Opturion Overview

OPTURION
Intelligent Decision Support

About Opturion

Opturion is at the forefront of transforming decision-making processes in the transport, logistics, manufacturing, and engineering sectors. Its groundbreaking technology ensures regulatory compliance, exceptional customer service, and cost efficiency.

Originating as a spin-out from CSIRO and Monash University, Opturion is commercialising the outcomes of the extensive G12 research program. This program, initially from Imperial College London, led by Professor Mark Wallace, focused on next-generation optimisation powered by constraint programming and artificial intelligence. Its early success in optimising internet traffic for CISCO in 2004 marked a significant milestone.
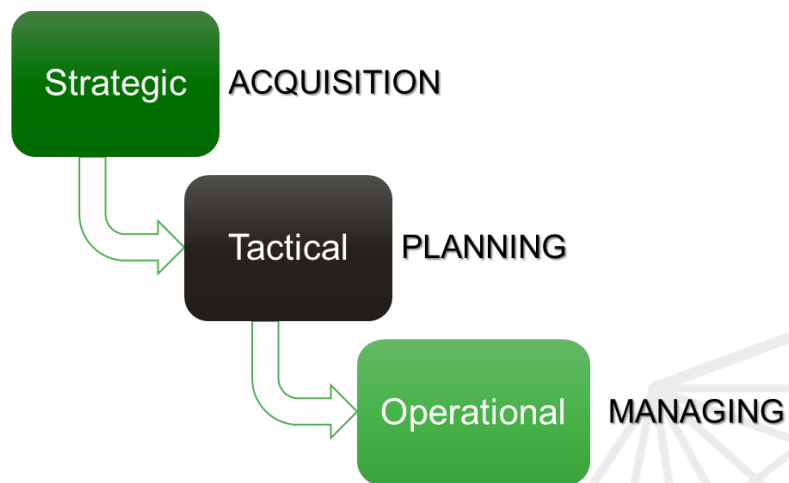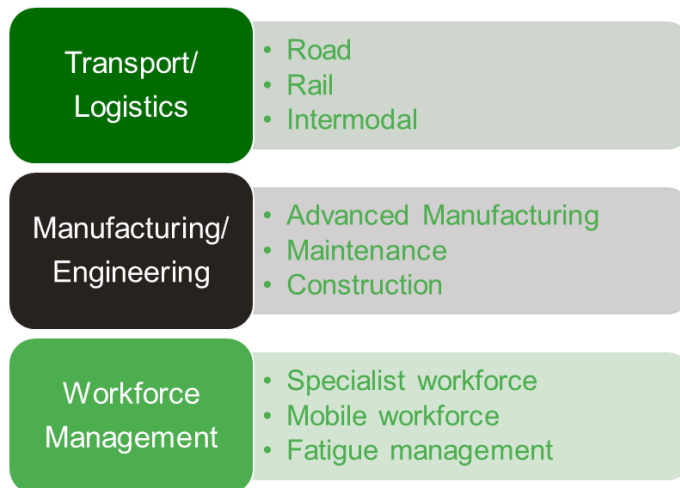
Technology Overview

Opturion boasts a distinctive technology that caters to strategic, tactical, and operational decisions. It caters to organisations striving to enhance customer service, adhere to compliance requirements, and minimise costs. Additionally, Opturion offers technology for partners seeking to embed analytics and optimisation capabilities within their platforms.

Optimisation Context

Opturion operates within various time frames:

- Strategic: Encompasses major decisions such as equipment acquisition, client expansion, and facility establishment. This includes resource allocation for specific contracts or business segments.
- Tactical: Involves advanced planning for upcoming weeks, days, or months. The focus is on efficiently implementing delivered resources.
- Dynamic/Operational Adapts to real-time events throughout the day. It is particularly valuable for unpredictable travel times, order changes, or new orders during the day.

Strategic	ACQUISITION
Tactical	PLANNING
Operational	MANAGING

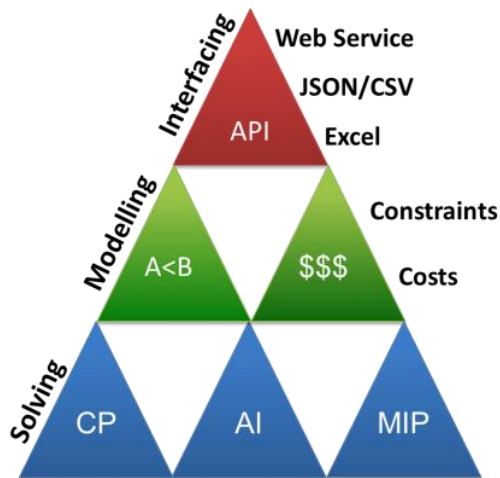| Transport/ Logistics	• Road • Rail • Intermodal
Manufacturing/ Engineering	• Advanced Manufacturing • Maintenance • Construction
Workforce Management	• Specialist workforce • Mobile workforce • Fatigue management

Opturion extends its technology and services across diverse sectors, providing systems that:

- Ensure adherence to rules and regulations.
- Deliver optimal customer service.
- Minimise costs effectively.

With offices in London and Melbourne, Opturion's technology is accessible via Oracle, Microsoft Cloud, and Amazon Web Services.

Distinctive Technology

Opturion's technology stands out due to its basis in artificial intelligence (AI) and constraint programming. This unique approach eliminates the need for translation or approximation, making it especially suited for scheduling and routing challenges. An open Application Programming Interface (API) supports integration and communication, offering access to a library of constraint and cost models.

Software Products

Leveraging the G12 engine, Opturion presents a suite of software products, including:

- **DTO** - Dynamic Transport Optimizer
- **PPS** - Production Planning and Scheduling
- **MWO** - Mobile Workforce Optimizer

Benefits

Optimisation yields advantages in three crucial areas:

- **Compliance**: Solutions aligned with business rules and regulatory demands.
- **Customer Service**: Assurance of meeting customer service levels and agreements.
- **Cost Reduction**: Identifying cost-effective solutions while upholding compliance and customer service.

Opturion's technology users have realised remarkable savings, often ranging from 5% to 20%, while maintaining compliance and user experience.

Real-World Impact

Opturion's technology has delivered notable results:

- **Manufacturing**: Enhanced manufacturing facility productivity by 10%.
- **Supermarket Deliveries**: Identified 8% to 20% savings.
- **Nation Distribution**: Reduced distance travelled and hours worked by up to 10%.
- **Warehouse Design**: Achieved up to 30% reduction in distance travelled.
- **Patient Transport**: Improved customer service and cost efficiency.
- **Couriers:** Real-time scheduling for over 1,000 vehicles with 20% improvement in customer satisfaction.

Differentiators

Opturion distinguishes itself from other optimisation technologies through two pivotal factors:

- **Speed**: Unlike linear programming, it eliminates translation and approximation, saving time and cost.
- **Responsiveness**: Offers scalable re-optimisation and dynamic optimisation, providing swift solutions compatible with real-time needs.

Expertise

Opturion's team of optimisation specialists and software engineers:

- Continuously advance the G12 core optimisation engine.
- Develop industry-specific versions.
- Create applications for clients and partners.
- Integrate with existing systems.
- Provide ongoing maintenance, support, and updates.

Over the past decade, Opturion has tackled complex optimisation challenges previously unsolvable by traditional methods, demonstrating its prowess across diverse industries. Opturion can assist partners and customers who wish to provide some of this capability as part of an integrated project team or similar arrangement.

These include:

- Complex, multi-machine, multi-product, high-tech manufacturing
- Dynamic transport optimisation for couriers and patient transport
- Large-scale strategic transport optimisation
- Optimisation of multiple resources (trucks, people and cranes)
- Tactical optimisation for national distribution
- Large-scale construction project optimisation
- Dynamic staging optimisation