Technologix
DECISION SCIENCES INC.

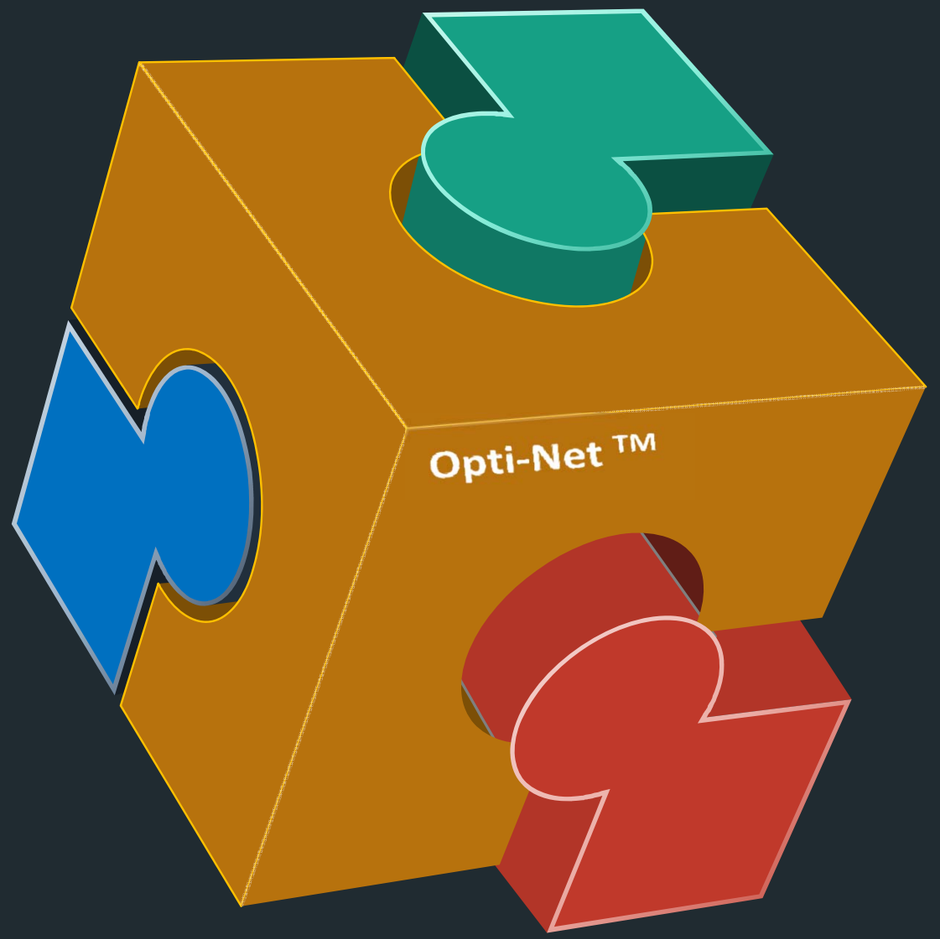
Solving Your Planning Puzzles

Planning and Optimization Tools and Solutions

We love the challenge of facing, analyzing and solving planning and scheduling problems. The bigger and more complex they are, the better. It is what we know and what we have been doing for over 25 years.

We do not offer an out-of-the-box product. We rely on **Opti-Net ™** , our development platform, to design and implement planning and optimization solutions that reflect your specific needs and the characteristics of your operation.

Within the universe of supply chain planning and optimization solution providers we offer you something different, like the yellow maple leaf in our cover page.



Supply Chain Planning & Optimization Topics

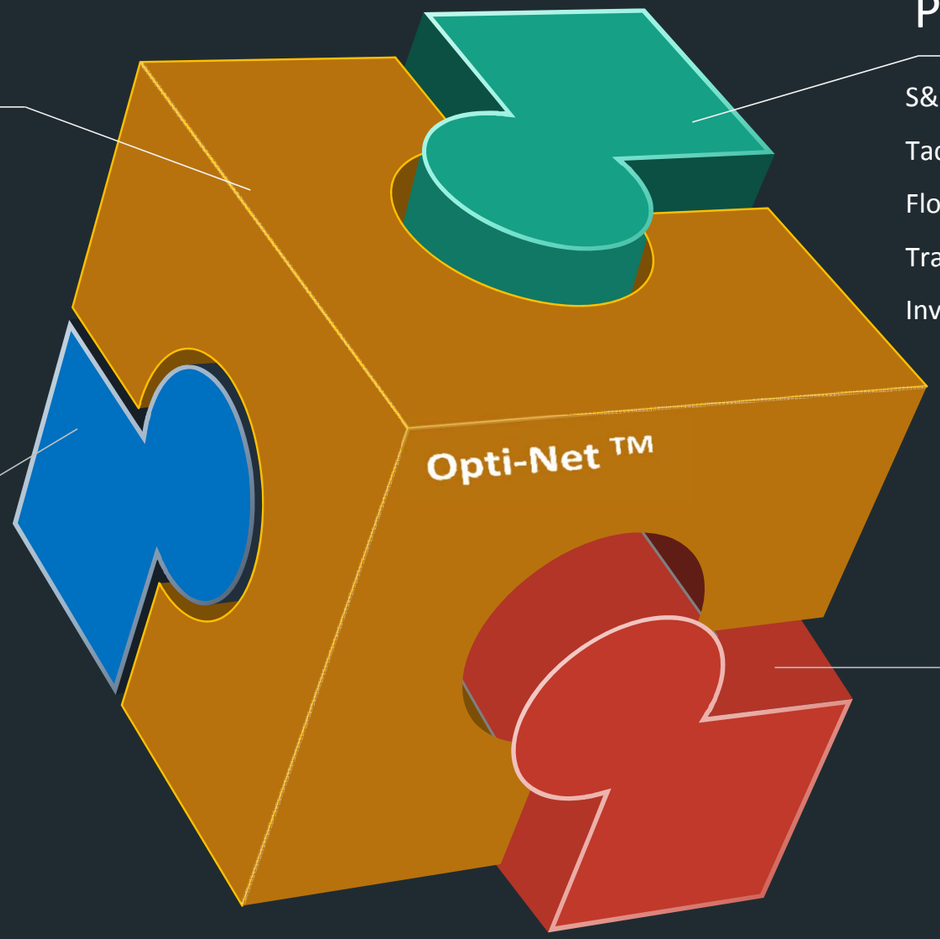
Any puzzle, any industry; the same development platform.

Strategy

- Strategic network design
- Sourcing strategy
- M&A network rationalization
- Competitive intelligence
- Global growth
- Supply chain network configuration

Operational

- Routing problems
- Continuous replenishment
- Scheduling problems
- Simulations
- Resource allocation



Planning

- S&OP solutions
- Tactical planning solutions
- Flow optimization
- Transportation and fleet planning
- Inventory optimization

Analytics/BI

- Organization of large volumes of data
- Modeling of unique, complex problems
- Data analysis

Analytics '*As a Service*'

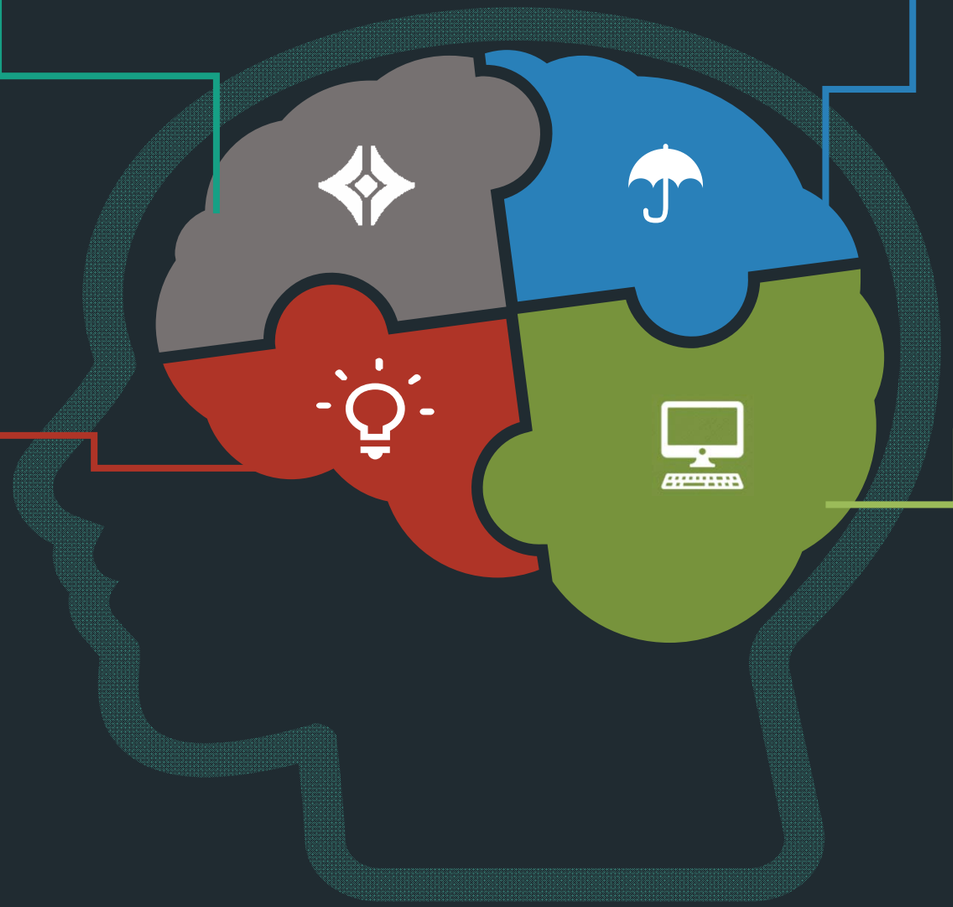
For those of you that prefer not to install or operate

Run Your Version of Opti-Net ™

We develop your complete version of **Opti-Net ™** and then maintain and run it on our servers.

Supplement Your Resources

We provide additional resources if and when needed to operate planning and optimization tools and solutions.



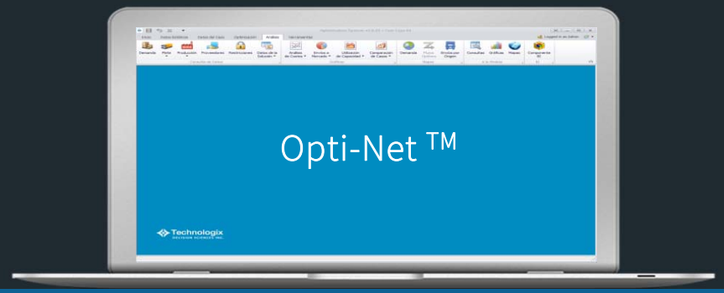
Outsourced Analytics

We develop and operate customized models and algorithms as required.

Operate Your Existing Tools

We take over the operation and maintenance of existing tools and solutions.

The Four Pillars Supporting Our Solutions



VALUE

Mathematical models that produce valid and good quality solutions

PRODUCTIVITY

A user-centric design that makes life easier for its users

FLEXIBILITY

The ability to evolve and adapt to changes in business conditions

ROI

An ROI that you will find very tough to match in our industry

What We Customize In Each Project

Everything Related to Data

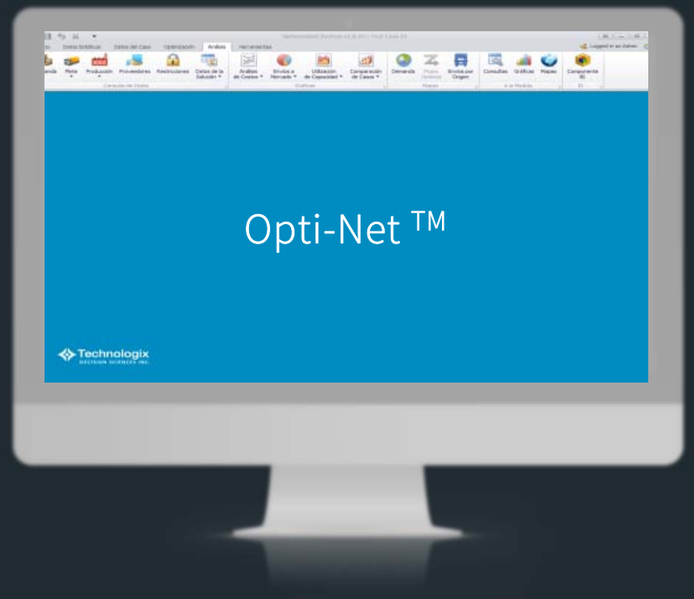
Structure

Integration

Validation

Maths

Identifying the type of model or algorithm that best fits your particular problem and needs



Logic

Implementing code and logic to facilitate the use of the app and make life easier for its users:

Demand forecasts
Data aggregation
Generation of freight and cost data
Generation of other scenario data

Analytics

Developing links to corporate B/I engines and expanding the B/I component of the app

Solving All Sorts of Puzzles For The Past 25 Years

1992 2000 2005 2010 2015 2017

Case Studies

Optimizing Replenishment @ Danone México

A custom implementation of Opti-Net to optimize the daily replenishment operations of Danone in Mexico, composed of 2 plants, 35 depots and 300 products.

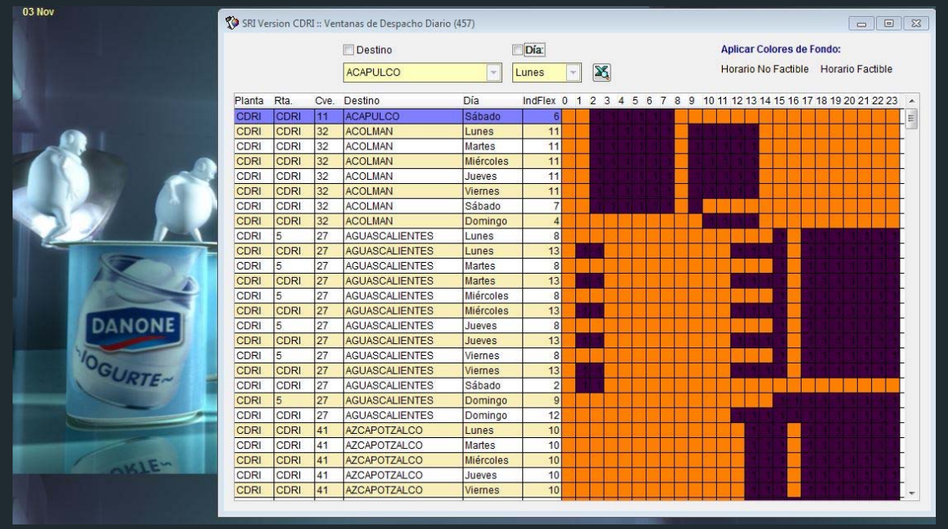
A fully integrated system was designed and implemented, with 3 modules:

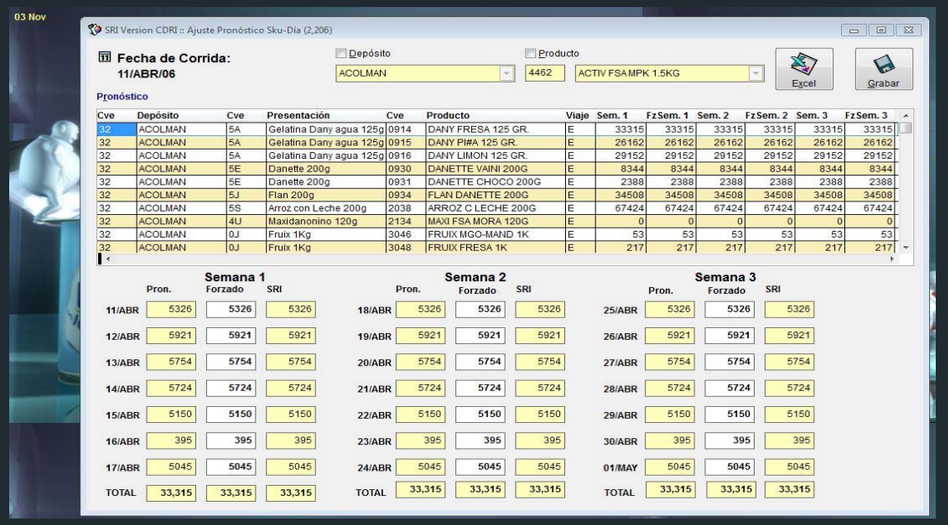
- ❖ Forecasting
- ❖ Demand planning
- ❖ Scheduling of deliveries

The system was designed to:

- ❖ Download detailed shipment data by depot and product on a daily basis
- ❖ Forecast daily shipments by depot and product for the next 14 days
- ❖ Calculate the inventory levels required, and hence replenishment quantities
- ❖ Based on there requirements, availability and priorities, develop a detailed schedule of deliveries to depots for the next 24 hours
- ❖ Synchronize net requirements with plant schedules

Indicator	Units	Jan/May 2006	Jan/May 2007	% Change	Comments
Total Tons Sold	Tons (000)	85,464	104,223	21.95	
Service Level	%	95.30	95.95	0.68	Weighted Average
On Hand Inventory	Days/Supply	10.36	9.76	-5.79	Weighted Average
Out Of Stocks	Occurrences	616	356	-42.21	
Transfer Freight	$Mex / Ton	366.8	365.0	-0.48	04 adjusted for inflation
Total Product Loss	$Mex (MM)	16.7	11.9	-28.74	Spoilage
Product Loss/Ton	$Mex / Ton	0.19	0.11	-42.11	Spoilage





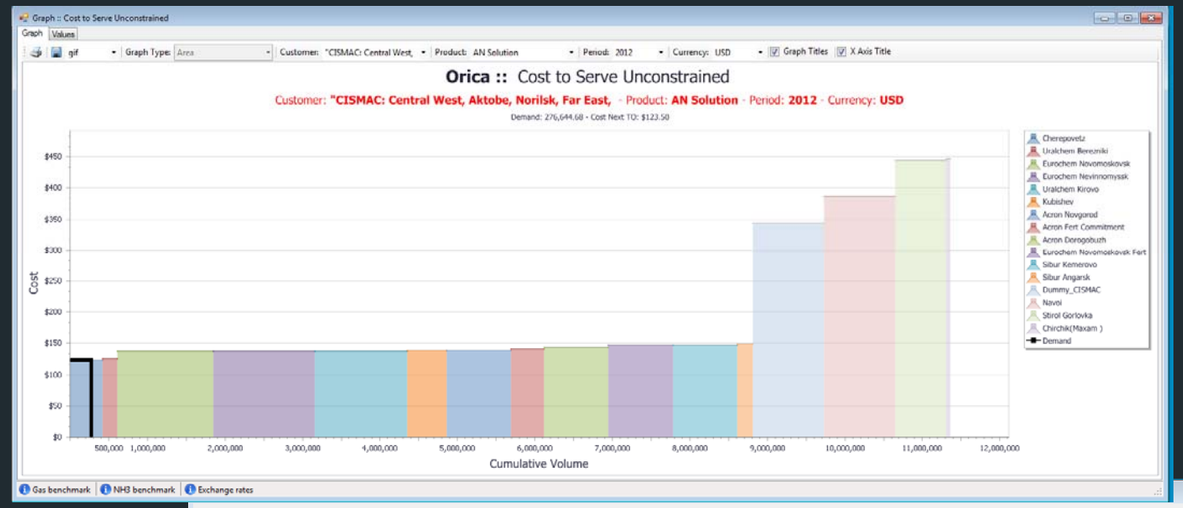
Developing Global Growth Strategies @ Orica

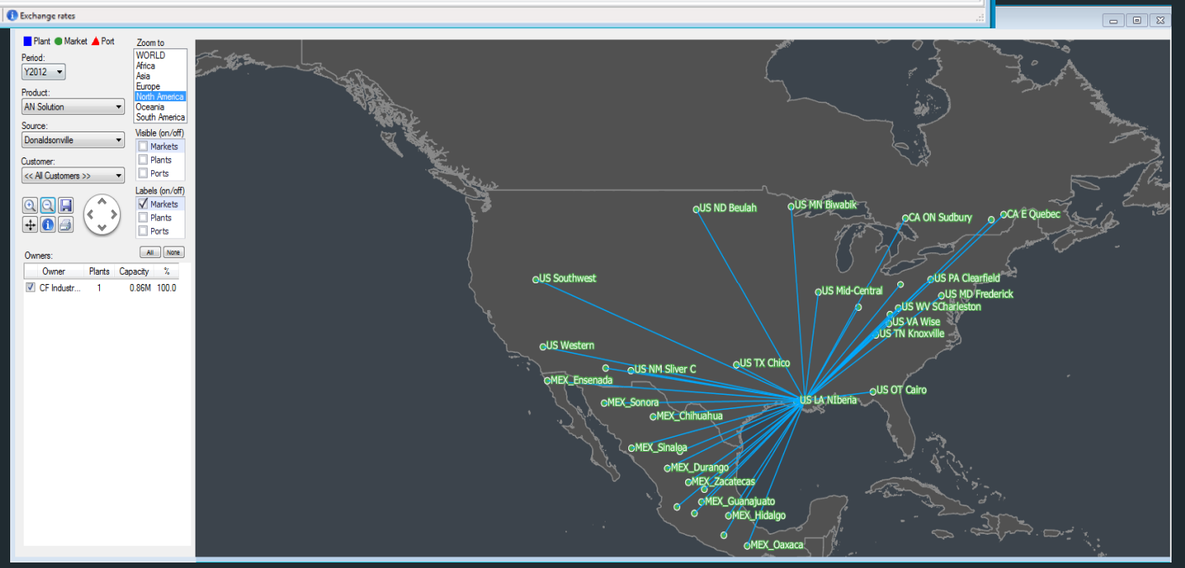
The Opti-Net platform was used to develop a global supply chain strategic planning system. What made this model unique was the fact that we modeled the entire commercial explosives industry.

As is usually the case in these type of applications, the mathematics were relatively simple and the logic required to generate scenarios very complex:

- Detailed cost of product calculations
- Generation of detailed freight data (literally millions of records)
- Detailed cartographic representation of the output
- Extensive and very specific analytics needs

The project was completed in 5 months and the system was used for a number of key, long term strategic issues as well as medium term optimal sourcing strategies.





Optimizing Routes and Costs @ US Cold Storage

US Cold Storage, a subsidiary of the Swire Group, is one of the key US third party logistics providers in temperature controlled warehousing and transportation. Its current network includes 37 warehouse locations in 13 states.

Technologix developed a customized routing optimization model for US Cold . As is the case with most Technologix implementations, the scope of this customized model and system was unique and very specific to US Cold:

They wanted to a planning tool that could predict the financial impact of a potential new account on existing routes and operations.

The applicationl has been used extensively for over 18 years, analyzing an average of 3 to 4 new business opportunities every month.

From the start this application was implemented in a SaaS format where our team builds, runs and analyzes all the scenarios.

WEST	MIDWEST	NORTHEAST	SOUTHEAST	SOUTH CENTRAL
CA, Bakersfield	IL, Minooka	DE, Milford	FL, Lake City	TX, Arlington
CA, Fresno	IL, Wilmington	PA, Bethlehem	FL, Medley	TX, Dallas
CA, Sacramento	IN, Lebanon	PA, Bethlehem (Miller Circle)	GA, McDonough	TX, Fort Worth
CA, Tracy	NE, Omaha	PA, Hazleton	NC, Lumberton	TX, Laredo (Calton Road)
CA, Tulare (North)	NE, Omaha (30th Street)	PA, Quakertown	NC, Marshville	TX, Laredo (Island Street)
CA, Tulare (South)		PA, Quakertown - West	NC, Warsaw	
CA, Turlock		VA, Harrisonburg	TN, Covington	

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