian.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **DSS** - Decision Supporto Systems for pathogen management and soil water condition monitoring.



ETOH



www.eto.fr

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **EtOH Suite** - Mobile application designed to diagnose and to overcome environmental, economic and social challenges, suggesting real and concrete solutions.



EXOBOTIC TECHNOLOGIES



www.exobotic.be

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

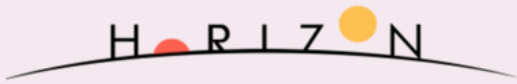
- **Exobot Land A2 for Vineyards** - Robot to patrol autonomously vineyards even though in rough terrains.



GRAPE-GROWING

Reduce use of chemicals in the vineyard

HORIZON SRL



www.horizon-lab.it

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **WinePlus** - Technology platform with smart sensors placed in the heart of the plots that allows to regulate spraying.



PULVERIZADORES FEDE S.L.U



Connected to agriculture

www.fedepulverizadores.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Tecnovid Qi** - Fede mist blower with Specialty Crops Gateway (SCG) device to perform precision application of treatments depending on the phenological state and pest or disease infestation level.



RVS CONSULTANTS VITICOLES



www.consultants-viticoles.fr

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **NDVI mapping for concrete field applications** - Smart solution of a sensory for proxy measure of the canopy indexes offers great opportunities of precision viticulture even for small properties.



GRAPE-GROWING

Reduce use of chemicals in the vineyard

SABI AGRI



SABI AGRI

www.sabi-agri.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **ALPO Electric Tractor wine straddle** - to manage vineyard's operations, even with innovative character and with positive impact in the triple agroecological performance.



TAILOR'D WINE DESIGN



www.tailordwine.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Pur'Avant/Pur'Apres** - New approach on phytosanitary treatments, using natural compounds (or derived from microorganisms) to protect vineyards.



TASTEFEVER



www.tastefever.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **DIGIWINE (Craft Your Taste)** - Digital tool for winemakers to manage the entire vineyard, from pruning to bottling.



GRAPE-GROWING

Reduce use of chemicals in the vineyard

UV BOOSTING



www.uvboosting.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Helios Vigne** - UV light treatment used to phytosanitary treatments and to protect the vines naturally.



VIVAI COOPERATIVI RAUSCEDO



www.vivairauscedo.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Resilient varieties** - Grape varieties with high oenological standards plus the capacity to cope with pest infections.



EARTH AUTOMATIONS



www.earthautomations.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Dood** - Hybrid autonomous robot for agriculture, able to identify the mites and only spray where it is needed, reducing the amount of insecticide used.



GRAPE-GROWING

Reduce use of chemicals in the vineyard

MYCOPHYTO



MYCOPHYTO

Cultivons l'équilibre de la nature

www.mycophyto.fr

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Targeted mycorrhiza** - It produces targeted mixes of mycorrhizas for the grapes production, which benefits are : vine biostimulation, yield boost, plant drought resistance, young vines survival rates.



WAX&GRAFTS

Wax & Grafts

www.waxandgrafts.com

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Organic grafting wax** - Replacement of oil wax by organic wax in the grafting process of vines, fruit trees and plants



NAOTEC



www.naotec.fr

THEME

Grape-growing

Challenge

- Reduce use of chemicals in the vineyard

Solution

- **Mechanical suckering** - A full-row and a two half-row shoot thinner, both equipped with rotary brushes technology designed to provide gentle and vibration-free treatment for the vines. Finally, connecting the machine to the tractor is a breeze.



GRAPE-GROWING

Facing the lack of personnel

BIOSYSTEMS ANALYTICAL SOLUTIONS S.R.L



<https://biosystems.global/>

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Spica** - Digital technology for a simpler in-house wine analysis.



DNA PHONE



www.dnaphone.it

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Smart Analysis** - Platform that is an innovative strategy to manage and simplify cellar operations, especially with less technical/specialized people.



ETOH



www.eto.fr

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **EtOH Suite** - Mobile application designed to diagnose and to overcome environmental, economic and social challenges, suggesting real and concrete solutions.



GRAPE-GROWING

Facing the lack of personnel

HTS ENOLOGIA



www.hts-enologia.com

THEME

Grape-growing



Challenge

- Facing the lack of personnel

Solution

- **AVAFERM** - Automatic yeast nutrition management system, created and designed by winemakers, to facilitate the work routine in the wineries.



NAOTEC



www.naotec.fr

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Prepruner** - Technology of double discs, to efficiently shorten vine shoots, making manual vine pruning easier and faster. The cutting heights can be customized and easily adjusted according to specific requirements.
- **Trimmer** - Various models of trimmers adjustable for different vineyards from half-row to two full-row trimmers. They are all equipped with high-quality steel machinery, hydraulic spacers, slope capabilities.
- **Shredder** - Wide range of mechanical and hydraulic. Shredders specifically designed for vineyards. They can be easily mounted on tractors or straddle carriers.



GRAPE-GROWING

Facing the lack of personnel

TASTEFEVER



www.tastefever.com

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **DIGIWINE (Craft Your Taste)** - Innovative tool to simplify administrative processes, facilitate the interactions with the government and stakeholders, restore of wine traceability and to stimulate the sustainability of the company.



VIMÉTRICA AGRO



www.vimetrica-agro.pt

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **INCAFO** - A solution to identify grapevine varieties.



PARSEC SRL



www.parsecsrl.net

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solutions

- **Quadr@ Software** - Solution to simplify the winemaking process while maintaining or improving the quality of the wines.
- **NECTAR by ADCF** - Innovation that automates
- the winemaking process and allows the communication with the cellar equipment.



GRAPE-GROWING

Facing the lack of personnel

UNFIA



www.unfia.com

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Platform for automated supply chain** - B2B platform to directly connect "terroir" wine producers and buyers with an automated supply chain to avoid intermediaries, trade barriers, and limited digitalization.



MBF S.P.A.



www.mbf.it

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Superbloc** - The Superbloc® MBF is part of those revolutionary technological solutions that have become a reference model in the bottling market over the years. It is a compact, complete and customized line that integrates in a single machine, several solutions: rinser, filler, cork and screw capper, capsuling machine and labeling machine. The output it offers is constant in production and guarantees greater technical/economic performance than a traditional line.



GRAPE-GROWING

Facing the lack of personnel

EARTH AUTOMATIONS



www.earthautomations.com

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solution

- **Dood** - Hybrid autonomous robot for agriculture, able to do a crop analysis, while performing other tasks on the field. For harvesting, the robot can be further developed and integrated with a harvesting implement.



GRUPO AGROVIN



www.agrovin.com

THEME

Grape-growing

Challenge

- Facing the lack of personnel

Solutions

- **Tank Control** - In-line measurement of fermentation parameters mitigates the consequences of staff shortages.
- **Process automation** (Free K+, OXiOUT, Perseo, Pyxis, Agatha, Ultrawine - Perseo) - equipment with the aim of being autonomous and only needing the supervision of one employee, most of the processes being automatic.
- **Direct yeast addition - Viniferm DIRECT** - a yeast developed for direct application without the need for rehydration.
- **In-line addition of liquid products at reception - Pyxis** allows in-line dosing of liquid products according to the reception flow rate.



WINEMAKING

Decrease energy and water consumption in the winery

CLAIREO



www.claireo.io

THEME

Winemaking

Challenge

- Decrease energy and water consumption in the winery

Solution

- **Air Vinif** - System that allows the optimization of pumping over.
- **CO2 Winery** - Innovation that consists in the injection of CO2 into the water supply of the winery.



ETOH



www.eto.fr

THEME

Winemaking

Challenge

- Decrease energy and water consumption in the winery

Solutions

- **EtOH Suite** - Application that makes it possible to monitor different elements of a winery and to be able to analyze its environmental and economic performance.



MY BACCHUS (ONAFIS)



www.mybacchus.net

THEME

Winemaking

Challenge

- Decrease energy and water consumption in the winery

Solution

- **ONAFIS - monitor and automate all stages of vinification** - Control, alert, monitoring and automation tools automate thermoregulation, air conditioning, humidification, as well as oxygen levels, microbiological drifts in containers.



WINEMAKING

Decrease energy and water consumption in the winery

PARSEC SRL



www.parsecsrl.net

THEME

Winemaking

Challenge

• Decrease energy and water consumption in the winery



Solutions

- **Quadr@ Software** - Solution to simplify the winemaking process while maintaining or improving the quality of the wines.
- **NECTAR by ADCF** - Innovation that automates the winemaking process and allows the communication with the cellar equipment (via API).

MBF S.P.A.



www.mbf.it

THEME

Grape-growing

Challenge

- Decrease energy and water consumption in the winery



Solution

- **Superbloc** - The Superbloc® MBF is part of those revolutionary technological solutions that have become a reference model in the bottling market over the years. It is a compact, complete and customized line that integrates in a single machine, several solutions: rinser, filler, cork and screw capper, capsuling machine and labeling machine. The output it offers is constant in production and guarantees greater technical/economic performance than a traditional line.

WINEMAKING

Decrease energy and water consumption in the winery

SOFTWINE



www.softwine.es

THEME

Winemaking

Challenge

- Decrease energy and water consumption in the winery



Solution

- **Digitization and improvement of information flows** - It helps to reduce order management time, sample delivery or production planning and control, as well as energy consumption thanks to industrial engineering techniques applied to the world of wine.

OENODIA



THEME

Winemaking

Challenge

- Decrease energy and water consumption in the winery



Solutions

- **SMART solutions by STARS® (7-15 hl/h) and STARS® Stab (15-240 hl/h)** - Both 100% reliable tartaric stabilization (tested for 6 days at -4°C) to secure your wine export sales. The process is just as well suited to making NFC juices, concentrated musts, and rectified concentrated musts. Production line becomes more efficient and responsive thanks to an automated continuous treatment that is kind to the product: zero loss, no oxygen takeup, no organoleptic impact, and unchanged color. STARS® is also eco-efficient: energy use is cut by 95% and operating cost by 30-40% versus cold soaking. For juices, the treatment is eco-friendlier and less costly than ion-exchange resins. Frugal (just 0.2 kW/hl of wine), eco-selective (only the ions

WINEMAKING

Decrease energy and water consumption in the winery

responsible for tartaric and calcium precipitation are removed), additive free and high-performance, our solutions are aligned with the sustainability goals of the 21st century. STARS® Stab models can also operate in a mixed unit that combines stabilization (if necessary paired with filtration) and a pH adjustment module: an all-in-one STARS®, able to work with very high precision on wine stability, acidity and color.

www.oenodia.com

GRUPO AGROVIN



www.agrovin.com

THEME

Grape-growing

Challenge

- Decrease energy and water consumption in the winery



Solution

- **FreeK+** - used to reduce energy and water consumption derived from tartaric stabilization by cold.
- **ULISES** - technology to reduce the energy costs of fermentation by eliminating the need to use pumping-over pumps, improving the efficiency of the refrigeration systems due to greater homogenization of the mash, reducing maceration times, improving the devatting process, achieving energy savings of around 35-40%. Water consumption is also reduced due to easier cleaning of the pumping-over systems.
- **Viniferm DIRECT** - to reduce water consumption by not needing water for yeast rehydration, as well as energy consumption by not needing hot water.
- **ULTRAWINE - PERSEO** - to reduce energy consumption by reducing the maceration time of red grapes by about 15%.

WINEMAKING

Reduce use of additives in winemaking

AEB SPA



www.aeb-group.com

THEME

Winemaking

Challenge

- Reduce Use of Additives in Winemaking

Solution

- **PRIMAFLORA** - A biological concept for the microbiological protection of grape musts.



BIOMÉRIEUX, INC.



www.biomerieux.com

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solutions

- **Veriflow®** - PCR based kit for quick identification of presence of spoilage microorganisms (Brett and bacteria) in wine.



ETOH



www.etoh.fr

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solution

- **EtOH Suite** - Application that makes it possible to monitor different elements of a winery and to be able to analyze its environmental and economic performance.



WINEMAKING

Reduce use of additives in winemaking

LAMOUREUX SAS



www.lamouroux.com

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solution

- **LAMBOX** - Supervision software to remotely control all tanks of fermentation, as well the entire winery.



MY BACCHUS (ONAFIS)



www.mybacchus.net

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solutions

- **ONAFIS - monitor and automate all stages of vinification** - Tools to control and automate thermoregulation, air-conditioning, humidification, as well as oxygen level in barrels.



TAILOR'D WINE DESIGN



www.tailordwine.com

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solution

- **Soleil'Meilleur** - Innovation created to support vineyard and cellar activities.



WINEMAKING

Reduce use of additives in winemaking

TASTEFEVER



www.tastefever.com

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solution

- **DIGIWINE (Craft Your Taste)** - Innovative tool to simplify administrative processes, facilitate the interactions with the government and stakeholders, restore of wine traceability and to stimulate the sustainability of the company.



UNIVERSITY OF VERONA



UNIVERSITÀ
di VERONA

www.univr.it

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solutions

- **Predictive tool for sulfur dioxide stability during wine storage**



PARSEC SRL



www.parsecsrl.net

THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solution

- **NECTAR by ADCF** - Innovation that automates the winemaking process and allows the communication with the cellar equipment.



WINEMAKING

Reduce use of additives in winemaking

GRUPO AGROVIN



THEME

Grape-growing

Challenge

- Reduce use of additives in winemaking

Solutions

- **Free K⁺** cation exchange allows the elimination of K⁺ and its substitution by H⁺ ions, which results in better tartaric stabilization and acidification of the wine, reducing the need to use additives such as CMC, polyaspartate, mannoproteins or organic acids.
- **Viniferm NS Chance** - the natural production of lactic acid by this yeast of the species *Lachancea thermotolerans* allows the biological acidification of wines from fermentation, reducing the need for additives such as organic acids.
- **Inactive yeasts of the Super Bouquet range** - this allows the organoleptic improvement of the wines due to its contribution of polysaccharides through contact, reducing the need to use additives such as purified mannoproteins or gum arabic.
- **Specific fining agents** - the adjuvants of the Vinigel, Proveget and Clarifine ranges specifically reduce the most astringent tannins, giving softness and smoothness to wines and reducing the need to apply additives such as purified mannoproteins or gum arabic.
- **Microstab Protect and Microstab pH** - the chitosan of fungal origin present in these products allows effective control of undesirable microorganisms in wine, reducing the need to apply SO₂ to them.



www.agrovin.com

WINEMAKING

Reduce use of additives in winemaking

OENODIA



THEME

Winemaking

Challenge

- Reduce use of additives in winemaking

Solutions



- **SMART solutions by STARS® (7-15 hl/h) and STARS® Stab (15-240 hl/h)** - Both guarantee 100% reliable tartaric stabilization (tested for 6 days at -4°C) to secure your wine export sales. The process is just as well suited to making NFC juices, concentrated musts, and rectified concentrated musts. Your production line becomes more efficient and responsive thanks to an automated continuous treatment that is kind to the product: zero loss, no oxygen takeup, no organoleptic impact, and unchanged color. STARS® is also eco-efficient: energy use is cut by 95% and operating cost by 30-40% versus cold soaking. For juices, the treatment is eco-friendlier and less costly than ion-exchange resins. Frugal (just 0.2 kW/hl of wine), eco-selective (only the ions responsible for tartaric and calcium precipitation are removed), additive free and high-performance, our solutions are aligned with the sustainability goals of the 21st century.
- STARS® Stab models can also operate in a mixed unit that combines stabilization (if necessary paired with filtration) and a pH adjustment module: an all-in-one STARS®, able to work with very high precision on wine stability, acidity and color.

www.oenodia.com

WINEMAKING

Adapt production in response to market requests

BIOSYSTEMS ANALYTICAL SOLUTIONS S.R.L THEME

Winemaking



www.biosystems.global

Challenge

- Adapt production in response to market requests

Solution

- **Spica** - Digital technology for in-house wine analysis



ETOH

THEME

Winemaking



www.etoh.fr

Challenge

- Adapt production in response to market requests

Solutions

- **EtOH Suite** - Application that makes it possible to monitor different elements of a winery and to be able to analyze its environmental and economic performance.



GMV

THEME

Winemaking



www.gmv.com

Challenge

- Adapt production in response to market requests

Solution

- **Wineo** - Software for vineyard monitoring and yield prediction.



WINEMAKING

Adapt production in response to market requests

LA VIE DU VIN



www.lavieduvin.fr

THEME

Winemaking

Challenge

- Adapt production in response to market requests

Solution

- **La Vie Du Vin** - Solution to keep track of wine "conditions" and routes.



PARSEC SRL



www.parsecsrl.net

THEME

Winemaking

Challenge

- Adapt production in response to market requests

Solutions

- **NECTAR by ADCF** - Innovation that automates the winemaking process and allows the communication with the cellar equipment.



SOFTWINE



www.softwine.es

THEME

Winemaking

Challenge

- Adapt production in response to market requests

Solution

- **Digitization and improvement of information flows** to reduce order management time, sample delivery or production planning and control, as well as energy consumption thanks to industrial engineering techniques applied to the world of wine.



WINEMAKING

Adapt production in response to market requests

UNFIA SRL



www.unfia.com

THEME

Winemaking

Challenge

- Adapt production in response to market requests

Solution

- **Platform for automated supply chain** - B2B platform to directly connect "terroir" wine producers and buyers with an automated supply chain to avoid intermediaries, trade barriers, and limited digitalization.



INSTEAD



www.instead-conseil.com

THEME

Winemaking

Challenge

- Adapt production in response to market requests

Solution

- **Global IT solution for sustainable and efficient viticulture** - WinePilot helps the engagement with suppliers in improvement initiatives by enabling them to use the platform to monitor their own environmental impacts. Also WinePilot allows to define and manage all the operational and strategic indicators and thus facilitate the monitoring of her estate's progress as well as the internal and external communication.



WINEMAKING

Adapt production in response to market requests

GRUPO AGROVIN



www.agrovin.com

THEME

Grape-growing

Challenge

- Adapt production in response to market requests



Solution

- **Selected yeasts from different regions within the Viniferm range, as well as different species of selected non-Saccharomyces yeasts belonging to the Viniferm NS range** - allow to provide differentiated characters to the wines and thus adapt them to market demands.
- **Organic products within the range of AGROVIN products** - allow the production of wines that are within the ECO and NOP standards. Agrovin can advise on the best tools to bring quality wines to these markets.
- **Development of fining agents based on vegetable proteins or yeast protein extract** - provides wineries with effective solutions for the production of vegan wines.

MANAGEMENT AND MARKETING

Increase direct selling

LA VIE DU VIN



www.lavieduvin.fr

THEME

Management and Marketing

Challenge

- Increase direct selling

Solution

- **La Vie Du Vin** - Solution to keep track of wine "conditions", track of positioning, pricing and sellout speed.



ETOH



www.etoh.fr

THEME

Management and Marketing

Challenge

- Increase direct selling

Solutions

- **EtOH Suite** - A solution for customer segmenting, as well as a way to attract young customers through company's presence on social media.



ORYZASTRATEGY



www.vendipiuvino.com

THEME

Management and Marketing

Challenge

- Increase direct selling

Solution

- **Wine funnel marketing** - Advisory service for wine web marketing that can be helpful to educate on better user data management and bringing customers to the cellar.



MANAGEMENT AND MARKETING

Increase direct selling

UNFIA SRL



www.unfia.com

THEME

Management and Marketing

Challenge

- Increase direct selling

Solution

- **Platform for automated supply chain** - B2B platform to directly connect "terroir" wine producers and buyers with an automated supply chain to avoid intermediaries, trade barriers, and limited digitalization.



MANAGEMENT AND MARKETING

Establish relationship with consumers



ADVANCED TRACK & TRACE



www.advancedtrackandtrace.com

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solution

- **ID Pack Line®** - Traceability solution through QR code that brings the producer closer to consumers, engaging interaction.



ETOH



www.eto.fr

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solutions

- **EtOH Suite** - Mobile app to companies management regarding sales, distribution and overall company performance.



LA VIE DU VIN



www.lavieduvin.fr

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solution

- **La Vie Du Vin** - Solution to keep track of wine "conditions", track of positioning, pricing and sellout speed.



MANAGEMENT AND MARKETING

Establish relationship with consumers

UNFIA SRL



www.unfia.com

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solution

- **Platform for automated supply chain** - B2B platform to directly connect "terroir" wine producers and buyers with an automated supply chain to avoid intermediaries, trade barriers, and limited digitalization.



GLOBAL E BUSINESS SOLUTION GROUP SRL



www.gebs.ro

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solution

- **Zoniz Proximity Platform** - Platform for engagement that uses proximity technology to offer the customer a great experience in a relevant location.



ORYZASTRATEGY



www.vendipiuvino.com

THEME

Management and Marketing

Challenge

- Establish relationship with consumers

Solution

- **Wine funnel marketing** - Advisory service for wine web marketing that can be helpful to educate on better user data management and bringing costumers to the cellar.



MANAGEMENT AND MARKETING

Simplify management and reduced paperwork

CLAIRÉO



www.claireo.io

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork



Solution

- **Winery Platform** - Online platform to gather technical information shared in real time allowing not only the reduction of paper, but also all time access to all information.

ERTUS GROUP



www.ertus.fr

THEME

Management and Marketing



Challenge

- Simplify management and reduced paperwork

Solution

- **Process2wine** - Web-based management software that allows data input and access via computer or mobile phone, enabling the backup and export of information.



ETOH



www.eto.fr

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **EtOH Suite** - Mobile app to companies management regarding sales, distribution and overall company performance.



MANAGEMENT AND MARKETING

Simplify management and reduced paperwork

WATGRID, SA



www.winegrid.com

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **Oenosensing** - Innovative sensor based technology with web app to obtain information on key parameters of the winemaking process, remotely and real-time.



VIMÉTRICA AGRO



www.vimetrica-agro.pt

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **INCAFO** - Application that will allow the identification of grape varieties through the vine's leaf.



PARSEC SRL



www.parsecsrl.net

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **Quadr@ Software** - Solution to simplify the winemaking process while maintaining or improving the quality of the wines.



MANAGEMENT AND MARKETING

Simplify management and reduced paperwork

SOFTWINE



www.softwine.es

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **Digitization and improvement of information flows** to reduce order management time, sample delivery or production planning and control, as well as energy consumption thanks to industrial engineering techniques applied to the world of wine.



MORENA INZENJERING



www.morena.co.rs

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **FruItS - Inventory Management and Sales** - Server-Client / Windows desktop application / SQL database.



E-TAG RFID FRANCE SARL



www.e-tagrfid.com

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **TIVE TAG** - Near Field Communication Tag which allows to measure and verify the wine shipment temperature easily and at an affordable price, using a phone application.



MANAGEMENT AND MARKETING

Simplify management and reduced paperwork

UNFIA SRL



www.unfia.com

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **Platform for automated supply chain** - B2B platform to directly connect "terroir" wine producers and buyers with an automated supply chain to avoid intermediaries, trade barriers, and limited digitalization.



INSTEAD



www.instead-conseil.com

THEME

Management and Marketing

Challenge

- Simplify management and reduced paperwork

Solution

- **Global IT solution for sustainable and efficient viticulture** - Agreo Vine & Wine is the most proven web platform on the market for collecting and analyzing all production data from the vineyard to the bottle. No more papers and Excel files!



STORIES AND ANSWERS



THEME: GRAPE-GROWING

CHALLENGE #1 - FACING EXTREME WEATHER EVENTS

Antonio cultivates 15 hectares of vines on the Italian Apennine foothills. His family has been producing winegrapes for three generations, on medium slope hills with an average altitude of 300 m.

Like his father and grandfather did, Antonio is using a traditional Guyot system: 3,000 vines per hectare with 2.5 m between rows to be able to pass comfortably with the tractor.

For decades the practices inherited from his grandfather had allowed a reasonable production of 9-10 tons per hectare, and the tractor, the sprayer and the tiller bought by his father allowed to reduce the effort needed to manage the vineyard in the vegetative period.

The Sangiovese grape produced has always had a good Babo grade and the cooperative winery to which it is conferred recognized a sufficient price to run the farm, which also produces cereals and some fodder.

Unfortunately, in the last 10 years everything has changed.

First, vines increasingly suffer from drought during the summer period. Spring rainfalls are increasingly less abundant, and you often have 2-3 summer months without rain. Antonio's vines and those of his neighbours have never needed irrigation, so he not only does not have a drip system in the vineyard, but not even access to a consortium water supply or a pond as a water reserve for the summer months.

Even worse, when water comes it's with very strong thunderstorms, and the free run water is digging channels that are dangerous even for the tractor. The most worrying aspect is the loss of soil in sloping vineyards, because at every storm tons of soil accumulates at the bottom of the plot. The layer of superficial soil gets thinner and thinner, and some plants have already their roots uncovered.

As if that was not enough, Antonio records more and more extreme temperatures: the temperature has reached 37-38°C in the last three years, even if only for a few days, and the vineyards in the valley bottom have been seriously damaged by frosts in two consecutive years. The result is that more and more frequently, Antonio produces much less grapes, in some years even half of what he used to produce. The sugar level is good, and the grapes are healthy enough, but the higher unit price paid by the cooperative winery does not compensate at all for the lower production - also because the cost of fuel, products and fertilisers has increased at the same time.

Antonio's father shakes his head and does not know how to deal with these changes, but Antonio must absolutely find a solution and reverse the trend, if he wants to avoid bankruptcy and leave the productive vineyards as an inheritance to his children.



ELAISIAN SRL

Antonio decides to rely on Elaisian for pathogen management and soil water condition monitoring.

Elaisian offers two Decision Support Systems (DSS), one dedicated to pathogen prevention and the second dedicated to vegetative and water monitoring of soils.

With the first Antonio is able to monitor weather conditions and predict pathogen attacks so as to control them in the best possible way and avoid further product losses.

With the DSS based on satellite images Antonio is able to monitor the water content of the plants being able to assess the areas of the field that have the greatest water needs and be able to intervene with timely and dedicated relief irrigation to the driest areas.

ETOH

What Antonio is going through and his father is also feeling is unfortunately the problem of many winegrowers around the world: they feel helpless in the face of the adversity of Mother Nature.

Yes there are multiple solutions but what are they? How to choose them? What results will they bring me? In the end, so many new questions and few answers.

One day Antonio receives an email from a cluster presenting him with a new application that allows him to manage his business and face his challenges presented as "EtOH Suite here, is your one and only Coach app to help you overcome your environmental, economic and social challenges."

As the first month is free, he let himself be tempted. After all, it costs nothing to try. After subscribing to the app, he enters his technical production itinerary. Instantly, it receives a diagnosis of its economic, environmental and social performance. Nothing new: the figures are not good and the outlook is rapidly deteriorating. Given the frequency of climate crises, Antonio must react quickly because the end is near.

In the Dashboard and next to his yield figure, Antonio clicks on +: following questions and a decision tree, various solutions and irrigation methods are suggested to him. As the problem of access to water is major, the App suggests to put him in touch with irrigation solution providers to study his particular case.

Shortly after, he was contacted by an irrigation specialist from Israel. The issue of access to water is not new to him and he has several options to solve his problem. Finally a start of good news for Antonio!

Continuing to analyze his performance indicators, he looks at the revenue metric. It is bad. Are there any short term solutions? EtOH Suite suggests other additional sources of income and in particular 2 main ones: putting him in contact with an international broker who is precisely looking for grapes at a higher price and also a training school which is precisely looking for Mentors on the pruning of the vine and a place of experimentation. Obviously, this are major changes but Antonio is seriously considering these options because the vine alone will not be enough to help him financially.



Antonio realizes that this application is not just a tool for managing his daily life: it helps him to take a step back, to open his eyes, to think about new ways of earning a living while keeping his vineyard. If the choice is to die or live differently, then thanks to EtOH Suite he will make the choice to do and act differently.

The richness and innovation of EtOH Suite app is to allow him:

1/ to make a diagnosis of his situation

2/ to suggest new ways with concrete solutions and experts to help implement these solutions.

And the price is affordable since he has access to this App for only 29 euros per month.

TAILOR'D WINE DESIGN

Or'Racine is a complex of enzymes which favors the development of soil microflora and the decomposition of organic matter. Sprayed directly onto the soil or paired with organic fertilizers, compost, or cover crops, it improves the bioavailability of organic matter for indigenous soil microbes, boosting their activity and vigor. This results in improves soil structure to reduce erosion, improve water retention, and aid the plant in resisting environmental stresses such as late frosts, water scarcity, and other extreme weather challenges.

MYCOPHYTO

But Antonio heard about the beneficial effects of Mycorrhizas on plants and checked facts.

The mycorrhiza symbiosis with the vinegrapes has been documented thoroughly for the last 30 years with strong positive effects on :

- soil structure since the mycorrhizas create a strong and large web connected to the roots, avoiding erosion.
- drought resistance / water retention by the plant by 20% compared to non-mycorrhized plants
- plant capacity to use nutrients by 30%
- crop yield by 20-70%
- plant natural resistance to pests-attacks by 40%

He decided to contact MYCOPHYTO since it is the only company worldwide that produces vinegrapes targeted mycorrhizas mixes adapted to different soil types. All other products are derived from one single mycorrhiza strain only symbiotic with potatoes, while MYCOPHYTO reintroduces more than 30 strains adapted to vinegrapes.

By using MYCOPHYTO mix, Antonio has been able to strengthen its vinegrapes, reduce water consumption and soil erosion.



GRUPO AGROVIN

Agrovin has been working for years and incorporating its research in R+D+i projects and tools to mitigate the consequences of this situation, of climate change.

That is why it proposes an oenological innovation, which is the application of ultrasound to the grapes, in order to achieve:

- ☒ Lower organic nitrogen content due to extreme heat during ripening and veraison.
- ☒ Dry and unbalanced wines due to high alcohol content and more astringent tannins.
- ☒ Imbalance between phenolic and technological ripening of the grapes at the time of harvest.
- ☒ Greater need for phytosanitary treatments due to adverse weather (storms).



THEME: GRAPE-GROWING

CHALLENGE #2 REDUCE USE OF CHEMICALS IN THE VINEYARD

Bertrand's family owns a 45-hectare farm in the Southwest of France. In the past, the majority of the arable land of the farm was dedicated to conventional cultivation of wheat and barley, but since Bertrand took over the management of the company, there has been a gradual shift towards vines, which now occupy 25 hectares of land. The rest of the hill farm is made up of coppice woods with a wide biodiversity.

The reasons for the drastic change of cultivation were different: certainly, the higher profitability of grapes compared to cereals, but also the will to get out of the dependence on fertilisers and of the obligation of agronomic techniques that kill the soil. Bertrand wants to preserve his land in good shape, and the consumers are increasingly asking for less chemicals in agriculture: therefore, his property is certified for the production of organic wine.

The production of organic grapes turned out to be quite challenging.

After so many years of ploughing and inorganic fertilisation, the soil organic matter was very low, and Bertrand had to supply large amounts of manure and compost, not easy to find of good quality. New vineyards have been subject to heavy attacks by mites, eradicated with great effort of many years without synthetic insecticides. More recently, many vines are infected by flavescence dorée, maybe because the vineyards are all surrounded by woods.

The main challenge for Bertrand is the management of copper spraying. In particularly rainy years, more than 10 treatments would be needed: this makes it difficult to stay below the legal limit of copper per year, and it requires numerous passages of the tractor in the vineyard, with a compacting effect that in the clayey soils of Bertrand can be very problematic.



AGROBIT SRL

Agrobit is developing a DSS app to help Bertrand managing his vineyards in a more sustainable way, by respecting the legal limits of pesticide application. The app will optimize pesticide treatments by simply using a common smartphone in combination with proprietary AI algorithms. The app will facilitate plant analysis, suggest the optimal water application volume rate for pesticides per field (or per zone), and improve treatments management in terms of money and environmental impact savings. 4-5 time per season, Bertrand will need simply to collect some photos of 5-10 vines per hectare in the vineyards using his smartphone and sent them to a cloud for processing. From the processed 3D model, the AI algorithms assess the canopy geometry (thickness, height, volume, LAI), vineyards parameters (TRV, LWA) and finally the optimal water volume application rate, also based on Bertrand's sprayer type. Besides these punctual measurements, by interpolating the collected data Bertrand will also be able to create prescription maps for variable rate operations, in order to maximize the application per plant, reducing the use of pesticides and enhancing the grape yields and quality.

Current solutions to improve pesticide management in vineyards are focused on the diseases detection and forecast (i.e., time-specific) than on the optimization of the water volume application rate for pesticides (i.e., site-specific). Actual methods to estimate this are based on manual measurements (time-consuming, approximated) and on LiDAR/ultrasonic sensors (expensive, complex). Agrobit wants to give Bertrand an economic and effective solution to make precision farming by hand, using low-cost sensors like smartphones and tablets.

ANOVA-PLUS

Pest and disease management is particularly challenging in vineyards. Conventional agriculture is still the preferred choice to ensure productivity and farm profitability. However, this strategy comes at a high price for the farm and is detrimental for the environment. Organic agriculture is a seductive option, but it brings back pest and disease issues in the front scene. In addition, increasing copper application is aggravating an irreversible heavy metal soil contamination and compaction.

A pragmatic compromise has to be found to reduce phytochemical treatments, promote soil health and insure farm profitability through realistic practices. Our approach consists of better knowing vineyard enemies to target and minimize treatments.

Pest and disease interact with their host successfully or unsuccessfully based on their respective genetic characters. Better identifying and knowing vineyards enemies and their intrinsic resistances is particularly interesting for viruses, common fungi and phytoplasma parasites such as Flavescence dorée (FD) or Bois noir (BN).

Flavescence dorée is a phytoplasma transmitted by leafhopper, a serious and rapidly spreading disease leading to a mandatory destruction of the vineyard if the disease concerns 20% of vines. The only solution to avoid losing the entire vineyard is to uproot the infected vines as soon as the disease is confirmed. Meanwhile, winegrowers in infected regions are applying insecticides and watching for symptoms to engage long lasting laboratory analysis. In addition of such careful watching and drastic remedies, FD and BN are leading to very similar symptoms whereas



BN infection is much less impacting production and can be overcome with time.

To answer these problematics, Anova-Plus has developed a pathogen detection kit called FD/BN Flashdiag®, with instant results and directly usable in fields. The solution is a simplified protocol that can be realised by people not qualified in laboratory techniques such as farmers, winegrowers, or their advisers.

Bertrand would have to take a sample of infected leaf, realize the test in the back of his car and almost instantly knows if its vines are infected by FD or by BN. For this, Bertrand can test suspicious vines, prevent BN infected individuals for uprooting and act much more rapidly before leafhoppers further disseminate the disease and put the entire vineyard at stake.

If Bertrand wish to limit soil copper accumulation and efficiently manage disease through lower number of treatments and tractor passages, he can use other targeted disease Flashdiag kits to know pathogen resistances (e.g. downy mildew) and better choose efficient synthetic or organic molecules.

More generally, the use of our technology brings another level of knowledge and means to manage pests and diseases on a territorial scale. The perspective of generating disease variant maps associated with vineyard varieties within their pedo-climatic contexts is a promising strategy to rationalise phytprotection and conciliate vineyard productivity and sustainability.

CASSANDRA TECH S.R.L.

Dear Bertrand,

reading about you and the problems with your vineyard suggested me you could consider adopting PocketSPRAY: our mobile solution for optimizing chemical treatments in vineyards.

Our application relies on two key principles: first tuning the quantities of chemical products to the actual leaf area of the vineyard and, second, spraying just when needed.

The first goal is achieved using a patented feature embedded in the app that allows quantitatively measuring the Leaf Area Index (LAI) of the vineyard. Since vineyards are managed to be as homogenous as possible, measuring the actual surface of leaf can be done just by shooting with the app a sequence of 3 pictures in a couple of points in the vineyard.

The app will use all these pictures along with the spacing between the vine rows and the total vineyard surface to compute the volume of water required to homogeneous spray all plants in the vineyard.

The App also ships with a list of hundreds of chemical products with the dilution information from their producer. These data allows the App to go beyond computing just the water volume to spray. It also outputs the exact quantities, in grams or ml, that have to be added to water for each of the chemical product selected by the user.

All this process also takes into account the machinery used to perform the treatment as each technology has its spraying effectiveness.

The second goal of PocketSPRAY, executing treatments just when needed, is achieved by providing in App, location-aware, pathogen alerts.

Thanks to our background in agronomic modelling, we could develop a number of algorithms that use historic and forecast meteorological data to compute the likelihood of the occurrence of an infection from a specific pathogen with daily updates.



This means that you are alerted up to 4 days ahead if one of your vineyards is under the risk of becoming infected by any of the most common grape pathogens. In the case the pathogen model gives no alarm, you have one more support tool in the risky decision to skip a scheduled chemical treatment.

PocketSPRAY was designed to be used in the production of organic vines. Since the scientific principles embedded in the tool are valid whatever kind of chemical product is chosen, the only thing you should do is to choose from the internal product database the chemical product based on copper or sulfur that you use and everything will work as described.

Using less product and using it fewer times will surely help you to stay below the legal limit and also, in the mid-term, contrast metal accumulation in the vineyard soils.

ELAISIAN SRL

Bertrand decided to rely on Elaisian for pathogen management and vegetative condition monitoring.

Elaisian offers two Decision Support Systems (DSS), one dedicated to pathogen prevention and the second dedicated to vegetative and water monitoring of soils.

With the first one, Bertrand is able to monitor weather conditions and predict pathogen attacks so as to control them in the best possible way and avoid further product losses. In fact, thanks to the sending of predictive alerts, Elaisian helps Bertrand to control pathogens in the field, taking preventive action, reducing the number of treatments performed, intervening only when necessary and reducing the input of chemical products and/or not good for the environment if distributed in large quantities.

In addition, with rainfall monitoring, it will be easier to repeat treatments when necessary.

With DSS based on satellite imagery Bertrand is able to monitor the vegetative conditions of plants by being able to assess the areas of the field that have more problems related to abnormal plant growth. Thus Bertrand will be able to select the areas that lead to worse plant growth in order to intervene with specific natural products in specific areas. In addition, Elaisian also incorporates the form of farm management into its algorithms, allowing for specific and dedicated control for farms that operate organically (e.g., by lowering thresholds for intervention on pathogens. Elaisian also collaborates with a supplier of natural fertilizers.

ETOH

Facing his vineyard management issues, he sought advice from his vineyard consultant and also from the Chamber of Agriculture. The answers given did not seem satisfactory to him: everyone replied that organic is better. But is it really?

One day at a trade show, Bertrand met EtOH who showed him a mobile app to analyze its economic, social and environmental performance in real time: EtOH Suite. Therefore he decides to download and test this app.



First, he filled in his production indicators. Fortunately, he did not have to re-enter everything precisely. In less than 2 minutes, he completed his technical itinerary and the fact that he manages his vines organically.

The diagnosis allows him to obtain what the app calls e-score. It is a letter from A to E, likewise you have on the label on food packaging, which allows him to have an overview of his overall performance.

His e-score is C. What a surprise... or is it really? He got a B for the social part, but a C for the environmental and economic part.

By digging into the details, he is interested in the environmental indicator which is composed of several sub-indicators: the quantity of pesticides is not the only criterion to be taken into account, but also the management of the soil (compaction and copper toxicity) and the carbon emissions. On those two last indicators, its e-score is very poor because of the higher frequency of treatment he needs to carry out in his region.

EtOH Suite suggested that he compares his technical itinerary and e-score with another technical itinerary based on another certification "high environmental value". He is not convinced: many of his buyers appreciate the Organic Farming label.

However, the outcome is astounding: this itinerary goes up to e-score B. Indeed, thanks to less frequency of treatments overall the environmental score goes up a notch. Regarding the economic score, the same is true: in fact, its revenue increased slightly under the effect of better average yields and costs decreased, despite a potentially lower selling price. He is skeptical: the explanation is that since he exports a lot and his French Organic Label called "Agriculture Biologique or AB" is not recognized in the United States and Canada anyway, the impact of losing this Organic Farming label is low.

These answers opened his eyes, he must seriously consider this alternative path. Therefore, he contacted an EtOH Consultant, offered by the application in the form of a 30-minute coaching to debrief the suggestions

He will keep on with EtOH Consulting to study this new path: they will call Bertrand's main buyers and will help him switch to High Environmental Value level 3 certification. However, they advised him to launch a communication plan to explain his approach to his customers so that they will not be surprised by this change. He will probably request via the application, social network services of EtOH Agency to help him with this communication.

A new chapter is being written thanks to EtOH Suite.

EXOBOTIC

At Exobotic Technologies, we believe that the autonomous drones and robots that we design can help for a more sustainable agriculture. To this aim, we have recently created, assembled and tested a robot specially dedicated for tree nurseries, orchards and vineyards: the Exobot Land A2.

Our Land A2 is much lighter than most other solutions available on the market (300 kg vs 1700 kg for the Naïo TED or 2400kg for the Vitibot Bakus S). This has several advantages: avoiding soil compaction, increasing autonomy, reducing power consumption, lowering the purchase price, ...



The main challenge with a light robot is the stability on rough terrains. We have solved this problem with a custom stabilization system inspired by the Martian rovers, which makes the vehicle very stable even on the roughest vineyard terrains. The robot will also be capable of patrolling autonomously in the rows of a vineyard for a full day without human intervention.

In France, vines occupy 3% of the cultivated soils, but this sector uses more than 20% of the total amount of fungicides nationally. Nonetheless, recent studies carried out in Bordeaux demonstrated that this amount could be reduced by 56% if the treatment was only applied when the first signs of the disease are observed and not preventively. We are developing an instrument for our Land A2 that uses a hyperspectral camera to detect early trace of mildew and limits the use of preventive treatments.

Starting from 2023, we are planning to offer our robot as a service: for a price lower than the Bordeaux mixture, we can come to the vineyard of Bertrand, let the robot do its inspection autonomously and provide him with a detailed map alerting where the mildew is about to develop in the next days if not directly treated. This way, he will have a better knowledge of his vineyard to decrease his use of copper while limiting the risks of diseases.

HORIZON SRL

Bertrand decides to rely on new technologies to preserve its land, relying on the WinePlus technology platform.

It thus identifies the main clusters, in which it installs small sensors complete with all the functionality of a weather shed, but able to reconstruct local microclimates.

It then carries out the treatments on the basis of local alerts, generating prescription maps based on satellite surveys.

Now the treatments are targeted and differentiated.

PULVERIZADORES FEDE S.L.U

Bertrand is aware of the existence precision equipment and digital agronomic tools but he had been sceptic until this moment. However, he has finally realized that the conventional machinery cannot solve his pressing issue, aggravated by the climate change. "Time is tight, now or never. Let's give it a try!", says to himself with hopeful feelings.

He decides to ask his friend Pierre, a reputable agronomic advisor. Pierre visits him regularly to check the status of the vineyards, they discuss about ecological agriculture, the evolution of the European regulations on the pesticides and fertilising products use, and about the risk assessment on bees because Bertrand hosts hives in his land so he's deeply concerned about this matter.

Pierre perfectly knows Bertrand's needs so he provides advice straight forward: "The solution for you is the FEDE mist blower Tecnovid Qi fitted with the H3O system to protect your vines together with the SCG device to manage all field tasks. I know it sounds scary, but you'll see how easy to implement and user friendly it is. You'll notice the agronomic, business and environmen-



tal benefits since the very first day”.

Bertrand trusts him so just he acquires the technology. Now, thanks to the Kubota mist blower, Bertrand can carry out effective organic precision treatments adapting the application depending on the phenological state of vineyard and pest or disease infestation level. This entails the reduction up to 50% of the drift and up to the 25% of plant protection product, in comparison with a conventional sprayer. This percentage will roughly turn in 5.354,4€ savings related to the yearly treatments. The savings can be more having in mind that this mist blower is able to apply selective treatments. Furthermore, this efficient mist blower cuts up to 4l/h the fuel consumption which entails significant savings and environmental impact reduction (around -49% of GHG emissions).

The smart mist blower is connected to an agronomic management tool where Bertrand can easily configure work orders and send them directly to the mist blower that automatically adjusts itself. Working on the fields, Bertrand is happy visualizing in real time the treatment on a tactile interface from the tractor in which he receives warnings in case any of the parameters is wrong so he can correct it on the spot. Once finished, Bertrand can review all work data on the digital platform to be sure that the treatment has been carried out accurately, avoiding proliferation of pests and diseases, and obtaining a quality and profitable harvest.

Among the spraying task, the implemented SCG integration device allows him to precisely carry out all field tasks (ploughing, pruning, harvesting...) and process full data to make decisions accordingly. Thus, the integrated precision system allows him to reduce the tractor's pass on the fields to the indispensable ones which significantly help to improve the condition by reducing the compacting effect.

Bertrand is so satisfied of the agronomic, business and environmental results that his courage on accomplishing the digital transformation on his fields have brought.

RVS CONSULTANTS VITICOLES

Our team of engineers would propose to Bertrand some vigour measuring of his vineyard. Thanks to our unique proficiency of cartography tools, we would provide him some reliable information about the behaviour of its vines and concrete help to daily management.

As a matter of fact, we have been testing and using proxy-détection, the Greenseeker technology, since 2012. Vintage after vintage, our team has been perfecting the settings of the measurement made by the infrared sensors. We, for example, made studies to calibrate the sensitivity according to the different grape varieties. Our goal was to get the same precision with the sensors as with our human eye : we made sure that the tool would traduce our perception of the behaviour of the plant. We taught the machine how to measure, and not the reverse.

The sensors can be mounted on all types of tractors, which would prevent Bertrand from having yet another passage to make in the vineyard. The measure can be done while doing any other task, avoiding additional costs.

The mapping will be directly accessible and usable by Bertrand for various uses:

- Easy and free of charge geolocalisation on smartphone to help parcel work
- Vigour mapping of the vineyards, helping to understand the weaker points of the property in order to program a tailor-made fertilization treatment aimed at homogenizing the vigour.

Strengthening the vines would ensure better and higher yields. Bringing the right amount of fertilizer at the right place will also be money-saving, while being more efficient.

- The mapping could also be used to modulate all kind of inputs (the sprayers valves can be closed when vigour measures show that the vines do not need any add-on).

This measuring that we have been developing for now more than ten years, and operationally using in our clients vines since 2017 is even more reliable when linked to:

- Agronomic support, including petioles and soils analysis, and pedological pits when needed in order to provide a full recommendation for soil maintenance and general management. We could also accompany Bertrand setting up new plantations as a mid-term objective.

- Agro ecology monitoring, to better understand how the surrounding woods can interact with the vine plants, give recommendation for plant cover and soil maintenance, which could quickly help avoiding the soil compacting problems, and possible setting and monitoring of fields trials to build tailor-made solutions for Bertrand vineyard

- Possible phytosanitary monitoring to provide a consistent overall strategy

As to follow the vines evolution and in the mid-term, télé-détection could provide reliable measures at a lower cost. Our team has been testing and comparing the results of the greenseeker measures with data from planes, satellites and drone, and is now able to provide guidance as to choose the most reliable solution.

Our unique know-how associated to the complementarity of our engineers team would provide an innovative and field-related overall solution to help Bertrand increase the quality of his vineyard and face his various day-to-day challenges.

SABI AGRI

To face his problems, Bertrand chose to adopt the ALPO Electric Tractor wine straddle from SABI AGRI.

He was allured by the ALPO Electric tractor because it was designed based on the specifications of agroecology to facilitate the implementation of a sustainable viticulture that produces better with fewer resources. Exactly what he needed!

The technical performances and the versatility of the ALPO Electric Tractor totally convinced Bertrand.

Bertrand uses his ALPO Electric Tractor to perform all soil operations (weeding...) and maintenance of the vines (pruning, mowing...) with all standard agricultural tools (mechanical, hydraulic, and electric).

Bertrand is pleasantly surprised by the autonomy of the battery of his ALPO Electric Tractor with up to 10 hours of non-stop work for a recharging time of only 1h30!

He can work with his ALPO Electric Tractor in all his vineyards thanks to the robustness of his machine, its custom-made characteristics and its 20cm variable track. Bertrand got vineyards with an interrow distance which varies from 1m30 to 1m50, so he chose the ALPO's patch track of 1m40. This is perfect, especially since he can navigate between his fields by road thanks to the road certification of his ALPO Electric Tractor.

In a nutshell, it is the ALPO Electric Tractor that has adapted to its domain and not the other way around!



The more amazing for Bertrand is that his ALPO Electric Tractor meets the triple agroecological performance: Environmental - Economical - Social.

By being up to 3 times lighter, ALPO Electric Tractor avoid soil compaction and ensures soil preservation during the numerous necessary passages. It has improved Bertrand's soil microorganisms' activity and fertility. All this without any pollution and CO2 emission since the ALPO is electric. This is particularly important for Bertrand who is very committed to climate change mitigation.

Moreover, Bertrand has observed that his domain profitability is higher through 87% reduction of operational costs (energy efficiency + zero maintenance). This allowed him to reach a return of investment in only 2 years!

Bertrand also realized that his working conditions were improved thanks to the exceptional comfort of his ALPO Electric Tractor allowing a high visibility, no gas, low noise, and vibrations.

These benefits allowed Bertrand to set up agroecological practices such as permanent cover of his vineyard inter-row. This has induced an increase of soil organic matter content and finally the reduction in the use of inputs.

For Bertrand, his ALPO Electric Tractor wine straddle is the dream equipment for sustainable and profitable vineyard production.

TAILOR'D WINE DESIGN

Pur'Avant and Pur'Après are foliar sprays which directly support the vines' natural autoimmune system. They are a blend of polysaccharides derived from yeast cell wall and algae extract. Working through targeted nutrition, the products reinforce the vines resistance mechanisms to improve natural defense against fungal pathogens including downy mildew, powdery mildew, botrytis, esca, and sour rot. The sprays do not contain copper but can easily be paired with copper, sulfur, and other organic and conventional agro-pharmaceutical products without the risk of phytotoxicity, allowing the grower to utilize the absolute minimum dose of standard products without sacrificing plant health or efficacy against pathogens.

TASTEFEVER

By working together with ILVO. ILVO is a research institute so it goes without saying that they keep on innovating and launching new projects and research. One of these projects can for example be an 'LA project' by VLAIO.

The objective of LA projects is to offer innovative solutions based on a concrete problem or demand-driven opportunity from a collective of companies that can be applied in the relatively short term and result in visible changes with a clear (economic) added value for a broad target group. Characteristic of LA projects is the integration of the entire process, from knowledge acquisition to knowledge transfer and the concrete application of that knowledge in the target group companies within one project. The aim is to implement the data coming from these studies and analyze them together with all the other input to give an accurate report of what is



going in on the vineyards and cellar.

For Bernard his problem we suggest to work with the 'drone technology' to detect where the wheat is growing so that he can anticipated faster and that spaying only needs to be effected where needed.

UV BOOSTING

Fortunately, Bertrand has discovered a new technology that can well change the game. UV Boosting offers equipment for the vine stimulation with UV light. UV light makes the vine more resistant to downy and powdery mildew attacks during the season. UV stimulates the production of a plant hormone, salicylic acid, which is involved in many of the plant defense mechanisms. Thanks to these stimulations, the vine can activate its defense mechanisms more quickly and intensely, and thus strongly slows down the propagation of the pathogen.

It is an easy-to-use equipment, it is attached directly to the tractor and allows to replace up to 50% of the copper treatments while ensuring the usual yields. This technology also allows Bertrand to protect his vineyard when the maximum authorized doses of copper are not enough to protect his vineyard in an effective way, during very rainy years for example, when he loses grapes to cryptogamic diseases. In this case, UV technology is a clean additional protection solution that leaves no residues in the soil or in the air. When disease pressure is more moderate (in drier years), UV stimulation allows for a more ambitious reduction of fungicide products (such as copper but also conventional products): the plant is stimulated at the beginning of the season in order to wait as long as possible before initiating the first treatment. This use allows Bertrand to control his phytosanitary program more precisely and to treat his vines only when really necessary.

Bertrand thus has a lever of plant protection that is truly different from the many chemical products available to the winegrower since it is a physical method to fight against diseases. He can therefore serenely stimulate his vineyard without fearing leaching (unlike copper or other chemical products) due to frequent rainfall, without worrying about delays before re-entering the plot and he can even use this equipment on areas close to the neighbours (Non-Treatment Zones) that he usually has a lot of trouble protecting! For Bertrand, this is the tool he was missing to serenely engage in more environmentally friendly practices.

VIVAI COOPERATIVI RAUSCEDO

Pesticide management is a primary task for farmers and winemakers in terms of cost and environmental sustainability. Viticulture alone uses up to 65 percent of the total fungicides in Europe. In this regard, EU authorities are limiting the range of chemicals available for conventional agriculture and, by 2025, aiming to reduce their application by 50 percent; in organic farming, the legal limit for copper use has been set at 28 kg per hectare to be used over a seven-year period. Depending on the growing area and seasonal weather conditions, the latter threshold may be insufficient, as was the case for Bertrand in rainy years.



One solution to Bertrand's challenge comes directly from nature. It is known that in some North American and Asian grapevine species, co-evolution with pathogens has allowed the development of specific resistance genes capable of triggering a rapid response to different fungal species, such as powdery mildew and downy mildew. A long-standing collaboration between Vivai Cooperativi Rauscedo (VCR) and the University of Udine has harnessed these natural resources and enabled the release of 14 new grapevine cultivars, with high oenological standards and ability to cope with pest infections. These varieties resulted from a traditional breeding program based on controlled pollination and with no GMO technologies. Although the sources of resistance come from wild species, these selections are a far cry from the first results obtained by breeders several decades ago. Through recurrent backcrosses on high-quality *Vitis vinifera* cultivars, a small but useful portion of the wild donor has been retained within these new varieties, thus keeping only the positive traits of the parents. Fungal disease resistance was evaluated for several seasons in diverse European countries, including France, to assess the suitability and adaptability of the new varieties. Since Bertrand must meet the requirements of organic farming regardless of weather patterns, resistant cultivars provide a new opportunity for that direction. For this reason, the sustainability of the new cultivars was assessed by quantifying a wide range of bioclimatic indicators, including those belonging to Life Cycle Assessment (LCA) methodologies (e.g., carbon footprint and water footprint), agronomic aspects (e.g., carbon sequestration and soil erosion), and biodiversity and chemical hazards. It emerged that the adoption of resistant varieties can have a strong impact on pesticide use, reducing pesticide application by up to 75 percent, with beneficial effects on biodiversity and operator toxicological risks. This means economic benefits in terms of water and fuel consumption. In addition, the reduction in spraying results in less soil compaction and ultimately friendlier and more sustainable vineyard management.

EARTH AUTOMATIONS

With our autonomous robot, thanks to the AI and computer vision, the robot is able to identify the mites and only spray where it is needed, reducing the amount of insecticide used. With the track type of wheels, pressure on the soil is evenly spread out, thus compacting the soil less.

MYCOPHYTO

But Bertrand heard about the beneficial effects of Mycorrhizas on plants and checked facts. The mycorrhiza symbiosis with the vinegrapes has been documented thoroughly for the last 30 years with strong positive effects on:

- soil structure since the mycorrhizas create a strong and large web connected to the roots, avoiding compacting effect.



- plant capacity to use nutrients by 30% leading to healthier, stronger vinegrapes
- plant natural resistance to pests-attacks by 40%

He decided to contact MYCOPHYTO since it is the only company worldwide that produces vinegrapes targeted mycorrhizas mixes adapted to different soil types, which guarantees a better efficiency.

All other products are derived from one single mycorrhiza strain only symbiotic with potatoes, while MYCOPHYTO reintroduces more than 30 strains adapted to vinegrapes.

With MYCOPHYTO mix, Bertrand has been able to naturally strengthen its vinegrapes, while reducing the volume of chemicals in its vineyard.

WAX&GRAFTS

Until now, Bertrand would buy 'grafted plants' to his local vine nursery for his new 'organic' vineyards. However, these grafted plants are not organic in a sense that the grafting process requires chemicals all along production. This includes grafting waxes.

Waxes are used in order to protect the callus for the newly grafted plants. Nurseries use about 5g per plant during the whole process, so it represents a few Tons per year. Grafting waxes are microcrystalline waxes, obtained through dealing petroleum.

We developed an organic wax for grafting plants which would replace oil grafting waxes. They are made of beeswax and other vegetable waxes and have the same characteristics as oil waxes. They offer the same elasticity, resistance and protection as the conventional ones.

Also they are safe for the end users as they do not include any bactericide or fungicide. They are much more user friendly as they smell and look nicer!

We have performed trials in a few European countries, which gave excellent results.

Organic wax shows the same results as oil wax and grafting success is the same or slightly better.

So we would encourage Bertrand to choose a nursery, which slowly tries to implement new grafting process, which would be more environment orientated. A nursery which would use organic wax!

NAOTEC

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THEME: GRAPE-GROWING

CHALLENGE #3 – FACING THE LACK OF PERSONNEL

Mark is the general production manager of a large private winery producing some of the most renowned brands in Germany for white and sparkling wines. The winery has 130 hectares of vineyards on its property, and multi-year contracts with neighbouring grapegrowers for another 200 hectares to which it provides technical assistance and often services as a contractor, given the increase in the average age of independent farmers.

In order to guarantee the standard of quality that has made the fortune of the brand, every operation in the vineyard and in the cellar is part of a productive strategy whose precise application Mark is responsible for. The property has never made Mark lack financial resources for the purchase of machinery and equipment and has a good management policy of its human resources, with salaries that are above the sector average in the region.

Nevertheless, recently Mark is facing a major challenge due to the lack of personnel, both seasonal and permanent.

Winter pruning is an operation that requires many hours of work and a good knowledge of pruning technique, because from this largely depends on the quantity and quality of grapes that will be obtained from the vineyard in the following summer and in the years to come. Perhaps because of the cold weather suffered in staying so many hours outdoors in winter, perhaps because of the physical problems of posture and fatigue, perhaps because of the competition of tourism that has developed so much in the region, in short, every year it is increasingly difficult to find sufficient staff.

Another very critical phase is the harvest. In order to obtain the desired quality of one's wines, it is very important to harvest at the right time of ripeness of grapes. For every vineyard, there is a temporal window of at most one week within which it is necessary to harvest the grapes and quickly bring them to the cellar in order to be processed. Traditionally, several dozen people were hired for the grape harvest for a few weeks, including local pensioners and students, but also foreign workers who came specifically for the harvest. Many were also hired in the weeks prior to harvest for the sampling required for maturity control of grapes. This pool of workers seems to be getting smaller and smaller, and each year it is harder and harder to find workers for the entire harvest period.

The problem is also assuming worrisome proportions for permanent employees for the vineyard, winery and even the offices. The biggest issue here is the competence of the workers, who must be aware of the importance of each operation and know how to implement it in the best way. Training in a company is often a job without end because there is a strong turnover of the workers, above all young people. In office work, expertise and precision are increasingly vital given the increase in legally required paperwork.



BIOSYSTEMS ANALYTICAL SOLUTIONS S.R.L

Our technology will let you avoid to find a well trained lab technician, the analyzer is able to do by himself everything and thanks to his connectivity it is able to check results or problem through a smarhphone and the application will drive you through the analytical requirement. So everyone can do lab analysis.

DNA PHONE

Mark can simplify and optimize his work with 4.0 digital technologies. For the quality control of his wine, Mark can choose the Smart Analysis platform that we have patented and developed. It consists of a completely portable optical analyzer, equipped with a battery, which allows chemical analyzes to be carried out wherever and whenever it is needed within the company. The platform allows Mark to carry out analyzes on the grapes directly in the field to accurately assess the ripeness of the grapes, or to carry out checks in the cellar near the fermentation vats in order to intervene promptly in case of needs, or near the barrels in which the wine is aging. In addition to the portable optical technology, Smart Analysis is the first enzymatic system totally controlled by APP, which allows Mark to simplify the analysis procedure; in this way he can personally take care of quality control, or delegate the analyzes to the cellar-man, or to the intern who comes to the company to gain work experience. The APP connects to the optical device via Bluetooth, and uses wifi to connect to the cloud services specifically implemented to save, interpret and manage analysis data from any terminal (or share them with the consultant in real time). To further simplify the analytical system, the developed reagent kits are pre-filled and ready to use, which means that no special technical skills are required to perform the analysis. Furthermore, the technology does not require periodic maintenance or calibration as occurs for other instruments that carry out similar checks; cloud services fully automatically update both the optical device firmware and the APP software; moreover, thanks to the remote diagnostics service, it is possible to remotely control the operation of the instrumentation in real time to report any malfunctions.

With Smart Analysis Mark can carry out the quality control of his product during the whole production, be it grapes, must or finished wine in total autonomy and independence without the need to hire specialized technicians or set up equipped laboratories. This results in a saving in terms of personnel, as well as a saving in terms of time because the analysis is performed just when it is necessary, without waiting hours / day for the response of the external laboratories to which the samples are generally sent (if the company doesn't have internal lab with technicians).



ETOH

Mark receives an invitation to join the beta-tester group to try a new feature of the EtOH Suite App: the linking of wine estates with service providers and freelancers to address the issue of staff manpower's lack. This is exactly what he needed!

Once the application is downloaded, a form asks him what type of labor he requires, for what kind of work, for which duration and which location. However, the price of the service is non-negotiable and seems more expensive than the minimum wage. EtOH Suite explains this: the goal is to connect experts in the sector for the proposed work. The daily amount is higher because it takes into account the training and expertise of the staff and therefore is a fair remuneration for the hardship and difficulty of the tasks entrusted.

He is offered to get in touch with 5 people who can undertake as soon as next week in his vineyard. They claim to prune 1 hectare in 38 hours.

In terms of the process, it is simple: as soon as Mark validates the request, the order form is sent and the service provider can accept or refuse. At the end of the month, he will receive an invoice to be paid by direct debit.

He is not yet convinced. Then EtOH Suite sends him a calculator to estimate the gain he will make on the choice of these service providers. Comparing the hourly output of a person he is going to hire directly, the productivity and the cost of recruitment and paperwork, in the end, the amount per hectare is 760 euros for the solution with a service provider and 772 euros for the solution with the search for a seasonal worker by himself. Given the mental burden, search and training time avoided, the solution with the experienced service provider is an alternative that suits Mark better.

In addition, the application is responsible for checking whether the service provider is in good standing at the administrative level, that he is trained and sends us his references if we wish. Mark therefore goes for this solution.

He is also interested in testing the application. Once the contractor is hired, Mark can assign them tasks and tell them which plots to prune first. He will be able to tell him the address of the plots. This is very convenient because it allows him to automatically track the progress of the work and the validated tasks are recorded in Mark's task tracker. He won't have to re-enter it.

Also, he sees that his Dashboard feeds itself: indeed, as the provider's tasks are validated, the cost is added to his Dashboard. He sees in real time the cost of his operation.

What a great app it is! EtOH Suite allows him to overcome his labor problems while saving him time and money!

HTS ENOLOGIA

We would love to help Mark with the issues he's facing due to the lack of personnel in the harvesting period.

We happen to have a great solution that can make his, and his collaborators' everyday work easier, more organized, more efficient, and most importantly: we can guarantee that he can reach a high-level quality with less personnel and excluding human errors.



It is called: AVAFERM, which is an automatic yeast nutrition management system, created and designed by winemakers, to facilitate the work routine in the wineries.

With Avaferm, it is possible to manage completely automatically the nutrition of fermenting yeasts in 6 different tanks at the same time, between 50 hL and 5000 hL each tank, using liquid nutrients.

It is a perfect alternative for those wineries who are struggling to find adequately qualified and competent personnel when the biggest pressure hits in the harvesting period. It is, in fact, having a huge success across Italy, using this system we have reached the amount of 3.200.000 hectolitres of must fermented by Avaferm.

One of our clients - a large corporate winery- managed the fermentation of 180.000 hL of must with ONLY ONE cellar worker, using the system.

He referred and I quote: " I assure you, It is simply awesome".

The main features and principles of this system are as follows:

Avaferm acts based on the fermentation kinetic curves, both pre-defined and customizable, already loaded in its memory.

The kinetic curve applied to the fermentation is chosen based on: the analytical parameters of the must (Sugar, YAN, vol.), the oenological aim- which type of wine is to be made, the nutritional requirements of the yeast strain, and the temperature. These parameters are set on the initial screen, after that, the system calculates the right kinetic curve, and applies the nutritional protocol so that all nutrients: organic nitrogen, inorganic nitrogen (DAP), and oxygen are delivered at the right timing during the fermentation and in the right quantity for the yeast with 95% accuracy. Thanks to Avaferm the winemaker can rest assured that human error in dosage amounts and timing will not be an issue anymore, and he has an assistant always ready to work 24/7. Thanks to the remote control app for smartphones and computers the winemaker can always follow what goes on in the winery, receive temperature alarms, and intervene remotely if necessary.

Avaferm is an extremely versatile tool, which goes far beyond nutrition protocols, almost everything is possible to be managed according to the winemaker's will, making changes to the software, which we can handle online.

Highly sustainable, certified industry 4.0.

Training of the personnel is easy: 30 minutes of a short introduction is always enough to teach them how to install and set up the system, after that everything goes smoothly, and if necessary it is always possible to enter the app and make changes.

We feel that the time has come to head towards international seas, we are ready and prepared.

Thank you.

NAOTEC

Winter pruning is a meticulous and time-consuming task that requires in-depth knowledge of the pruning process. This operation involves pruning wood shoots to shape the vines for their future growth. These shoots can grow to substantial lengths and tend to entangle themselves around the support wires. Untangling and cutting them can be an arduous and intricate endeavor, complicating the precision pruning process.



To address these challenges, Naotec has engineered an advanced prepruning solution. Leveraging double cutting disc technology, this innovation allows for precise pruning at a desired height. The benefits are manifold: significant time savings, cost reduction, and a decreased need for labor. By cutting shoots into small, manageable pieces of 7 cm, the prepruner eliminates obstructions in the vineyard rows, enabling pruners to focus on their precision work without fatigue.

Notably, Naotec's technology also facilitates the removal of shoots entwined around support wires. This eliminates the need for manual untangling, streamlining the entire pruning process. Naotec's innovative solution not only enhances efficiency but also ensures that your vineyard operations are conducted with precision and ease.

TASTEFEVER

By giving Mark more time through decreasing the administrative burden by administrative simplification. The administrative burden for the winemaker is a wide field, often time-wasting. This burden can again be broken down into two parts; the administration itself and the wayward administration/legislation.

Craft Your Taste will simplify the administration itself by digitizing in two ways: becoming 'the' single entry point and generating template reports based on these data to meet the reporting requirements to the various agencies and authorities (collective application, harvest-stock administration, application PDO - PGI, FYTO, FAVV, Manure Bank, any affiliated labels, ...).

In the second instance apart from the templates generated, APIs connections will be added, in order to facilitate interactions not only with the government itself but also with other stakeholders or entity interested in collaborating with this project.

Currently, there is no detailed code of practice available for the Belgian winemakers. This makes it, especially for new winemakers, rather difficult to see the wood for the trees in terms of legislation.

So there is a huge need for such an advisory body, and it is precisely this role that Tastefever wants to take on.

A 3th point is restoring confidence by offering production transparency, that is the purpose of this traceability. Giving the consumer an insight in what is happening from the field to the glass via the Qr-Code.

An important note here is that after a number of years, Mark will have better insight into his products and the quality ratio in relation to terroir and oenological processes.

By using traceability, it will be possible to detect much more accurately where and what adds or subtracts from the quality, and Mark will be able to refine his product and time management more and more.

A 4th point is by stimulating sustainability on both ecological, economic and social level through digitalization. This by sensitizing the consumer. This awareness will not only apply to the production process, but also to the people behind it. Until today, the wine world still relies heavily on seasonal workers, and we also want to include this aspect in our digitalization. Every (seasonal) worker can become a part of the platform and link himself to winery. This results in 2 gains for Mark, his workers can also put in data to make him again gain time and he can prove as they are officially registered that he works fairtrade.



VIMÉTRICA AGRO

Nowadays there are fewer specialists in Viticulture and also in other areas. The INCAFO project will make it possible to carry out the work of the specialist, allowing farmers to analyze the varieties they have in a simple and effective way.

PARSEC SRL

Mark's case perfectly illustrates the major problem of seasonality encountered in the wine sector. It requires a high availability and workload over a limited period of the year in the cellar and in the vineyard at the time of the harvest.

As far as the management of processes in the cellar is concerned: reception of the grapes, treatment of the harvest, pressing, selection of batches, settling, racking, fermentations, ... Quadr@ is compatible with many machine manufacturers and already has the configurations to integrate the most common equipment on the market, for example for presses, Quadr@ has the characteristics of the brands Wilmess, Bucher, Pera, Della Toffola, Siprem. In addition, we integrate Turbidity, pH, O₂ and conductivity probes to automate the selection of must according to the quality and the programmed thresholds.

With Quadr@, Mark will be able to completely automate his cellar from the reception of the grapes to the presses and settling vats. Once the thresholds of the analytical parameters for the selection of grapes and musts have been programmed, a team of 2 to 3 people will suffice to identify the skips and activate the operations that the supervision will have selected.

It is the same for the vinification vats for which the protocols will be applied automatically by the computer supervision for each vat.

It will thus obtain clean wines, and can, depending on the options, follow the fermentation kinetics, automatically add oxygen nutrients, ensure effective inerting of the gaseous headspace.

If he produces sparkling wines according to the Charmat method, he will be able to standardize and automate his processes thanks to the dedicated AphroMate Plus application (PARSEC exclusivity, silver medal at Sitevi 2019).

Today, digital tools perform better analysis and monitoring of processes. It is quite possible to almost completely modernize and automate critical and time-consuming operations and ask staff to devote themselves to certain one-off operations: cleaning, hygiene, maintenance, manual operations, etc.

PARSEC SRL

NECTAR by ADCF is an optimal system for managing the automated control of winemaking: fermentation kinetics, temperature control, nutrient and oxygen supply. For red vinifications, the pressure applied can reach 300 mbar to compress the skin and gently extract the most qualitative anthocyanins and tannins.



Recent studies on the sweetness of wines have shown that gentle extractions make it possible to obtain wines richer in astilbine. NECTAR by ADCF technology manages winemaking independently. Once the tank is filled, it is hermetically sealed to contain the CO₂, the pressure of which is managed by ADCF technology. BY this process the aromas remain in the tank. The production of premium wines therefore requires little work in the cellar. Once the wine has been made, the ADCF process will automatically manage the inerting of the vats to guarantee perfect preservation of the aromatic freshness of the wines. Thanks to NECTAR, Mark will be able to simplify, automate and secure his premium vinifications.

UNFIA SRL

In the short term, our solution allows producers to gain easier and faster access to the global markets without needing to acquire particular skills, knowledge, or invest capital. So Mark does not need to hire extra people to take care of the paperwork and online distance sales because it can be done automatically by the platform. In the medium/long run, we plan to expand the platform to different markets adding services for the producers such as looking for workers/internship students. This will allow Mark to potentially have access to a bigger audience, even abroad, but also to young students that can be hired for the future after the internship that Mark can use to know them better. Also, because all the services are online and digital Mark would be able to see their availability and plan better his work on the vineyards without the need to get crazy to call or email around to find people to work with. Mark will have everything one click away so he can focus on producing great products and helping his neighbours.

EARTH AUTOMATIONS

Our autonomous robot can do the pruning on its own (in addition to many other tasks) As to sampling the grapes, with computer vision our robot is able to do a crop analysis, also while performing other tasks on the field. For harvesting, the robot can be further developed and integrated with a harvesting implement.

MBF S.P.A.

With a view to optimising human resource requirements, MBF has developed a series of solutions that reduce the need for personnel intervention both for normal machine management and for sanitising and product and/or format change operations.



As far as machine management is concerned, for example, the Superbloc solution allows the entire wet end of the line, from rinser to labeller, to be managed by a single operator who can, from a centralised position, control the system and manage the loading of consumables.

The sanitising phase can also be programmed and carried out automatically without the presence of an operator.

Product change operations can also be carried out automatically, as well as almost fully automatic format changes, almost eliminating the need to replace equipment.

GRUPO AGROVIN

At Agrovin we develop technology and products that help winemakers in their daily work, to make them more efficient and thus achieve more responsible wineries.

Tank Control - In-line measurement of fermentation parameters mitigates the consequences of staff shortages. The daily manual density measurement during alcoholic fermentation alone may require one or two employees exclusively in a winery. The use of tank control allows the employees' time to be used for other tasks, since the system allows automatic, real-time monitoring of density, among other parameters, and also provides more visual information on fermentation kinetics.

Process automation (Free K+, OXiOUT, Perseo, Pyxis, Agatha, Ultrawine - Perseo).

Agrovin develops its equipment with the aim of being autonomous and only needing the supervision of one employee, most of the processes being automatic. Especially autonomous is the Free K+ system that can treat musts and wines having the capacity to self-clean and regenerate itself when the equipment detects that the exchange is not being effective. Therefore, it treats the total volume indicated without the need to modify its configuration.

Direct yeast addition - Viniform DIRECT is a yeast developed for direct application without the need for rehydration. Traditional, correct rehydration of a yeast is a more time-consuming process that needs to be supervised by technicians. However, Viniform Direct can be applied without rehydration, resulting in a safe fermentation because of its good adaptability to the must due to its high resistance to osmotic stress.

In-line addition of liquid products at reception - Pyxis allows in-line dosing of liquid products according to the reception flow rate. This means precise and automatic dosing at adjustable doses of liquid products such as sulfur, tannin, chitosan, tartaric acid...



THEME: WINEMAKING

CHALLENGE #4 – DECREASE ENERGY AND WATER CONSUMPTION IN THE WINERY

Sustainability is one of the main drivers in the production strategy of Gaetano, technical director of an important wine group in the south of Italy. The family that owns the property is seriously engaged in developing the business by minimising the impact on the environment and to the benefit of the local rural society.

Gaetano has under control all the steps of the production process: wine grape production, winemaking (100% of the wine is obtained from their own grapes), packaging, and marketing. All the production is certified as organic, and a lot of efforts have been put in the past in the vineyard to optimise the use of resources, to maintain a healthy soil, to improve labour conditions for workers, always ensuring a high enological quality of grapes.

Presently, Gaetano's action is focused on reducing the use of energy and water in the winery. The high environmental temperatures during the harvest period leads to warm grapes, at 30°C or more at winery reception, imposing their drastic chilling before any step of the process. A lot of energy is also required to refrigerate the tanks during alcoholic fermentation to keep a temperature suitable for yeasts qualitative performance. Another important energy sink is cold stabilisation, used to prevent precipitation of tartrate crystals when the bottles are on the market. Energy savings are important to reduce the carbon footprint of the winery, and recently has assumed high economic relevance due to the significant increase of bill costs.

Saving water is another goal of Gaetano's management plan. A recent water footprint of the winery operations has quantified the overall consumption in 3 litres of water per litre of wine, above the average for wineries of the same size. The critical points in the process were identified in the cleaning of floors and equipment, especially during harvest period, and in the bottling phase to rinse and sanitise filters and filling machines. Barrel washing is another phase with high water consumption, although regarding a limited volume of wine.

Wastewater treatment is also a concern. Gaetano aims to reuse all water, including rainwater from roofs and courtyard, for vineyard irrigation in the dry season, and the high variability of wastewater from the winery along the year, both in quantity and in composition, poses major problems.



CLAIREO

Gaetano acquired the system Air Vinif last year and that has been a revolution for him regarding the reduction of water and energy consumptions. The system allows the optimization of pumping over. It replaces the traditional pumping-over process, from an average of 50 minutes per tank to a maximum of 5 minutes per tank. It is very simple as he has generalized the use to all his work of remontage during vinification of his red wine. The system is composed of a blower, which comes to capture the air of the cellar or the CO₂ of a tank in fermentation. This blower is connected to a stainless-steel rod by his flexible pipe that he inserts into the marc from the top of the chimney. Once the marc is crossed, the sending of big air bubbles in the juice will allow it to go up over the marc cap, in order to immerse and partially or totally destroy the marc, all of it in less than 5 minutes.

In parallel, Gaetano also asked Claireo to implement their new offer "CO₂ Winery" which allows the injection of CO₂ into the water supply of the winery. The injected CO₂ is recovered during fermentation, it is then compressed and stored. The water loaded with CO₂ has a greater acidity which will reduce the water consumption in his winery by 50%. This reuse of CO₂ meets the logic of circular economy and has allowed Gaetano to optimize its environmental footprint.

Gaetano obtained 3 gains that have to be highlighted thanks to the use of this system:

- Labor : reduced to almost 90% during fermentation and an ease of use that
- Allows one person to use it on its own.
- water: reducing by + 50% annual consumption
- Electricity: reducing by 20% during fermentation

Gaetano's questions before buying and answers provided by Claireo :

Don't we risk oxidation by sending air into a fermenting tank? We recommend sending air at a density of between 1100 and 1030, which is why we have developed also a CO₂ option to manage out of this range of density.

Do I have enough headroom to pass a two-meter cane? We recommend 4 passages at the 4 cardinal corners, which forces you to incline the cane. We have also tested on a ceiling height of 80 cm and by tilting the cane as recommended, it is without worries

Gaetano's testimony after using Air Vinif :

" According to my previous request, which was to reduce water and energy in my vineyard, Air Vinif fulfills my expectations. The water consumed during the fermentation phase has decreased by 50% and the electricity by 20%. For the wine, Air Vinif improved the quality of the tannins and allowed a better control of the process. Concerning the reuse of CO₂ in the water of our wineries, the water cleans faster without increasing the flow. The force of the water cleans the equipment more quickly, which reduces our water consumption by at least 50%."

ETOH

Gaetano is looking for a tool that will help him manage his water and energy management so that he can identify ways to reduce his consumption and thus reduce his environmental footprint and his costs.

Searching on Google, he comes to the website of an application, EtOH Suite.



This application makes it possible to monitor different elements of a winery and to be able to analyze its environmental and economic performance. As the first month is free, and the application cost only 29€ per month, Gaetano is tempted for a try and download the app on its smartphone.

Once on the application, he will add the indicators that interest him: he does not necessarily want to analyze all of his work in the vineyard. What interests him in the first place is the amount of water and energy he consumes.

It will therefore inform 2 relevant indicators: quantity of watts and amount of water.

To be able to follow his indicators, he will have to enter the data regularly. For electricity, it has meters for each building. He will thus be able to add the weekly quantity of watts per building to the application by reading the meter. It will be quick.

For water, he will ask his teams to fill in the time spent at key stages where they use water. By means of an average water flow, he will be able to estimate the quantity of water consumed by the task.

Each week, he can analyze the quantity of electricity and water at each key activity station. He thus realizes that he must concentrate his efforts on the winery which consumes the most significant resources.

He also realizes that the water and electricity readings seem to show consumption on weekends and during times when the teams are not working. This allows him to identify a water leak and electronic tools that remain on in the evenings and on weekends. It is already a saving but not enough.

Then, EtOH Suite allows him to do self-diagnostics to go further. Thanks to these diagnoses, he will be able to get advice on small actions that can help him reduce the use of resources or recycle and reuse others, especially for water.

In particular, he is put in contact with an expert who will help him optimize the reuse of resources and the design of sustainable cellars.

This is real progress because it allows the domain to act concretely on its reduction in water and energy consumption and to be able to precisely monitor these key indicators in real time.

MY BACCHUS (ONAFIS)

We have created an intelligence in our tools to control and automate thermoregulation, air-conditioning, humidification but also the windows to open the cellars when the nights are cool and to let the cold in the cellar.

Thanks to our tools that continuously measure the wine, it is the wine that controls its environment and not the additional tools that overreact to an external drift.

Wine has an inertia and a microorganism life. We are the electrocardiogram of the winery.

We have been audited by Greenflex and we are implementing our solutions in large houses. We have been audited by Greenflex and we are implementing our solutions in major wineries, which have shown energy savings of 30% compared to what exists today. Real economic and ecological gains.



PARSEC SRL

Viticulture must contribute to the essential efforts to protect the environment: limit treatments and the use of pesticides, lighten and recycle bottles, reduce energy consumption through the eco-design of cellar,... try to develop virtuous practices and be economically viable so as not to impact their short-term profitability and long-term survival. For this, the industry must provide solutions to limit water and energy consumption. PARSEC proposes to physically recycle the CO₂ produced during fermentation by liquefying the gases by compressing them. Fermentation of one liter of most produces approximately 50 liters of CO₂ gas. Once liquefied, this CO₂ can be used: to cool and inert the harvest, to cool and thermoregulate fermentation vats, to inert vats after fermentation or to carbonate the rinsing water to improve rinsing after disinfection with soda. Liquid CO₂ can also be transformed into pellets for cryogenic cleaning without water of harvest processing equipment: conquet, desteemer, pump, floors. Recycled CO₂ can finally be resold as food CO₂ for the food industry. Thanks to the NECTAR by ADCF process, the system calculates in real time the quantity of CO₂ produced by all the tanks in fermentation. ADCF Technology releases pure CO₂ under pressure. The centralization of the entire cellar on a single Quadr@ supervision also makes it possible to assess at any time the CO₂ needs for cooling, washing, and inertingEnvir. PARSEC engineering is able to advise Gaetano to design simple solutions for saving water and energy: CIP unit for recycling cleaning products, cryogenic cleaning unit, as well as designing a new cellar in which everything will be implemented to limit energy needs. The measurement and control of fermentation kinetics can also be a means of limiting the heating of tanks. Maintaining a CO₂ sky and dissolved CO₂ saturation in the wines will also be a guarantee of wine protection in order to limit SO₂ Addition or produce wines without sulphites. Gaetano will be able to make his company virtuous and participate in CO₂ recovery, thus fighting for the preservation of water.

SOFTWINE

At softwine we digitize energy and water consumption for automatic control based on the best continuous, through a Big Data platform that allows you to view indicators, alarms, reports and an energy dashboard. We are able to save up to 20% of consumption only by measuring, since a large number of improvement actions are revealed.

MBF S.P.A.

One of the solutions that MBF has developed in recent years to address the problem of energy consumption in the winery is the Superbloc system, i.e., a compact, complete and customised line that integrates the rinser, filler, cork and screw capping machine, capper and labeller into a single machine.



This bottling line can significantly reduce both energy and operating costs as the space used can be reduced by up to almost 50% compared to a traditional line. This leads to several important advantages from an energy point of view, including, for example:

Optimisation of machine sizing as the classic 'V-graph' is no longer necessary, requiring the oversizing of machines downstream of the filling monoblock.

Reduced the number of motors, as connecting belts and accumulations between machines are eliminated.

Drastically reduced footprint with substantial savings on both building costs and energy consumption for lighting, heating and cooling.

The patented solution for the filler turret allows the reduction of energy, water and sanitiser consumption.

OENODIA

The SMART solutions by STARS® (7-15 hl/h) and STARS® Stab (15-240 hl/h) guarantee 100% reliable tartaric stabilization (tested for 6 days at -4°C) to secure your wine export sales. The process is just as well suited to making NFC juices, concentrated musts, and rectified concentrated musts.

Your production line becomes more efficient and responsive thanks to an automated continuous treatment that is kind to the product: zero loss, no oxygen takeup, no organoleptic impact, and unchanged color. STARS® is also eco-efficient: energy use is cut by 95% and operating cost by 30-40% versus cold soaking. For juices, the treatment is eco-friendlier and less costly than ion-exchange resins.

Frugal (just 0.2 kW/hl of wine), eco-selective (only the ions responsible for tartaric and calcium precipitation are removed), additive free and high-performance, our solutions are aligned with the sustainability goals of the 21st century.

STARS® Stab models can also operate in a mixed unit that combines stabilization (if necessary paired with filtration – see below) and a pH adjustment module: an all-in-one STARS®, able to work with very high precision on wine stability, acidity and color.



GRUPO AGROVIN

At Agrovin we develop technology and products that help winemakers in their daily work, to make them more efficient and thus achieve more responsible wineries.

Tank Control - In-line measurement of fermentation parameters mitigates the consequences of staff shortages. The daily manual density measurement during alcoholic fermentation alone may require one or two employees exclusively in a winery. The use of tank control allows the employees' time to be used for other tasks, since the system allows automatic, real-time monitoring of density, among other parameters, and also provides more visual information on fermentation kinetics.

Process automation (Free K+, OXiOUT, Perseo, Pyxis, Agatha, Ultrawine - Perseo).

Agrovin develops its equipment with the aim of being autonomous and only needing the supervision of one employee, most of the processes being automatic. Especially autonomous is the Free K+ system that can treat musts and wines having the capacity to self-clean and regenerate itself when the equipment detects that the exchange is not being effective. Therefore, it treats the total volume indicated without the need to modify its configuration.

Direct yeast addition - Viniform DIRECT is a yeast developed for direct application without the need for rehydration. Traditional, correct rehydration of a yeast is a more time-consuming process that needs to be supervised by technicians. However, Viniform Direct can be applied without rehydration, resulting in a safe fermentation because of its good adaptability to the must due to its high resistance to osmotic stress.

In-line addition of liquid products at reception - Pyxis allows in-line dosing of liquid products according to the reception flow rate. This means precise and automatic dosing at adjustable doses of liquid products such as sulfur, tannin, chitosan, tartaric acid...



THEME: WINEMAKING

CHALLENGE #5 – REDUCE USE OF ADDITIVES IN WINEMAKING

Graciela is chief winemaker in a large cooperative winery in Valencia region (Spain). She is producing both white, rosé and red wines. Most of the production is sold in bulk to private wineries in Spain and in other European countries, where it is blended, fined and filtered to produce wine under brands distributed by the major supermarket chains. The bulk wine market is global and highly competitive, with low margins. As the selling price varies a lot from week to week, Graciela is asked to have great flexibility in the production cycle, in order to have wine ready to sell when prices are high, or in order to be able to keep the wines stored for months waiting for the market to offer more favourable conditions. Presently, Graciela has low processing capacity, both in terms of undersized equipment and shortage of personnel. Although, until now she has been able to manage large volumes of wine with low production costs and few investments, thanks to her good enological background that allows her to prevent accidents and to produce unfinished wines with high commercial standards. Graciela is now facing a major challenge, as nature and the market are pushing in opposite directions. Because of climate change, the composition of grapes entering the cooperative winery are very different from the past: higher potential alcohol degree, higher pH, temperatures well above 30°C and highly extractable colour. With these characteristics, the wines are more easily contaminated by spoilage microorganisms, and prone to early oxidation. Moreover, tartaric and protein stability is more difficult to reach. She observes also a reduction trend over years, both in quantity of grapes brought by associated grapegrowers, and in juice and wine yield from grapes: this imposes a rigid control of production costs. Simultaneously, the market asks for bulk wines with good acidity, low alcohol, possibly produced without additives and processing aids with potential allergenic effects. Graciela's task is becoming very challenging, because the alteration in grape composition is expected to modify further in the coming years, and the consumers ask to reduce the use of the main tools she has available against wine deterioration, such as sulphur dioxide as antimicrobial and antioxidant. It is time for Graciela to propose to her management a new winemaking strategy, introducing new practices with reasonable costs that can allow the production of competitive wines for the global bulk market.



AEB SPA

The wine market is increasingly oriented toward products with lower sulfur dioxide content. Thanks to the new Primaflora must microbiological protection concept, it is possible to significantly reduce the use of SO₂. This is done right from the start by eliminating the normal dose of sulfur dioxide used per must (50 mg/L).

PRIMAFLORA yeast makes it possible to obtain wines with a lower volatile acidity, so the physiological rise in volatile acidity during the aging period of the wines will still maintain acceptable values. In addition, the lower use of sulfur dioxide implied by the use of PRIMAFLORA will give Graciela the opportunity to employ - where necessary - sulfur dioxide while maintaining lower overall SO₂ values.

PRIMAFLORA is ideal for the Spanish market for white wines that are used to make affordable sparkling wines (e.g., those destined for Germany): the lower use of sulfur dioxide, in fact, allows for better second fermentation. In addition, higher free sulfur dioxide ensures that more microbiologically stable wines are obtained, with lower total SO₂ content.

Lower volatile acidity raises the wine's commercial potential in the market, considering also that the rise in volatile acidity that occurs naturally during aging could make wines less attractive in the market and lead to a decrease in price.

In addition, the use of PRIMAFLORA from the earliest stages of the must expands the aromatic profile of wines and makes them qualitatively superior

PRIMAFLORA is available for white wines (PRIMAFLORA VB BIO) and red wines (PRIMAFLORA VR BIO). Both are certified organic products*, and AEB Group pioneered the theorization of using selected non-Saccharomyces yeasts to naturally combat indigenous non-Saccharomyces yeasts in the must.

In red wines, initiating sulfur-free fermentation promotes the production of soft, organoleptically interesting wines that do not need to be clarified with technological additives such as gelatins or albumins, while also excluding the risk of the presence of allergens in the winemaking process.

The technique of must bioprotection really reduces the use of chemical additives in the must through the use of selected microorganisms. All this naturally benefits the environment, resulting in a reduced polluting impact when compared with that related to yeast production.

* In accordance with the Regulation (EU) n. 2018/848 and subsequent modifications, and the related Implementing Regulation (EU) n. 2021/1165 on organic winemaking.

BIOMÉRIEUX, INC.

Thanks to Veriflow technology, it will be possible to monitor in a totally proactive way the onset of the main spoilage organisms in wine, with rapid, selective and highly sensitive on-site tests. With climate changing and rising temperatures, controlling for example the populations of Brettanomyces at the source makes it possible to avoid the use of curative products, reduce SO₂ and other products, and increase the quality of the final product by decreasing the costs of repair.



Building your own monitoring protocol for wild yeasts and bacteria, allows you to find potential spoilers at very low concentrations and avoid the onset of any by-products or deterioration, saving on quality depreciation, repair costs, volatile phenols analysis and the use of products such as carbon, sulphites, chitosan etc.

A proactive approach to quality control may initially be seen as an additional cost but will always turn into long-term savings and an inevitable increase in quality and brand reliability. Always prevent rather than cure.

ETOH

Graciela wants to try some new winemaking experiments using the test and learn method. But for that, she needs a simple and affordable tool to help her monitor her tests and deliver the results.

One of her suppliers told her about a new and affordable mobile app: EtOH Suite.

After downloading the app, she starts by filling in what is called the catalogue of wines, that is to say the different lots or types of bulk wine quality she wants to monitor: she starts by filling in 5 qualities based on the 5 grape varieties she wishes to monitor.

Then, she fills in the performance indicators that interest her: in her case, the essential indicator is the final production cost. The best feature of this app is that she can set targets: not only she will be able to monitor performance but in one look, she can check that it remains below her target cost. And the app automatically calculates the value and percentage of the gain obtained. What a time saver!

To feed these indicators, it is necessary to track the tasks done for each stage of winemaking. In her case, it's a good idea, because it will allow her to track digitally the actions carried out by her team. Today, everything is done on paper and one person is in charge to re-enter everything manually on the winemaking register. It's tedious and it occupies a full-time person who is on sick leave. This is the perfect time for a change!

Graciela also wants to monitor the oenological quality of her wines and in particular the acidity, the alcohol and the inputs. She contacts EtOH Suite by chat, to understand the proper way to do that. They tell her that it is possible to connect the application to her laboratory tool, for example, her Foss which is her wine analysis machine. She can also import data via csv. It's convenient: her laboratory assistant will be able to import the data every week. Therefore, Graciela will have the synthesis of the results directly on her smartphone: PERFECT!

This application is ultimately THE perfect pocket companion to help her set up and test new strategies. She will have access to the performance indicators in real time and the whole team will save valuable time and energy on entering and analysing results. Of course, there will be some little adjustments to do but her team should react favourably because the application is easy to use and paper today... it's outdated!

She already intends to go further: gradually add taste parameters each time she tastes thanks to the form feature: she can create her own form inside the app. And EtOH Suite can also monitor her environmental performance score: that's interesting because her Australian and British importers are more and more in need of sustainability. And all this at a reasonable cost and at acceptable effort prices.



LAMOUREUX SAS

To allow Graciela to reduce the use of additives and by the meantime to have a better control of the quality of her wine, I would recommend an investment in a thermoregulation process with a supervision software. This thermoregulation could start by cooling the harvest thanks to a vintage exchanger. This system operates thanks to a cooling kit that will reduce the temperature of the grapes entering in the cooperative. This kind of process is often use in warm regions when producing rosé. It allows to get a lighter color without having to cut the rosé with water for example. Another point that could be implemented in Graciela's winery would be the temperature regulation and control of the tanks during the fermentation period. This system would use the same cooling kit as the vintage exchanger so it would save you costs. And with this, Graciela would be able to manage the fermentation of her wine without having to add additives. Thanks to a software that we call LAMBOX, all the tanks can be controlled from one computer/tablet/smartphone. And, with the different equipment installed on the tanks such as temperature probes, density captor, micro-oxygen dispenser, etc., the use of additive will become pointless. Indeed, Graciela will be able to follow the temperature of each tank as well as the density and so, know at what stage of the fermentation her wine is. With this system, the need of personnel will also be reduced because one person will be able to check all the tanks at the same time and location and decide the next step to do. With this software, even the incoming vintage can be controlled and switch to the right tanks, and if needed, pass through the vintage exchanger in order to cool the grapes. This software also allows to give orders to the winery. For example, if tank N°3 is goes above 32°C, an order can be sent to lower the temperature until it gets to 28°C. To conclude, with this software installed in her winery, Graciela would be able to control the whole winery from her desk (or remotely on her phone or tablet) such as the air conditioning, moisture regulation, nitrogen production, etc, and she won't have to use, or at least less additives anymore.

MY BACCHUS (ONAFIS)

I created these solutions after meeting a winemaker who asked me to bring technology to these tanks.

He had realised that in order to further reduce his inputs he needed to take regular samples and send them to a laboratory for results.

Unfortunately, he did the test of sending a sample of the same vat, of the same wine to three different laboratories and received three different results.

With our solutions, the winemaker has a solution that continuously measures the evolution of his wine and alerts him when a drift is detected. In this way, we secure the wineries so that they can go further with fewer inputs, while increasing quality by improving their processes.

With our tools they understand the consequences of their actions and see the qualitative improvements with less manual control operations.



TAILOR'D WINE DESIGN

Soliel'meilleur directly supports the vineyard's photosynthetic mechanisms, improving the uniformity of mechanical and polyphenolic maturation of the grapes. In the vineyard, this results in a more homogeneous veraison, allowing wineries to reduce man hours in the harvest and collecting grapes that have achieved full maturation with less risk of damage from over-exposure to the sun. In the cellar, the grapes produce wine with higher levels of acidity, including malic acid, a higher level of extractable anthocyanins, both at the pH of 1.0 and 3.2, an increase in the level of malvidol 3 - Glucoside, a decrease in the level of Cyanodol 3 Glucoside, and a decrease level of quercetine glycoside, all of which are indications of a more balanced wine with more stable color and natural antioxidants to improve cellar stability without the use of additives.

TASTEFEVER

Here I refer to point 3 of the reduce of use of chemicals in the vineyard as it is identical, meaning Traceability. Restoring confidence by offering production transparency, that is the purpose. Giving the consumer an insight in what is happening from the field to the glass via the Qr-Code. An important note here is that after a number of years, Graciela will have better insight into here products and the quality ratio in relation to terroir and oenological processes. By using traceability, it will be possible to detect much more accurately where and what adds or subtracts from the quality, and Graciela will be able to refine here product more and more.

PARSEC SRL

NECTAR by ADCF is an economical technology to simply transform a tank into a premium winemaker. It is applicable to large vats only for low pressure levels, which however make it possible to inert to fight against oxidation, to preserve the aromas and a great freshness of the wines, to control the fermentation kinetics and to preserve the wines under conditions optimal by limiting the possibility of development of micro-organisms. For red vinification it is also possible to use the patented Air Mixing Modulated Injection technology to efficiently extract the same rum from marc whose thickness exceeds 2 m and up to 4 m. The waves and waves of must created by the injections of air crumble, decompact and immerse the pomace so as to extract the qualitative compounds in the whole of the pomace. The wines obtained are fruity, open, round, fresh and intense. The woodiness of its wines is integrated thanks to the aromatic pool and the roundness of the wine's tannins.



UNIVERSITY OF VERONA

By means of an innovative solution based on rapid electrochemical analysis combined with artificial intelligence Graciela can develop and implement, for their wine portfolio, an approach that will assist in classifying the wines with respect to their tendency to lose SO₂ during storage due to chemical reaction with native wine components.

This will allow to r

1. rationalise an ultimately reduce the overall SO₂ use in the winery
2. optimise winemaking protocols to develop wines with reduced SO₂ demand

OENODIA

We invent, design, build, and install custom eco-solutions for stabilizing, filtering, and controlling the pH and alcohol level of your wines.

Each solution we design combines one or several precision processes, our expert advice, and unique guarantees that we honor throughout the equipment's life, however long it is used.

Each solution fits a specific context and a single request. But they all simplify winemaking by reducing oenological interventions, eliminating additives, accelerating decision-making, and by optimizing and delivering reliable winery operations, productivity, and cost control, as well as responsiveness to market demand and to unforeseen events of every kind.

All with the ultimate goal of securing and developing your sales – thus unlocking your future.

GRUPO AGROVIN

There are different tools to reduce or replace the use of additives in wine.

- Free K⁺: cation exchange allows the elimination of K⁺ and its substitution by H⁺ ions, which results in better tartaric stabilization and acidification of the wine, reducing the need to use additives such as CMC, polyaspartate, mannoproteins or organic acids.
- Viniferm NS Chance: the natural production of lactic acid by this yeast of the species *Lachanea thermotolerans* allows the biological acidification of wines from fermentation, reducing the need for additives such as organic acids.
- Inactive yeasts of the Super Bouquet range: this allows the organoleptic improvement of the wines due to its contribution of polysaccharides through contact, reducing the need to use additives such as purified mannoproteins or gum arabic.



- Specific fining agents: the adjuvants of the Vinigel, Proveget and Clarifine ranges specifically reduce the most astringent tannins, giving softness and smoothness to wines and reducing the need to apply additives such as purified mannoproteins or gum arabic.
- Microstab Protect and Microstab pH: the chitosan of fungal origin present in these products allows effective control of undesirable microorganisms in wine, reducing the need to apply SO₂ to them.



THEME: WINEMAKING

CHALLENGE #6 - ADAPT PRODUCTION IN RESPONSE TO MARKET REQUESTS

Catherine is the owner and winemaker of a 100-hectare estate in the northeast of France, producing around 760,000 bottles a year. For 5 years now the estate has been transitioning from conventional to organic practices. Catherine, in line with her personal values, is starting to feel the pressure from her clients, and society as whole, to have a more environmentally friendly approach to her wine production not only in the vineyards, but also in the cellar and in sales. Recently, Catherine has also attended market study conferences presenting local and international trends of consumers.

Combining these factors, she has multiple goals for the next 5 years, in a global approach to reduce the carbon footprint of her estate. To begin with, she will focus on sustainable packaging efforts as this is also a strong market request.

Packaging is vital for the conservation of a quality product and for brands to distinguish themselves in the consumer market, and Catherine is curious of how to be more respectful of the environment - while being cost-effective - in both the manufacturing of her packaging and in its potential reuse. She asks herself if there are more efficient, profitable, and responsible ways to work? Catherine exports 70% of her wine, with bottles weighing 650 grams and uses foil capsules. Her labels are traditional paper facestock. In this same direction, Catherine would like to find ways to recycle and reuse packaging materials.

Catherine's clients are not only concerned about sustainability, but also about the quality of the wine. While her efforts in the vineyard are quite successful to produce a quality wine, Catherine is looking for a cost-effective way to produce and bottle small lots, something special for the consumers. Once again, she would like to do this in an energy efficient way.



BIOSYSTEMS ANALYTICAL SOLUTIONS S.R.L

Thanks to SPICA, you can do analysis at really cheap price internally without the needs to send to a lab with the CO₂ related to the transport. more safety on the data and facility to take decision in order to adapt different lot of product to your customer without any issues.

ETOH

For Catherine, her problem is twofold: she is afraid to test unprofitable and therefore economically disastrous projects; she finds it hard to know where to start.

On social networks, his communication trainee tells him about a mobile application that could help her move forward on her project: EtOH Suite. He shows her the post on Instagram that presents EtOH Suite as "your one and only Coach app to help you overcome your environmental, economic and social challenges."

It's interesting because this app allows her to analyze the environmental and economic performance of his activity at the same time. The other consultants often forget that going organic is good, but you also have a good product and that is profitable. This last point is often forgotten, but she is an entrepreneur. At the end of the month, it is the banker who too often reminds her of this reality.

By browsing the application, she sees that the indicators will allow her, as she enters the actions in the vineyard and in the cellar, to see her environmental impact at the same time as her economic profitability.

But what is really innovative, something that she has never seen before, is that she has access to a technical route simulator. It is a very simple calculator, which makes it possible to test hypotheses for changing cultivation and winemaking methods and thus to see its final score: the forecast e-score. This e-score is good because it's simple: with a letter from A to E, you can see if our overall performance is improving or not.

In addition, thanks to this simulator, Catherine has access to suggestions for improving her methods: the advice is simple and common sense.

In the end, she obtains an interesting result: she will try to make a premium cuvée with a neutral impact on the environment thanks to a circular system of reuse of raw materials. This is the first time she has heard of this. There is no label for that technique but it's even better and simpler. However, EtOH recommends that she carefully follow her traceability to then communicate on each stage of production of this cuvée. It is through the communication of her efforts that she will be able to enhance her product and thus have good margins while having an environmental score close to A.

She thanks her trainee: after all, browsing for hours on social media can bring up some good!



GMV

Wineo can help you with your environmentally friendly approach to wine production. GMV has been working for the Spanish wine sector for several years now, generating specific value-added products based on the processing of Copernicus images and other data sources such as agro-climatic stations, hygrometers or agricultural practices. By working closely with winemakers and gathering their feedback, GMV has consolidated the Wineo product for viticulture, which offers both vineyard monitoring such as photosynthetic activity, leaf area index, real daily evapotranspiration or volumetric water content in the soil, as well as prediction of the yield of each vineyard and therefore of the final grape intake in the winery.

Sentinel missions, which have already generated series of images that go beyond five years, are key to analysing the behaviour of the parcels where the grapes sprouts each year. Today, being able to compare at ten-meters granularity every week, every fortnight or every month with what has happened over the last five years is to be able to provide information of great value to winegrowers, as it is aligned with their agricultural practices: The farmer makes the mental exercise of comparing how his crops are evolving in the current campaign compared to previous ones and decides what to do and how to act. But the comparison process itself is also the key to predicting yields. Currently, GMV with Wineo achieves higher accuracies than those achieved in the field thanks to models based on artificial intelligence that have been retrained each campaign to achieve this fact. In this way, the owner can monitor the yield periodically to adjust to the expected grape intake at the winery.

LA VIE DU VIN

First thing for Catherine is to determine her carbone footprint At winery it can be done but what happens on the market also has an impact and La Vie Du Vin by automatically tracking routes can know the amount of travels her cases are doing.

Shipping win can result in parrallel market. It's a problem in terms of business but also in terms of carbon footprint since useles travel is done. La Vie Du Vin by automatically tracking brings parrallel market detection and helps reduce travel.

Catherine wants quality wine so she would want to make sure that her wines are not altered by bad aging conditions once they are shipped. La Vie Du Vin brings visibility on temperature, humidity, light and shocks of wine cases once put on the market.

Sometimes Catherine can travel in order to animate tasting and bring samples. Thanks to La Vie Du Vin she will be able to do remote tastings by having the guarantee that the samples are not altered.

PARSEC SRL

NECTAR by ADCF is part of an innovation effort to offer breakthrough technologies (direct analysis of fermentation by the CO2 produced, rather than the traditional indirect measurement



by density) but also to carry out an intelligent synthesis best oenological practices to preserve aromas, control dissolved gases, carry out selective extraction, secure premium processes in order to produce the best wines as naturally as possible by perfect control of all parameters and especially dissolved gases. The conservation of CO₂ is a means of increasing roundness, acidity and length in the mouth. All the wines produced with this technology are always better than the controls, even in the greatest Grands Crus Classés of Bordeaux. As described in the other scenarios, NECTAR by ADCF is a technology that simultaneously limits the environmental footprint of the sector, secures and automates processes, improves the quality and characteristics of wines, which are more natural, fresher, more elegant and perfectly clear. Catherine in Alsace will be able to make more aromatic variety White wine: Riesling, Guewurztraminer, ... and more elegant Pinot Noir. With time and knowledge, she will be able to increase the volume of free SO₂ wines.

SOFTWINE

We improve order management, making all the information available to the entire team at all times. We reach where the ERP cannot reach. We avoid sending wrong samples or losing customer feedback. The first impression is what counts, and that of your winery cannot be bad. We help to plan the production of orders is a headache due to the large number of auxiliary elements, but thanks to our methodology, this process is much easier and more efficient. We help your winery to know the efficiency of the bottling line automatically, which will allow you to improve your productivity.

UNFIA

One of the pillars of our platform is the direct collaboration between producers-buyers to which we can add sommeliers as well. These direct relationships can help to promote innovation and direct access to the buyers. Catherine will be able to speak directly with her buyers, no matter the language they speak our platform can translate, so they can discuss and share potential solutions. Also, our platform was built with the idea of collecting and analysing all the data from transactions and production to reach an economy or scale among producers on the platform. Using an economy of scale and the data we can improve processes and products so they can become more sustainable without impacting too much on the price. With the constant innovation, data, and our platform Catherine can remain up-to-date with her buyers and the latest technology to move as much as possible toward sustainability without impacting her bottom costs. Catherine helps the planet, makes her buyers happy, and reduces her company footprint.



INSTEAD

Catherine really wanted to contribute to the reduction of greenhouse gas emissions and improve her practices for greater respect for the environment, but the subject was complex, the number of standards and specifications dizzying, and she spent an endless time filling out questionnaires to justify its practices to its customers or partners.

By adopting the WinePilot web platform, she can now in a single tool:

- Measure precisely in real time and using its own technical data, the environmental impacts of each step of its production (from the cultivation of the vineyard, through winemaking to the bottling and distribution of its products).
- Calculate all types of environmental scores and its carbon footprint that can be shown, explained and justified to its customers
- Define progress trajectories to reduce the carbon footprint of its products and its estate and improve its environmental indicators
- Create and follow action plans and run simulations on changes in practices that can be applied in the future

Thanks to WinePilot, Catherine can also engage her suppliers in improvement initiatives by enabling them to use the platform to monitor their own environmental impacts.

To manage her company's CSR policy, Catherine also uses Winepilot, which allows her to define and manage all the operational and strategic indicators and thus facilitate the monitoring of her estate's progress as well as the internal and external communication.

In short, Winepilot supports Catherine throughout the year to measure the environmental impact of her activity in real time and help her improve continuously.

GRUPO AGROVIN

The use of selected yeasts from different regions within the Viniferm range, as well as different species of selected non-Saccharomyces yeasts belonging to the Viniferm NS range allow to provide differentiated characters to the wines and thus adapt them to market demands.

The organic products within the range of AGROVIN products allow the production of wines that are within the ECO and NOP standards. Agrovin can advise on the best tools to bring quality wines to these markets.

The development of fining agents based on vegetable proteins or yeast protein extract provides wineries with effective solutions for the production of vegan wines.



THEME: MANAGEMENT AND MARKETING

CHALLENGE #7 - INCREASE DIRECT SELLING (ON-LINE, AT CELLAR DOOR)

Andor is the owner of a 10-hectare vineyard in Hungary. After an initial reluctance to take up the family business he decided a couple of years ago to start investing in their vineyard with his husband. They have specialised in producing botrytized wine made 100% with the Furmint variety. Nowadays they produce around 50,000 bottles of 2 premium wines, a traditional Tokaj and a dry white.

They are both experienced in winemaking, and their brand has gained some popularity in the international markets. They are even thinking about elaborating a Tokaji Eszenza, the highest added value wine in Hungary.

Even though they are very proud of their international reputation they have seen that the national market is increasing especially due to an increase in local tourism.

They have around 400 visitors a year and they know they are the best at communicating the essence of their wines and their history. They are also very proud of their partnership with a communication agency that is boosting the number of visitors that attend their winery interested in the product, but they don't see a huge number of direct sales. They are realising that they are producing a wine of which they are very proud of, but the most challenging part of elaborating the wine is selling it and, especially, selling it at the price range that they think their wine deserves.

In addition, to diversify their income during the COVID19 pandemic, Andor decided to expose their wines in different gourmet webpages at a national and international level. Nevertheless, the commission and the small number of sales have convinced them that they need to invest in another way to reach the consumer.

After their investment in a communication agency, they have realised that data management has a huge potential but what specific data can increase their direct sales, at the cellar and online?

As they are making a dry white, they are sure that there is a new market waiting there but they have the same packaging and branding as their traditional Tokaj. Maybe there is a new technology that can help them interact with the new young consumers? They are sure they want to focus on direct sales from the winery, but they don't know where to start.



LA VIE DU VIN

When cases are equipped with La Vie Du Vin device consumers can interact with the original winery via qr code. Indirect sales can then generate direct sales. "You bought this wine from your retailer? You liked it? Order it directly!"

By following all types of wine on the market, La Vie Du Vin will bring crucial market data in terms of positioning, pricing, sellout speed and will help wineries having a good understanding of the market and better ROI on their investments.

ETOH

Andor has been using a new mobile app for some time that he discovered following an advertisement in the specialized press: EtOH Suite.

He mainly uses the functionalities of contact management, monitoring of commercial actions and lead management. This allows him to properly manage the relationship with his professional buyers, in particular wine merchants, restaurateurs and importers.

Following a new post on LinkedIn, EtOH suggests also managing his private customers on the application. Indeed, this would allow him to be able to better segment those direct sales customers in order to be able to carry out the most relevant marketing and commercial actions: what is called targeted marketing. There are 2 advantages to this approach: to reduce the cost of his marketing and commercial actions by only taking the necessary actions and also to increase the average shopping basket and the repurchase rate.

Thanks to the app, it is also possible to be able to connect directly or via csv import to his ecommerce stores and marketplaces. This also makes it possible to follow some key performance indicators (KPI), such as sales, visits, repurchase etc.

Unfortunately, the figures that appear in the Dashboard are not very good: in particular, his ecommerce store does not attract much traffic. The app can give him some suggestions to improve his KPI: the app suggests working on 2 axes, natural referencing (SEO) as well as the presence on social media and in particular new social media to attract young consumers, such as Instagram and Tik Tok. As Andor does not really want to train on it and has no time for that, he can directly order from the EtOH Suite app, to take care of this for him. He only has to indicate the number of social networks on which to launch and the type of content and the subscription is launched. Added to this, he will be able to monitor EtOH's performance from the app: SIMPLE and EFFICIENT.

With EtOH Suite, he can finally follow the PCT marketing strategy named by EtOH: Promote, Convert, Track.



ORYZASTRATEGY

Increase direct sales for a wine cellar is a goal that must be achieved.

Nowadays it is unthinkable to try to sell own wines without having direct contact with our public.

Over the years the internet has taught us to know that we are just a few clicks away from any manufacturer in the world. The web has made it possible to disintermediate supply chains by putting producer and consumer in direct contact.

Unfortunately, the wineries, having no particular marketing skills, have turned over time to large web platforms that operate online sales with the disadvantage of never acquiring user data and not knowing what the profile of their typical customer was.

Furthermore, these web platforms, well understand the importance to be customer oriented and not producer oriented, so they have no particular interest in pushing one wine rather than another, unless it is a recognized Brand, generating poor results for the single cellar with a not well defined brand in the customer's head.

Precisely for this reason Andor should directly exploit the potential offered by the web by integrating web strategies and tools to growth direct visits to the cellar, and by implementing procedures for the collection of user data in order to be able to reuse them to make recursive sales.

Indeed, knowledge and data management has enormous potential but you have to know what to do with it.

Fundamental data to be collected are those that allow contact with the user, therefore email and mobile phone.

With Wine marketing funnel marketing Andor will be able, using social media, to increase the flow of people to his winery to make visits or direct sales. He will also learn how to sell more and better directly in the cellar learning negotiation and sales skills.

Finally, he will also learn how to better manage user data to convey email marketing campaigns, sms or whatsapp campaigns to them in order to generate further sales while remaining in constant contact with his audience.

Increase direct sales is possibile if Andor should know how to do it, and we colud help him with our Wine Funnel Marketing.

UNFIA

This is probably the main pillar of our platform and the one we will focus on first. Our platform can open global markets to producers like Andor. They do not have the knowledge, skills or capital to understand how to maintain the sales generated with those 400 visitors per year that go to their winery because each country has different legislation. With our platform, Andor does not need to worry about paperwork, legislation, cross-border transaction, and payment because it is done automatically and seamlessly through our platform using technology. Because we promote direct sales Andor can now talk directly with his buyers to answer any question or perhaps change the packaging to customized products for a specific buyer.



Our platform does collect data, so if a person is in a market where Andor is not present and is looking for that product we are able to suggest it opening up to Andor a new market with just one click. At any moment the products on the platform are controlled by producers who set up the prices and can change them anytime. Our platform automatically adjusts taxes, fees, excise duties, and shipment fees based on the destination and applies a standard small commission (15%) to the price of the bottle that is always visible to both buyers and producers. If a buyer is purchasing many products on the platform he or she will have the possibility to lower the commission fee on the bottles. A producer can even adjust the price for a specific order, giving a discount to a single loyal buyer. With our platform, Andor has a much bigger audience and potential buyers just one click away! We aim for the economy of scale so our platform will do centralized marketing to attract buyers with a significant cost reduction for Andor as well as more accurate suggestions that can improve sales for Andor, so Andor makes more margins while selling and the buyers save money when buying.



THEME: MANAGEMENT AND MARKETING

CHALLENGE #8 - ESTABLISH RELATIONSHIP WITH CONSUMERS (COMMUNICATION STRATEGIES, CONSUMER PREFERENCES AND FEEDBACKS)

Eleven years ago, Paula and Nil fulfilled their life-long dream of elaborating their own wine in Paula's family vineyards, in Catalonia. They met at university, when studying for a degree in Viticulture & Oenology. They both live with their two children in an impressive country house, which also accommodates the cellar, surrounded by part of their vineyards, which are all within eight kilometres reach.

There are six people working the whole year to both grow 40 hectares of vineyard and produce six types of wine, two of them sparkling. The rest of the grapes are sold to other neighbouring wineries. They practise ecologic, biodynamic and regenerative vine-growing and their grapes are high-valued to produce top quality wines. The price of their own wines is also in the high range and 75% of them are sent abroad by five export distributors. They would like to gain more local consumers, though. On the one hand, that would mean reducing expenses related to transport. On the other hand, prices should probably be lower, but that still would fit with their awareness on environmental sustainability.

Last harvest they decided to start organising visits to the cellar for colleagues, distributors, and friends. They know they have a nice place to share with their customers and Nil enjoys doing that from time to time. Sometimes, they think that they should focus on it and, other times, they think that it would be taking on too much. Would it allow them to get closer to potential customers? Would it be worth it?

In addition, they also wonder if it would be worth it to elaborate a better quality-price-ratio wine for local and national consumers. Would it work? Paula would like to foresee the future, as this idea keeps going back to her head. If only they could know why people choose their wines, what they are looking for or even what they think when they taste it. If only they were able to explain their wines and winery to them! However, distributors are reluctant to share their contact with clients and even the gender or age range of their consumers.

They have also been discussing several times about adding an online shop to the website that they created some time ago with a friend's help, but their distributors may not like that as they may see it as potential competition. Paula and Nil are keen on integrating new technology to have feedback and even suggestions from their consumers, but they don't know where to start. Nevertheless, they've both realised it is time to find new ways to establish relationships with consumers and design their communication strategy based on their preferences.



ADVANCED TRACK & TRACE

Paula and Nil started using ID Pack Line®, the end-to-end solution from Advanced Track & Trace company.

They integrated the QR code directly on their back label for their still wines, and directly on the capsule for their 2 sparkling wines. It's an "agnostic", eco-environmental solution not using any additional consumables. It was then in total coherence with their corporate social responsibility's and their philosophy of producing.

Through the traceability QR code, they were able to integrate new technology :

- Thanks to ID Pack Line®'s traceability solution they were able to create personalized information for their consumers. For eg. last June they sold wine for a wedding, by registering the final client in ID Pack Line®' traceability system, they created a personalized message for the wedding guests : "Welcome to Nerea and Ramiro's wedding" with a picture of the engaged.
- They can also generate a more general information (in the case they are selling to distributors for eg.) to communicate directly with the consumers of their wines. Once the final consumer scans the code it leads him to a short questionnaire asking for the place where he buy the wine, the price, where does he consumes it. He can as well give a tasting note and fulfill a commentary for the winery. Paula and Nil can of course actualize the questions at any time and depending on their needs.
- This information being provided in the language of configuration of the smartphone, or if not available in the default language chosen by Paula and Nil.
- Each time the QR code is reading, the smartphone used is geolocated. Thanks to geolocation integrated into the solution , when the consumer close the window of the questionnaire it will send him either to a proposal for visiting the cellar (if he was located in Catalonia), either to the online shop (if outside Catalonia).
- Geolocation also allows Paula and Nil to consult on the ID Pack Line® dashboard a mapping of the selling of their wines (they can even sort it by vintage, area, etc...)
- On top of all above mentioned, ID Pack Line® will soon integrates the Nutrilabel by ATT. Indeed to answer to the new EU regulation requirements in terms of nutritional information's and list of the ingredients, clients of ID Pack Line® will automatically benefit for this service. QR code will then leads to a pop up window with nutritional information's and list of the ingredients as per the new regulation coming into force on December 2023.

The price of their own wines being in the high range, and as they developed their sales and their fame thanks to ID Pack Line® they are now thinking in integrating the anticounterfeiting solution.

ETOH

Yesterday, Paula read a blog article from EtOH about the PCT strategy: Promote, Convert, Track. Whether you sell locally or internationally, for individuals and professionals, you need to constantly do 3 main actions over and over: promote your products, convert your leads and track your actions. And this cannot be done by instinct: you need a tool.



Paula and Nil think it's time they acquired a professional tool. EtOH Suite is an accessible mobile app that allows you to manage your customer relationship at hand, in your pocket.

It's perfect for Nil who hates sitting behind his computer in the office.

First of all she enters her wines and prices. Then, she chooses the key performance indicators from a suggested list. She connects with her social media accounts and emailing provider and... voilà : the Dashboard is automatically filled with some figures.

She can segment her activities: direct sales, national sales via its distributors and export sales. It's fast and she immediately manages to identify the channels that are developing, those that are stagnating or declining. In particular, she sees that after Covid-19, national sales have not resumed their pre-Covid level.

Alongside their Dashboard, for each indicator, EtOH Suite suggests rooms for improvement. EtOH suggests connecting with new distributors, developing cellar sales, by offering activities around wine tourism, creating partnerships with wine training schools such as the WSET. For each suggestion made, EtOH makes it possible to receive contacts and to be put in touch by a Marketing Coach.

In the meantime, Nil is testing the ROI calculator for their online store: it aims to guide you whether it will be profitable or not to launch an online store. For them, it is not judicious: low volume vs costly marketing effort. EtOH suggests listing their wine on well-known platforms like Drinks & co which will do the marketing work for them.

Finally, Paula is interested in communication indicators: Facebook is not working well because she does not make time to post enough. EtOH suggests that Paula subscribe to a social media subscription: from €299 per month, it ensures regularity and visibility. It's a significant cost: but you have to face the facts, she doesn't devote enough time to it and it's still cheaper than hiring a person.

After 2 months, Nil began to see the results improve significantly: he contacted the marketplaces suggested by EtOH and Lavinia also wanted to reference them.

The communication on social networks works: the importers are happy and Paula has even been spotted by a New York importer. She plans to ask EtOH to launch an Instagram account for her.

Finally, she sees the performance of her actions in real time thanks to the contact and prospect management module: this is very useful, because she is able to enter a new prospect in 2 clicks, as soon as he calls and sends him the list of his wines and prices from the application in less than a minute. It really is life changing!

LA VIE DU VIN

When cases are equipped with La Vie Du Vin device consumers can interact with the original winery via qr code.

A direct relationship can be established and CRM can start:

- order again;
- comment;
- follow us;
- be notified of our special offers;
- visit us for special events

- ...



UNFIA SRL

All that Paula and Nil are looking for is just one click away with the out platform! They can access the local and global market using our platform, for which we do not request any exclusivity deal. Paula and Nil can sign up, register their winery and wines and they are ready to go! This aspect is tied with the previous one. In fact, the data generated on the platform are shown in the profile of the producers. These are the purchase data such as demographic but others such as what types of wine the buyers are looking at. Paula and Nil produce six types of wines so if they are all published in our platform they will be able to see on their dashboard that in Germany people are looking at wine #1 but in France, they are looking for wine #2 and in their own region people are looking more at wine #6. All the data generated on the platform that are about their own establishments are shared on their dashboards (for free!!). Other data about the market, local or international, can be purchased for a fee. All these data and suggestions can help Paula and Nil to develop a better strategy and to understand what to push or publish in their local market as well as to better understand the prices. Another big part of the platform is the chat integrated with automatic translations so Paula and Nils can connect and speak directly with their buyers answering questions, and sharing additional information and establishing a fruitful relationship without language barriers. Noa Paula and Nil can better understand the performance of their winery as well as understand the needs of their buyers!

GLOBAL E BUSINESS SOLUTION GROUP SRL

Paula and Nil have heard about Zoniz platform and after learning about its functionalities, they have decided to implement marketing campaigns using this app because it offered a way to reach people based on their location (so they could target locals) and there were digital campaigns for engaging with customers. Their only concern was how to promote the app, and together with the Zoniz team have decided to offer a partnership to the restaurants.

Paula and Nil have talked to a few of the local restaurants and made a deal to create special offers for their wines in the Zoniz app when people accessed the app while being at the restaurant. They also shared their story and invited people to take a tour of the winery, with the main focus on the cellar. Using location technology, the app guides the visitors from one place to another and offers all the information they need, as they reach each step of the tour. Nil is still involved by organising the wine tasting bit of the tour and answering questions, but saves a lot of time as the app guides the visitors throughout the entire winery and offers them relevant information as they reach each step of the tour.

Visitors also have access to an online shop on the app, where they can buy the wines at discounted prices directly from the winery. The shop is only visible locally, so it doesn't affect exports.

It is not only the cellar that attracts visitors, but other engaging content as well, like photo contests that encourage people to visit the winery and take photos. They are sharing these photos on social media, which has created a lot of word of mouth advertising and now everyone in the area knows about the winery.



Creating loyalty programs came as a natural next step, as now Paula and Nil got to know their customers better and they wanted to reward those who returned often. Additionally, Paula and Nil also have access to statistics where they learn more about their customers, their gender and age, the technology they are using and even their spending habits in their winery. They sometimes also create polls to ask specific questions about the wines and why people choose them.

They are also proud to present information about their wines and organic practices, but also about the fact that using this technology falls in line with their environmental sustainability, as they can use the app for everything and don't need to waste any more paper.

Some of the restaurants even found the app useful and implemented Zoniz functionalities as well, which brought added value to customers. Now the clients were learning about the winery from the restaurants, and about the restaurants from the winery.

ORYZASTRATEGY

Firstly Paula and Nil should consider to have a branding consultancy in order to understand which might be the best solution for their wine positioning.

Considering that it is not the right choice try to sell every wine produced to everyone, Nil and Paula should ask for a consultancy to analyze the market, to study the right positioning and pricing strategy in order to have the right awareness of the audience they are targeting.

Organic wines and biodynamic wines, although they are both growing sectors, are not aimed at the same target audience.

In this way they could organize and manage the right advertising in order to promote their products.

Our solution, Wine Funnel Marketing is based on three fundamental pillars to consider in order to structure a truly effective marketing:

1. target - know the audience I am targeting,
2. tools - which online and offline tools to use,
3. contents - knowing the target, which contents to convey to interest my audience.

From this point of view, building a website with e-commerce is not enough (it's just a tool).

The real challenge is to convey the web traffic of the audience potentially interested in their products to their site.

Furthermore, with Wine Funnel Marketing, Paula and Nil would acquire the right skills to increase visits to the cellar, implementing systems for the collection and management of user data in order to sell to them recursively.

There are precise protocols to follow if you want to proceed with the actions to be taken to manage visits to the cellar.

This would allow Paula and Nil to better manage the time available and would help them if they want to hire a person dedicated to this task if they are unavailable.

With Wine Funnel Marketing, Paula and Nil will manage user's data for email marketing campaign as well as sms campaign or whatsapp campaign in order to establish a direct line with their customers and increase loyalty e resell.

They would also learn to use the web to build an online sales system that can generate positive cash flow.



Additionally, once customer data are acquired, they could trigger referral, reviews, testimonials and membership plans.

Even partnership with other local activities will be really effective.

Only by doing the right actions at the right time, Paula and Nil will get the results they want.



THEME: MANAGEMENT AND MARKETING

CHALLENGE #9 – SIMPLIFY MANAGEMENT AND REDUCED PAPERWORK

Maria is responsible for management decisions in a wine company in the Douro Region of Portugal with 95 hectares of vines. The company produces both red, rosé, and white wines from different Portuguese autochthonous grapevine varieties.

The properties that Maria is responsible for are distributed in the three sub-regions of Douro. Maria works with five direct collaborators that manage the different farms and the winery.

Recently, the administration decided to invest to expand their business of grape production and wine selling to enotourism, near the winery as well as start to sell to international markets. In addition, the administration is considering creating a new category of product, sparkling wine, to differentiate their offer in international markets and at the same time to move towards a more sustainable pathway.

With the support of her assistant, Maria is responsible for managing new commercial trades, to decide the distribution channel fit for each product and to evaluate and accept the purchase of raw material for viticulture and enological products. The decisions must be supported by data directly acquired from the different farms/vineyards and the wineries.

Five years ago, the company implemented online by-weekly reunions, where reports of each of the vineyards and wineries must be presented including wine stock in each winery, winemaking records, enological and viticultural products inventory and/or products needed to be ordered. Even though Maria is a well-organised professional, she struggles with a lot of paperwork, and spends a lot of time dealing with bureaucracy work. Also, her office is starting to get filled up with folders and shelves.

Last year, due to the excess of documents to approve, Maria forgot an order for a client and, when she was on the way to solve the problem, the stock had already been sold off. Maria is also responsible for filing and proceeding to employees' payments, which sometimes are delayed, especially during festivities and holidays, times of the year when the wine orders increase.

Maria is concerned about all of this and her bosses also agree and have admitted the need to improve and simplify the management system. All the tasks are becoming very difficult and not very sustainable, from recording the use of products in the vineyard and winery, company accounting, wine inventory control, to recording orders and sales.

It is time for Maria to propose a new approach, introducing new practices that can allow a more simplified management, with reduced paperwork.



CLAIREO

To respond to her problem, Maria needed two tools (softwares) : a traditional one of Enterprise Resource Planning (ERP) to manage inventory, order, invoices, and production planning.

And another one also to reduce the paperwork but mainly to optimize the quality of their production facing climate changes and reducing their chemical products consumption. She chose to use Winery Platform. This software gathers all of the technical information from the vines to the bottle in order to facilitate the decision process based on historical and tangible datas such as: weather meteo stations, sensors on the vines, maturity analysis, thermo regulation information, sensor in the oak barrel,..... This software has led Maria to a precise work of wine making where she has been able to know the exact period to manage the work in the vineyard and to adjust precisely the volume of inputs and water needed in each vine. The tool helped her and her team a lot in the cellar for taking notes during the wine tasting sessions. They have been able to compare all their notes, tank per tank, phase after phase, to take the right decisions on the actions to manage during vinification and assembly.

Thanks to this platform, she was able, with all her crew at the same time, to watch and be aware of the natural evolution of one or several vines in her vineyards. The information is shared in real time with all of her crew that has an account on Winery Platform.

Testimony from Maria one month after getting Winery Platform:

“ Winery Platform is very useful, each of the members could capture in mobility everything they saw and did, automatically collect weather data from different stations and brands and all team members with a Winery Platform account were able to receive information in real time. This software was actually à real time saving, it's intuitive and our notes don't get lost in all the pieces of papers that we had. When I took over the vineyard, my grandfather and father didn't leave me any notes on how to take care of it. Those datas are very valuable for the next generations to come, and knowing that they are on the cloud is very reassuring. Thanks to Winery Platform, no one on the team use paper anymore, I am very proud of us for the sustainable step that we managed to achieve, using less paper and chemical products”.

ERTUS GROUP

Maria decides to purchase Process2wine, a SaaS vineyard and winery production management software to keep track of all operations in the five productions sites and make sure that from now on she will be up to date with all relevant information needed for her day-to-day work.

She has been assisted by a consultant from Process2wine all along the implementation process to make sure that the software features that she chose were perfectly adapted to her needs and her current workflows. The consultant also took care of importing into the system the data that she already had on her various spreadsheets. Therefore, Maria and the other users could start using the software directly after the end of the initial training.

Since Process2wine is web-based, no one had to worry about having to install the software. Each update is performed automatically as well as the daily backup that are secured by Process2wine.



Thanks to Process2wine access right system, all five estates are on the same environment, allowing Maria to interact and consult data from all estates at once, but also limit access to each 5 managers to their specific estate.

Each permanent employee has also been equipped with a mobile only access. Thanks to these accesses, they can enter on their phone all the tasks they perform directly in the vine plots or in the cellars, in real time. Along with the tasks, they can also and enter their time spent for them and their teams, allowing Maria to extract from Process2wine time sheets and payroll preparation very easily at the end of each month, saving her a lot of paperwork.

She can also consult the various inventories anytime and from any place, for instance during trade fairs and commercial meetings, making sure of the availability of each product at any given moment, avoiding selling twice the same wine.

Maria's bosses where also able to open read-only accesses to the software, allowing them to consult in real time and from anywhere any data required to stay informed. This saves Maria a lot of time since she does not need to prepare and send reports before each meeting. Furthermore, these meetings became more relevant as she and the board can use the Business Intelligence module of Process2wine to make data-driven decisions on the spot, such as launching or not the production of a new sparkling wine.

This morning, Maria had the visit of an inspector from the ministry of agriculture asking her to show the amount of various phytosanitary products there were sprayed in the vineyards since the beginning of the year. With a few mouse clicks, she was able to display the required information in less than a minute. When the inspector left, Maria sigh in relief remembering how tedious these inspections where back when she didn't have a production management software.

With the time saved, she decided that she could indulge herself with a small glass of fine Tawny as a reward for the decision she made to choose Process2wine.

ETOH

Maria is confronted with the major problem of the wine and spirits industry: the heaviness and administrative complexity and the mental load associated with it.

While you already have to worry about climate risks, finding business opportunities, each manager is often bogged down in the administrative management of his position. The more the company grows, the more the administrative weight grows exponentially: this is often what is associated with the theoretician Brooks.

Maria's fear is that adding a new tool or a new process will further complicate, increase management and require re-entry. But she recently listened to an interview of Paula, a Spanish winemaker, reluctant to digital but who found an application that really saved her time: EtOH Suite. She explains that she had to agree to change the way she works, but it was to improve performance.

Maria lets herself be convinced and begins to test the application on her own.

She first imports her contacts: well, she sees that in addition, EtOH Suite manages the GDPR for her! So much the better because his Excel file was not very compliant until then!



She can also manage all of her deals and orders and add notifications: perfect, at least her smartphone can remind her to follow up with her customers. And if she's on the move: no big deal, she can do it from mobile.

The CRM part is really interesting: indeed, it will be able to manage the commercial performance as a team and follow the actions on the prospects of each person. This will really improve communication and information sharing.

In addition, everyone can follow their own Dashboard with their key performance indicators: a good solution for monitoring their business objectives for themselves and their team.

She can create task templates and assign them to her team. Perfect, this will allow her collaborators to know what to do and when. Plus, she can better ensure that the shipments of samples and marketing materials are well done.

It can also create forms: this can be interesting to manage inventories more easily. We could also use it for the management of employees but also why not, for internal tastings. This would allow us to have the tasting notes of the oenologists.

She decides to contact EtOH so that they come and give a demonstration to her team and help her set up the tool internally: it is certainly simple and intuitive, but the tool changes practices. She really needs a Consultant who also helps them to change processes. After all, it's not the tool that makes the processes, it's the processes that dictate how the tool should work!

WATGRID, SA

Maria did some research on modern ways to simplify her winery management and found WINEGRID, a Portuguese brand focused on the development of new technological solutions for process digitalization in the wine industry. Its technology, Oenosensing, has already been awarded by Vinatech-Sifel as the best innovative product, which made her believe in its reliability and accuracy. She also found out this brand has already been adopted by wineries all over the world, some of which are well-known, being currently implemented in five continents and more than ten countries.

Maria understood that WINEGRID is a distinctive tool to obtain real time information on the key parameters of the winemaking process. With an unique and patented technology consisting of sensors, a computational platform and a web app, WINEGRID offers a range of solutions to monitor the several stages in the winemaking process (pressing, fermentation and maturation) remotely and in real-time.

Maria also found in WINEGRID the last motivation her company needed to invest in sparkling wines, since WINEGRID has a specific sensor to monitor the second fermentation in bottles, keeping track of wine's temperature, pressure and user handlings.

Maria's confidence in WINEGRID's solutions led her to propose them to the board of directors, who, after analyzing all the advantages, decided to implement them in their wineries. After their first harvest with the WINEGRID's solutions, the improvements started to appear. There was more operational efficiency, since manual sampling was no longer necessary and the time spent on this task was greatly reduced, resulting in the preservation of the wine quality, without unexpected stagnating yeasts or any excessive additives.



Consequently, this technology freed up time in Maria's and other employees' agenda to other important tasks, improving their efficiency.

It also had several advantages in management improvement and simplification, since it allows a proactive and predictive process management. The automatic detection of fermentation events and the possibility of creating customized alerts make it easier to know when a certain value has been reached and thereby help in the decision-making process, allowing to act at the right time.

WINEGRID's solutions solved several Maria's management issues, allowing digital monitoring of her wineries, tanks, barrels and bottles, all in one screen. Having all the data in only one platform, anytime and anywhere, her job of building weekly reports became much easier, since WINEGRID DASHBOARD will send her automatic reports at any predetermined hour. This digitalization has also greatly reduced the amount of physical paperwork, freeing up space in her office and making it easy to keep all the bureaucracies up to date. Maria achieved more efficiency at work and gained time to finish all her tasks without delays.

Another advantage is that this system can easily communicate with the other management systems they use in Maria's company. With all the data integrated, Maria has now an overview of all the processes inside the winery, which brings more insights and improvements. Now Maria believes this was their first big step for their wineries to become Cellars of the Future.

VIMÉTRICA AGRO

The INCAFO project will allow the management of the information on the vine leaves, which are collected by the farmers, and which were kept in a database, which will make it possible to carry out the records quickly and the farmers can have access to the information.

PARSEC SRL

The case of Maria is very frequent in viticulture in small to medium structures. Beyond the mental load, and the availability, viticulture is a very complete activity which affects both the management of the vineyard and the management of the wines until the packaging in bottles. As the vine is a living plant, fragile submitted climatic hazards and diseases and that wine is a food product also subject to quality and conservation constraints in order to maintain its market value, it is essential to devote particular attention to viticulture and to the processes of vinification, maturing, preparation and packaging, and to be able to justify a perfect mastery of the processes without weighing down and complicating the work in the cellar.

It is for this purpose that Quadr@ centralizes all the information of the company: management of the Vineyard: plots, treatments, ... of the cellar (vat and cellars), of the laboratory, of stocks, and exchange with the ERP all the information necessary to carry out an effective management from a customizable interface to the configuration and the evolutions of the company.



Thanks to this digital assistant Maria will have a better follow-up and will be able to delegate tasks more easily and integrate the computer tool as a process management support. The crossing of information with the operations carried out makes it possible to evaluate the quality of the tools, of the processes to improve the skills of the personnel, to involve them more with clear and up-to-date dashboards that can be consulted on smartphones.

By automatically collecting information from human resources, Maria will be able to automatically transfer the information to her accounting firm for the establishment of pay slips, even during periods of high activity.

The inventory will be updated automatically according to withdrawals or contracts already made. Automatic measurement of tank volumes will greatly simplify the part of the work devoted to compliance with legal obligations.

Quadr@ will be the perfect tool to carry out the digital transition of the cellar by connecting all the communicating equipment on a single database in order to develop specific applications to certify the processes, improve quality and productivity and develop export sales. .

The implementation of an industrial-type organization will be an essential asset for its competitiveness and its internal and external growth.

SOFTWINE

We are experts in the Kanban methodology, which digitizes information flows, eliminating emails and phone calls. All orders are attached to each Kanban card, eliminating the need not only to print, but also to search for the document, since it is attached to each order. In addition, all the activities and movements of each order are recorded, making it possible to trace each action digitally and immediately. It is ideal for managing export orders.

MORENA INZENJERING

Maria's Challenges: - Tracking and managing different autochthonous grapevine varieties, vine farms and wineries - Control the procurement of raw material - Tracking and managing the winemaking Maria's challenges are in line with challenges that Morena encountered while designing the software solution for thorough management of procurement and production processes for the food industry. We designed our software upon 20+ years of experience working for clients in the frozen fruit, wine and dairy industry. The experience of our clients shows that the implementation of the software enabled at least a 70% improvement in the control and management of business processes. EVALUATION AND ACCEPTANCE OF THE RAW MATERIAL, WITH DIFFERENTIATION BY GRAPEVINE VARIETIES, BY VINE FARMS AND GEOGRAPHICAL ORIGIN When receiving the raw material, the origin of the vine is simply identified, the received raw material is measured, classified by variety and quality (optional: a financial liability is formed towards the supplier) and the entry into the production facility is recorded: all of this in three mouse clicks!



A set of reports will provide Maria a detailed insight into material-financial transactions with suppliers for each winery, as well as the value of raw materials procurement (by variety and quality, by geographic origin...) for each vine farm. TRACKING AND MANAGING WINEMAKING BY WINERY, OPTIONALLY BY CUSTOMERS AND DELIVERY Information about the origin of the used raw material is passed through the production segments, all the way to the sale of the product - the traceability of the products from the field to the table is ensured. During production, along with consumption of raw materials, the software generates information about usage of packaging materials as well as other materials necessary for productions. Definition of work orders and recording of work performance by shifts is simple, with significant automation. Documenting the customer's specific requirements is included with the delivery date notification. All that provides detailed reports for Maria, with insight into production lines efficiency: consumption of materials, quantity of waste, quantity and quality of final products. The criteria for filtering reports can be all relevant data: grape variety, semi-finished product, product, customer, period/date of delivery, period/date of work (production) etc. Maria can have production reports for each winery, on a daily and/or desired periodic level. CALCULATING THE PRICE OF THE PRODUCTION With the inclusion of other (non-production: electricity, labor costs, machinery costs...) costs, software can calculate the price of the product. QUALITY CONTROL Aware of the fact that quality testing is an essential segment in the food industry, we have ensured the documentation of performed quality controls from the reception of basic raw material to the sale of finished product.

This software solution will give Maria control, reduce workload, stress and potential failures, while significantly reducing paperwork. The software is designed so that the user can easily adapt the documentation to his business rules, without additional involvement of the programmer. Of course, there is always room for improvement and we are ready to provide.

E-TAG RFID FRANCE SARL

Maria can provide extra security to her professional clients all over the world thanks to the TIVE TAG logger. She will start the logger with the TIVE TAG smartphone application and upon delivery, her client will be reading the tag with the same application. This saves time and provides an image of dedication to customer's satisfaction and wine quality. All gathered data are automatically sent by email to Maria's email, so she can also assess the performances of her logistics partners.

UNFIA SRL

We are developing a seamless and paperless supply chain for the wine industry. Once the order is placed by the buyer and confirmed by the producer the platform automatically prepares documentation and notifies the producer in something is needed. All the order history with the specific paperwork can be accessed from the producer profile on our platform so Maria can always go back and check on them.



Also, the platform can show 24/7 the status of the orders, if they are closed, in transit, still to be shipped or if they are waiting for approval. Maria can now have control of the situation from her dashboard. In the medium run, we plan to implement in the platform even some software that can help Maria and her bosses to manage the day-to-day operation in the winery. Also, these softwares will be integrated with each other so the AI on the platform can notify Maria and her bosses if there is something suspicious or strange requesting Maria and her bosses to verify it. These performance data will also be visible from her dashboard along with the sales data so Maria and her bosses can look at the aspects they may lack and develop a plan to improve their businesses. All of this information will be available digitally with graphics and insights that can help Maria to be more organised and at the same time by having everything in one place instead of papers in folders around the office.

INSTEAD

Thanks to Agreo Vine & Wine, Maria has found the perfect web solution that will allow her to centralize all the technical information from the vineyard to the bottle, and to ensure that it is reliable.

Managing 95 ha of vines on 3 different sites requires clearly defining and monitoring the evolution of her crops: initially, Agreo will allow Maria to create all her vine plots and draw them on a map (or import if she has already carried out GPS surveys). Thanks to this mapping, she will be able to follow the history of the vineyard's plantations, but she will also be able, in real time, to follow the evolution of the vineyard, all the activities and all the observations made in the fields on thematic maps which will allow Maria to make decisions.

The collected information on the jobs carried out on the plot (products used, time spent by each person or each team, etc.) and measurements made in the vineyard (monitoring of phenological stages, counting, sampling, monitoring of diseases, etc.), means no more paper! Maria's teams will use the Agreo mobile application, which is very easy to use and allows data to be collected in real time throughout the work period.

At harvest time, Maria will automatically import her maturity controls and plan her harvest considering all her constraints (weather, availability of teams, quality of the harvest, etc.). With Agreo Wine, Maria's cellar master will be able to record all the operations carried out during vinification and ensure full traceability from the harvest to the bottle.

Finally, Maria, through personalized PowerBI dashboards, will have a real-time and automatic view of her production indicators (number of hours per person, per plot, per month / Quantity of products used / Availability of stocks / % of surface worked etc.).

In summary, no more Excel files and paper sheets scattered throughout the company, all production monitoring information is collected, centralized, and organized in Agreo Vine & Wine for effective monitoring of production in real time.

In addition, Agreo Vine & Wine can be connected to the WinePilot platform to automatically feed some environmental impact indicators (View item #6 - ADAPT PRODUCTION IN RESPONSE TO MARKET REQUESTS for more information)

WICA BY EPAWI



For more information about the project or if you would like more details about a solution, contact us!

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