

Popping Bottles

A TrakSYS™-Powered Success Story of
Production Management at Corticeira Amorim



Featuring Parsec Partner

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AMORIM

About Corticeira Amorim

Corticeira Amorim is the largest cork processing group in the world. Founded in 1870, the company currently has dozens of business units spread across five continents, exports countless products to more than 100 countries and has a diversified network of 27,000 customers. Based on strong sustainability credentials, and developing an activity with a positive impact on climate regulation. Currently under the leadership of the fourth generation of the family, which cultivates the values of longevity, ambition, pride, attitude and passion, the same as always in these 150 years of successful history, the company invests millions of euros annually in R&D+I, makes 94% of sales outside Portugal and employs more than 4400 employees. Adding value to cork, in a competitive, differentiated and innovative way, in perfect harmony with nature, is, therefore, the mission of Corticeira Amorim, which in 2021 registered 837.8 million euros in consolidated sales. To learn more, visit amorimcork.com.

Overview

Founded in 1870, Corticeira Amorim (Amorim) has spent the last 150 years firmly cementing itself as the world's premier cork producer, manufacturer, and distributor. With a vast portfolio of products and solutions ranging from wine and champagne stoppers to space-grade materials, Amorim has consistently innovated and pushed the envelope to extend the utility of its plant-based product. Originating in beautiful Portugal and stretching to the final frontier—this connoisseur of cork has already transformed the world many times over and still shows no signs of slowing down.

With its eclectic portfolio of products and an ever-increasing customer base, the team at Amorim realized they needed to find ways to streamline their production processes. Intent on establishing uniformity throughout their facilities around the world, the Amorim team sought to adopt a system that would be agile enough to optimize their various production processes and versatile enough to adapt to the unique needs of each individual site. With an understanding of the goals firmly in hand, Parsec's Certified Partner, Kaizen Tech, introduced Amorim to the only platform they knew would be up to the task. That platform...was TrakSYS.



Goals

- Provide real-time visibility and insight into the factory floor
- Automate KPI data collection, with an emphasis on OEE and process margin control
- Automate production flows
- Standardize production procedures to optimize inventory management
- Provide complete and accurate real-time and historical reports for fact-based decision making
- Facilitate operator involvement in Kaizen activities
- Optimize administrative workloads via digitalizing paper-based processes
- Improve traceability
- Improve quality management



Challenges

- Lack of shop floor visibility
- No efficient system for root-cause analysis
- Lack of insight into true inventory levels
- Reliance on paper-based record keeping
- Manual production processes and data entry

Solution Overview

To get started, Kaizen Tech worked with Amorim to pilot a TrakSYS project at one of their Champagne cork stopper facilities. It quickly became clear to the Amorim team that TrakSYS, with its ability to provide each of their facilities with the unique suite of tools and insights they needed to thrive while simultaneously allowing for uniform operational control and insight, was just the platform they had been looking for. And so it was that, after the initial test site, Amorim and Kaizen Tech set about implementing TrakSYS at the company's 25 global production sites.

With optimization being the theme that underscored Amorim's goals, Kaizen Tech began designing a TrakSYS rollout that would (amongst other things) un-cork production bottlenecks, help improve product quality, and provide operators with real-time inventory levels. To that end, the Production Management module of the platform was implemented to increase the efficiency and speed of production runs. Operators also gained the ability to monitor material consumption in real-time, which had previously not been possible.

On the heels of Amorim's Production solution came TrakSYS' Inventory Management. In addition to further informing the material consumption reports mentioned above, this solution enabled Amorim to dramatically improve its raw material ordering and warehousing processes. With production operating more effectively, scrap and reject had decreased, which, when paired with accurate measures of material consumption, enabled teams to stop over ordering (and stop overpaying for) raw materials. The contextualized, real-time data that these solutions provided enabled Amorim to do cost analysis reporting at the start of the month—a practice that, before TrakSYS, had to be conducted in the middle of a given month once the previous month's data had been collected and reviewed. With this reporting now happening at the start of each month, corrective actions and changes to production schedules could be implemented as necessary throughout the month to ensure financial goals and thresholds were met.

Batch and Recipe Management was implemented to eliminate errors and deviations brought on by manual recipe and production data entry. By integrating with Amorim's ERP system, TrakSYS gained the ability to select recipes automatically. When a customer contract closed, the resulting new order would trigger within TrakSYS, and the platform would automatically select the appropriate recipe. TrakSYS would then cue the recipe for production and guide the

Solution Overview

equipment through execution, step-by-step, thereby optimizing inventory consumption and creating a standard for each unique recipe and batch process. Automating their batching processes has helped Amorim avoid the potentially costly pitfalls that arise through poorly or improperly executed batch runs and also enabled end-to-end traceability.

As the next step in further optimizing their global manufacturing operations, Amorim and Kaizen Tech have already begun working on introducing TrakSYS Algorithmic Production Scheduling and SPC to each of the 25 global facilities.

Key TrakSYS Features



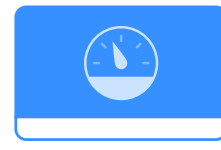
Production Management



Single-Instance Multi-Site (SIMS)



Algorithmic Production Scheduling (APS)



Performance Management



Quality Management



Batch Management



Statistical Process Control (SPC)

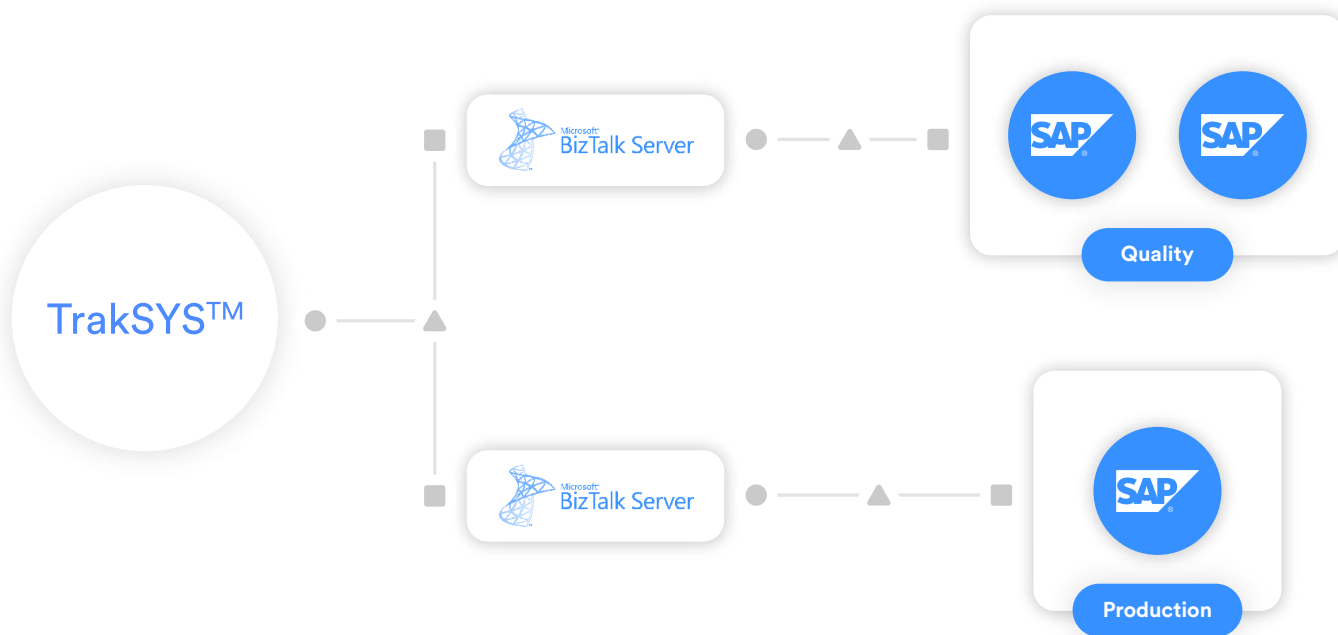


Inventory Management

"Amorim, due to multiple factors, never invested so much in manufacturing information systems. The focus was (and still is) to fulfill our client's orders on time and above the standard quality. In the past, all the plants had different ways of registering what happened on the shop floor, but the records were mainly made on paper and were written by an operator. Later, another person would transcribe and enter that info into the ERP. This could be done at the end of the day, week, or month and could occur in different systems depending on the company (BaaN, System 21, NAV, Excel, etc.). This meant that ERPs never had the inventory data online, where it could be accessed by the people who run the business."

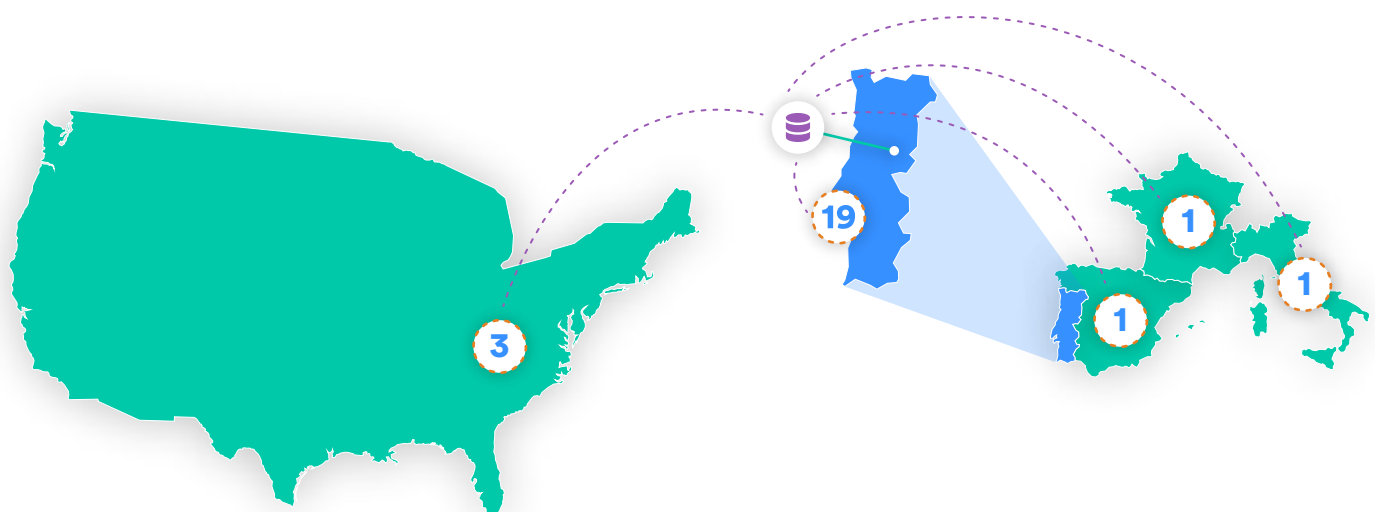
Rogério Nunes - System's General Manager - OSI

Solution Architecture



Single Instance Multisite Deployment

- 25** Number of Sites Worldwide
- OPC and Logic Service at Each Site
- 4** Centralized Database
- 200+** Users across all sites
- 1,000+** Machines across all sites



Results



Save over €26 million by optimizing inventory levels



Improve OEE by 5-10 points in each of their 25 facilities

- > Achieve their paperless goals by eliminating paper from the factory floor
- > Prevent costly poor quality issues which resulted in the savings of several million euros and boosted profitability
- > Establish complete end-to-end traceability across each facility
- > Improve on-time and in-full metrics

Example Screens

Express Container Declaration

[Return](#)

Container Quantity: 9,000 9,500 10,000

Printer

F2 Labeling	Sub-Product Cork Container	
F2 Labeling Client: AMORIM FRANCE, S.A.S.	Product Cork Container	Sub-Product Cork Container
F2 Labeling Client: AMORIM ITALIA, S.P.A.	Product Cork Container	Sub-Product Cork Container
Reverse Labeling	Product Cork Container	Product Cork Container

Machine Operation

Machines

Molding 1 CHK. 1100009944 In Execution	Molding 2 CHK. 1100009944 In Execution	Molding 3 CHK. 1100009944 In Execution
Molding 4 CHK. 1100009944 In Execution	Molding 5 CHK. 1100009944 In Execution	Molding 6 CHK. 1100009944 In Execution
Molding 7 CHK. 1100009944 In Execution	Molding Reversals CHK. 1100009944 Stopped	

[Machine Configuration](#) [Empty](#) [Operate Machine](#)

Machine Selected - Molding 3

Id Machine: 10
 Machine Name: Molding 3
 Id of Machine: 976296
 Of in Machine: CHK1100009946
 Of Execution: 977458
 Execution Name: CHK 1100009946Molding97926
 Machine State: In Execution
 Machine Configuration

[Launch Prods](#) [Launch Sub-Prds](#) [Launch Mats](#)

Production Orders

Maintenance Order CHK. Maintenance Order No Batch	42x33 BS32 CHK. 1100009944 No Batch	48x33 BS32 CHK. 1100009944 No Batch
42x33 BS32 FSC CHK. 1100009944 No Batch	48x33 BS32 FSC CHK. 1100009944 No Batch	50x33 BS32 CHK. 1100009944 No Batch

Selected Manufacturing Order


Production Order Id: 976296
 Production Order Operation Id: 976297
 Production Order Name: 976296
 Operation Id: CHK1100009946
 Operation Code: 2
 Operation Name: A000000000002
 Operation Description: CHK_A_Moldscap
 Preparation Time: Molding
 Machine Execution Time
 Execution Time Manual Labor: 4200
 Products: 65000032
 Sub-Products: 330000054

Molding: Declare Container


Machine Overview Exits Overview Return

Machines Exits Containers to be Declared


F2 Labeling



Sub-Product

Cork Container 

Product

Cork Container 

Molding

Nome Moldadora 1
 Tipo Produto/Subproduto (Mono-Saida)
 OF

Product Destination

Centro Ensilagem C.E. Stock Corpos em Bruto
 Silo Destino Silo CORPOS MOLD 42x33 RCT
 Quantidade 1234063 UN

Change Silage Center Destination

Selecionar o tipo de contentor para destino do produto)

[Change Silage Center](#)

Change Container Destination

Selecionar o tipo de contentor para destino do produto)

[Change Container](#)

Treatment 01 (4° Rotation)
 (OF: 1100651159)
 Enc.: 4220007873 / 000010

Rotation

Currently Executing

4220007873 / 000010
 Anonymous Wines Canada, Inc.

CHK. 1100651159
TRD5.00_40_00

TR05.00_40_00
 Versalo 1
 Versalo 2021.11.18

Active

Mixer

Mix No. 4

Item
 RE CH_2D 48x30 0,5 C CF M T

17984

Mix
 4th Step

Start 16:30:46
 Total Duration
34.5 min

Treatment Execution

Load
 1st Step

Executed 1 of 6

Start 16:34:19
 End 16:35:04
 Total Duration
0.8

Vacuum
 2nd Step

Executed 1 of 6

Time (sec)
 Plan: 300

Real: 293

Start 16:35:04
 End 16:40:03
 Total Duration
5 min

Injection
 3rd Step

Executed 2 of 6

Product Code
 Plan: 902000208

Real: 90200208

Mixing
 4th Step

Executed 4 of 6

Quantity
 Plan: 719

Real: 719

Start 16:40:03
 End 16:45:34
 Total Duration
5.5 min

Vacuum
 5th Step

Waiting for Execution

Time (sec)
 Plan: 1200

Start 16:45:34
 End 00:00:00
 Total Duration
19.7 min

Unload
 6th Step

Waiting for Execution

Time (sec)
 Plan: 60

About Kaizen Tech

Kaizen Tech is a company that implements digital transformation and industry 4.0 projects. The company delivers innovative MES/MOM solutions that continually add value to its customers. It differentiates itself through innovation and continuous improvement of its products and processes, which allows it to carry out agile and innovative implementations. By having a multidisciplinary team, it supplies and manages all components of a MES solution such as the implementation, evolution and support of TrakSYS software. It also supplies, through representation or through partners, equipment, servers and eventual connection needs between the system and the customers' equipment. To learn more, visit <https://kaizen.tech/>.

About Parsec

Parsec is the developer of TrakSYS™, a real-time manufacturing operations management software platform deployed at thousands of factories in over 100 countries. TrakSYS aggregates data from multiple sources to deliver real-time, actionable intelligence that helps manufacturers to reduce production costs, decrease lead time, and improve profitability. To learn more about Parsec and TrakSYS, please visit www.parsec-corp.com.



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