

ArtSoft
— consult —

The Art of Software Development

**A timber trading
operations management
software**

Key Information



Industry:

Manufacturing



Project duration:

3 years (between 2017 and 2020)



Team Size:

2 specialists



Technologies:

- ASP.Net MVC, Telerik, Xero, Automapper
- SQL Server



Services:

- Analysis
- Architecture and software design
- Implementation
- Deployment

Highlights

- This application was developed with the aim of assisting lumber producers in monitoring the entire technological flow, from raw materials to finished products, while also managing orders and transportation logistics for lumber via both road and sea.
- The client request was for a sophisticated tool that enables processors to create technological processes and to maintain a history of all the technological processes applied to a specific order.
- A key point in the development of the application was the prediction of costs for the complex wood processing operations.

Product Overview

Given the variability in the cost of lumber, technological processes and transportation, the client required an application able of managing these variables to ensure accurate pricing for finished wood products.

To address these complexities, the application integrates a dynamic pricing model that adjusts for fluctuating costs and currency exchange rates, ensuring that users can offer and maintain fair pricing throughout the supply chain. It incorporates real-time market data to accurately reflect changes in material costs, processing fees, and transportation expenses providing a comprehensive view of the financial aspects of wood product manufacturing and sales.

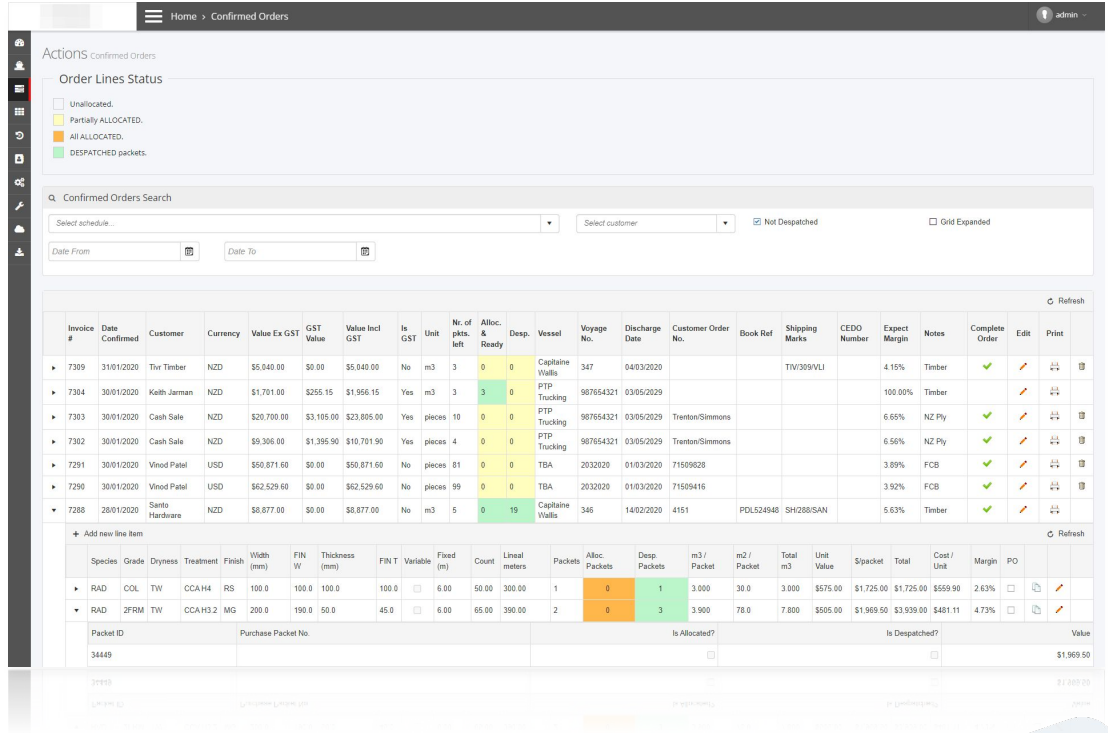
Additionally, the application offers a feature-rich dashboard that enables users to track the progress of each order, detailing every technological process the wood undergoes. This level of transparency and control empowers businesses to optimize operations, reduce waste and improve overall efficiency, leading to higher profitability and customer satisfaction in competitive marketplace.

Requirements

The project requirements were to create a complete solution, designed specifically for the timber processing sector, focusing on optimizing operations, increasing efficiency and reducing costs. It sought to innovate and streamline the entire workflow, from raw material management to final product delivery, addressing the distinct challenges of the sector.

Challenges

Tackling the **sophisticated algorithms** required for the technological processes of wood management posed a significant challenge in the development of application. These algorithms had to accurately model the complex interactions between various stages of wood processing and also ensure the seamless correlation of vast amounts of data. Furthermore, integrating these processes with the Xero API introduced an additional layer of complexity. This integration was needed for financial management, enabling real-time tracking of costs and revenues.



Home > Confirmed Orders

Actions Confirmed Orders

Order Lines Status

- Unallocated.
- Partially ALLOCATED.
- All ALLOCATED.
- DESPATCHED packets.

Confirmed Orders Search

Select schedule... Select customer... Not Despached Grid Expanded

Date From Date To

Invoice #	Date Confirmed	Customer	Currency	Value Ex GST	GST Value	Value Incl GST	Is GST	Unit	Nr. of pcks. left	Alloc. & Ready	Desp.	Vessel	Voyage No.	Discharge Date	Customer Order No.	Book Ref	Shipping Marks	CEDO Number	Expect Margin	Notes	Complete Order	Edit	Print
7309	31/01/2020	Tiv Timber	NZD	\$5,040.00	\$0.00	\$5,040.00	No	m3	3	0	0	Capitaine Wallis	347	04/03/2020			TTV100V/LJ		4.15%	Timber	✓	✎	🖨
7304	30/01/2020	Keith Jarman	NZD	\$1,701.00	\$255.15	\$1,956.15	Yes	m3	3	3	0	PTP Trucking	987654321	03/05/2020					100.00%	Timber	✓	✎	🖨
7303	30/01/2020	Cash Sale	NZD	\$20,700.00	\$3,105.00	\$23,805.00	Yes	pieces	10	0	0	PTP Trucking	987654321	03/05/2020	Trenton/Simmons				6.65%	NZ Ply	✓	✎	🖨
7302	30/01/2020	Cash Sale	NZD	\$9,306.00	\$1,395.90	\$10,701.90	Yes	pieces	4	0	0	PTP Trucking	987654321	03/05/2020	Trenton/Simmons				6.56%	NZ Ply	✓	✎	🖨
7291	30/01/2020	Vinod Patel	USD	\$50,871.60	\$0.00	\$50,871.60	No	pieces	81	0	0	TBA	2032020	01/03/2020	71509628				3.89%	FCB	✓	✎	🖨
7290	30/01/2020	Vinod Patel	USD	\$62,529.60	\$0.00	\$62,529.60	No	pieces	99	0	0	TBA	2032020	01/03/2020	71509416				3.92%	FCB	✓	✎	🖨
7288	28/01/2020	Santo Hardware	NZD	\$8,877.00	\$0.00	\$8,877.00	No	m3	5	0	19	Capitaine Wallis	346	14/02/2020	4151		PDL524948 SH288/SAN		5.63%	Timber	✓	✎	🖨

+ Add new line item

Species	Grade	Dryness	Treatment	Finish	Width (mm)	FIN W	Thickness (mm)	FIN T	Variable	Fixed (m)	Count	Lineal meters	Packets	Alloc. Packets	Desp. Packets	m3 / Packet	m2 / Packet	Total m3	Unit Value	\$/packet	Total	Cost / Unit	Margin	PO
RAD	COL	TW	CCA H4	RS	100.0	100.0	190.0	100.0	<input type="checkbox"/>	6.00	50.00	300.00	1	0	1	3.000	30.0	3.000	\$575.00	\$1,725.00	\$1,725.00	\$559.90	2.63%	<input type="checkbox"/>
RAD	2FRM	TW	CCA H3.2	MG	200.0	190.0	50.0	45.0	<input type="checkbox"/>	6.00	65.00	390.00	2	0	3	3.900	78.0	7.800	\$505.00	\$1,969.50	\$3,939.00	\$481.11	4.73%	<input type="checkbox"/>

Packet ID Purchase Packet No. Is Allocated? Is Despached? Value

34449 \$1,969.50

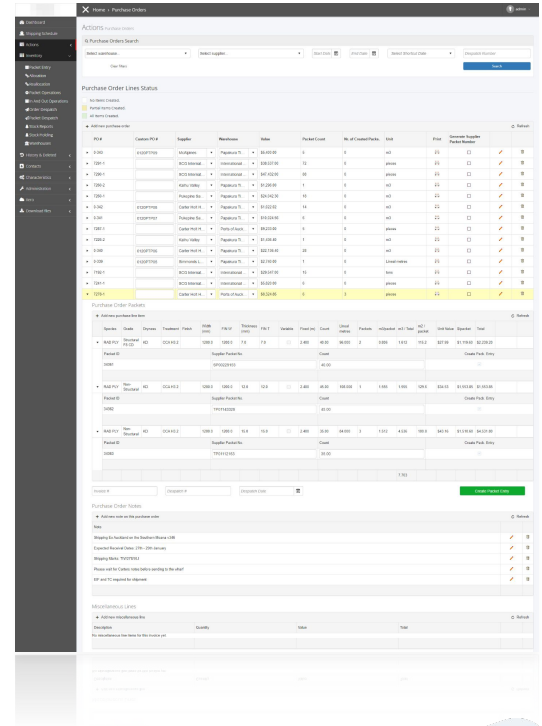
Provided Solutions

To develop this processing management application, a variety of solutions were incorporated to address the complex needs of the timber industry.

Here's an overview of the **key strategies** and technologies implemented:

- Custom algorithms were designed to model the flow from raw material acquisition through various stages of processing to the final product.
- Robust data management capabilities which combines data from various sources, ensuring that all information from timber acquisition to finished product sales is seamlessly correlated.
- To streamline financial operations, we integrate Xero accounting platform, which allows for real-time financial tracking.

- Incorporating dynamic pricing model which adjust prices based on real-time data, material cost, processing and transport expenses.
- Designed a user-friendly dashboard which provides a central hub for accessing all critical information, enhancing decision-making and operational efficiency.
- We build reporting tools which allows for generation of comprehensive reports on various aspects of timber production.



Let's get in touch

ArtSoft Consult is a trusted partner in the IT industry, providing tailored solutions to address your unique business challenges.

With our proven expertise our team delivers innovative solutions and development services.

Drawing from years of experience and industry insights, we deeply understand this industry and we look forward to working with your business.

For more details on our services and team, please [contact us](#).



Str. Eugen Ionesco, nr. 1A
Cluj-Napoca, Romania, 400357

 www.artsoft-consult.ro

 office@artsoft-consult.ro

 +40 0264 403 662

+40 0264 403 489

