



# INDUSTRIAL ENGINEERING

*Achieving faster, better quality products and services at a better cost.*

## SERVICES

- Capacity planning
- Operations improvement
- Simulation consulting
- Training

## BUSINESS CHALLENGE

Too often, organisations understand the operational difficulties and challenges that they are facing, but with the option of multiple solutions and ambiguous decision-making processes, problem solving and change efforts become complicated and difficult to implement effectively.

Industrial engineers consider business improvement opportunities by challenging the traditional way of doing business. They find better, safer and faster ways of working at a reduced cost by considering the following aspects and making recommendations to executive management:

- The allocation of resources, such equipment and labour;
- The existing physical constraints of a production plant;
- Corporate culture analysis;
- Historical performance data analysis; and
- Personal observations.

## SOLUTIONS

The industrial engineers at Bureau Veritas are expert systems integrators and problem solvers. They help clients improve their operations, processes, systems and the overall workplace using client-specific solutions. We analyse, evaluate, design and manage business improvements, encompassing facilities (buildings, rooms, equipment, infrastructures, etc.); information systems; material handling systems, manufacturing/production systems; and service processes.



The scope of our industrial engineering services encompasses:

### Capacity planning

Companies often struggle to plan the required capacity in an integrated, analytical manner, while simultaneously taking the dynamic effects of the changes to their capacity into account. We help our clients to determine the optimal production capacity needed, while considering the changes in demand for products and/or services e.g. HME equipment capacity analysis and forecasting against mine plan. Capacity planning encompasses the allocation of resources, scheduling and inventory control.

### Operations improvement

With Bureau Veritas, we help our clients to find a cost effective and quick way of analysing different improvement alternatives and making meaningful decisions that deliver value-adding results. We apply industrial engineering concepts and simulation to effectively evaluate alternatives and provide reliable decision support that considers all the influencing operational factors, from quality assurance to

personnel safety.

### Simulation consulting

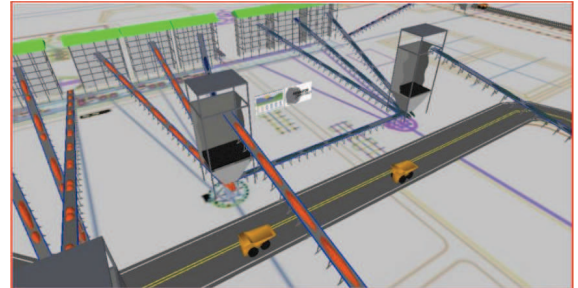
Our industrial engineers conduct simulation studies, operations management and general industrial engineering consulting for mining, rail, logistics and warehouses, service and manufacturing industries.

### Training

We offer our clients in-depth training on various state-of-the-art simulation software packages, including Simio® and SimMine®.

## KEY BENEFITS

- Increased capacity
- Business efficiencies (time, cost and process) – making work safer, faster, easier and more rewarding
- Improved output – faster, better quality product at a better cost
- A more profitable business
- Better customer service
- Increased ability to achieve more with less
- Quick, cost effective evaluation of alternative solutions
- More accurate procedures
- Meaningful decision making



## TOOLS AND TRAINING

- Simio®
- SimMine®
- ACT-OR
- Arena

## RELATED SERVICES

- Business improvement
- Project management

### INDUSTRIES

- Mining
- Rail transportation
- Industrial (manufacturing and assembly lines)
- Supply chain, logistics and warehousing
- Ports

## CONTACT

For details about this service, please contact Bureau Veritas:

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## FOR MORE INFORMATION

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- [www.bureauveritas.com](http://www.bureauveritas.com)