

COIL PROCESSING: KEY CHALLENGES THAT CAN SLOW DOWN PRODUCTION, AND HOW TO ADDRESS THEM

The most common bottlenecks, how new technology helps reduce them, and what really changes on the production line



In the **sheet-metal coil processing sector**, when orders are numerous, batches are small and coils are only partially used, production planning needs to quickly compare **different combinations of orders and material**.

An unoptimized choice can affect not only material waste, but also coil changes and the time required to prepare production.

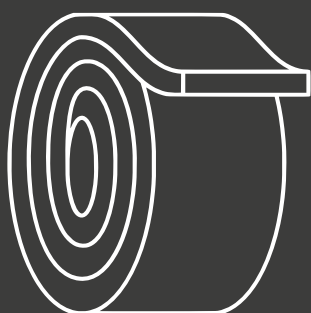
Adopting advanced technological solutions can lead to an **average waste reduction of 3%**, with reductions of up to 10% measured in production tests using actual production data, particularly in situations involving frequent format changes and compatible orders.



THE PROBLEM WHERE EFFICIENCY IS LOST

In coil service centres and processing plants, planning has to bring together fragmented orders, small batches, materials with different characteristics, stock availability and line constraints.

SITUATION	EFFECT ON THE PROCESS
FRAGMENTED ORDERS AND SMALL BATCHES	More combinations to evaluate and greater sequencing complexity
DIFFERENT WIDTHS, THICKNESSES AND FINISHES	More constraints when putting production runs together
PARTIALLY USED COILS	Risk of leftover material building up and less rational use of material
MANUAL SIMULATIONS	More time spent comparing alternatives and greater reliance on spreadsheets
DEPENDENCE ON MANUAL SCHEDULING	Greater risk of errors and of dependence on key personnel
FREQUENT COIL CHANGES	Interruptions and longer setup times
PLANNING ON PRODUCTION DATA KEPT SEPARATE	More difficulty realigning the plan with actual results
CHANGES OR REWORK DURING PRODUCTION	Need to recalculate sequences quickly
MANY LINE CONFIGURATIONS	More setups to prepare and more manual work

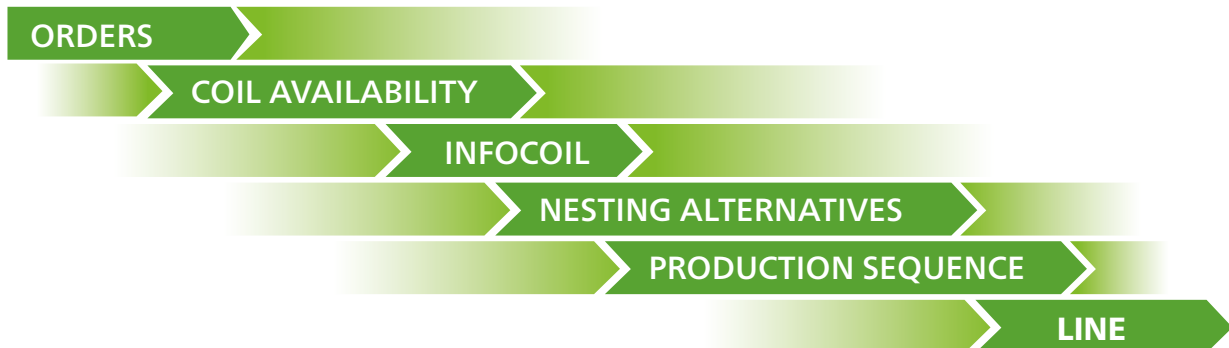


Sequencing isn't just a matter of deadlines: **orders, coil availability and line capacity all have to be taken into account together.**



HOW INFOCOIL WORKS

INFOCOIL moves optimisation upstream of production and quickly generates several nesting solutions based on orders and stock requirements.



MORE ALTERNATIVES

The system generates several proposals and shows the expected waste for each.



MATERIAL YIELD

Nesting looks for combinations that reduce unused material.



FEWER CHANGES

Planning can factor in fewer coil changes and the use of coils that are already open.



REAL CONSTRAINTS

Solutions can take machines, operating limits and stock availability into account.



OPERATOR CONTROL

Proposals can be compared and edited manually: the software supports decision-making without replacing experience.



ORDER BOOK AND SCENARIOS

INFOCOIL manages open orders, checks stock availability, allows partial scheduling and makes it possible to simulate and analyse alternative scenarios.

THE RESULT

Coil management that starts from the order, evaluates several alternatives, takes the sequence to the line and brings actual data back into the planning cycle.

UP TO 10%

maximum waste reduction measured in real production tests, particularly with frequent format changes and compatible orders.

≈ 3%

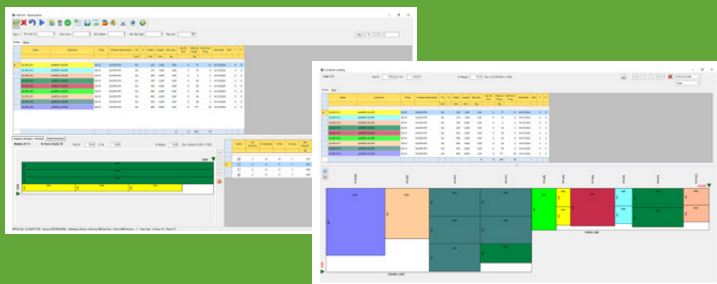
average waste reduction reported in the most recent tests and applications.

14 LINES

slitting and cut-to-length lines from different suppliers, successfully integrated in a case study.

THREE GENERATIONS OF EXPERIENCE

the blend of experience built up over Gabella Macchine's nearly 70 years and Informa's 40 years in developing production solutions.



LAMIERA

Meccanica

Metalworking
WorldMagazine



WANT TO PUT INFOCOIL
TO THE TEST AT YOUR COMPANY?
info@gabella.it


GABELLA MACCHINE

OPERATIONAL ADVANTAGES

Optimisation is not only about nesting: combining information allows better control of the sequence and a faster response to changes in the plan.

LESS WASTE

Alternatives are also compared on material yield, with average waste reduction of 3% and reductions of up to 10% measured in production tests using actual production data.

PLANT-WIDE OPTIMIZATION

INFOCOIL considers all available production lines and suggests the most efficient distribution of workloads.

STANDARDISED SCHEDULING

Automating calculations and documents helps reduce errors in manual processes and makes the production schedule more consistent, limiting reliance on individual people.

FEWER COIL CHANGES

The sequence can be built by also considering the number of changes and the use of coils that have already been started.

FASTER PLANNING

Automatic calculation reduces the work needed to build and compare combinations manually.

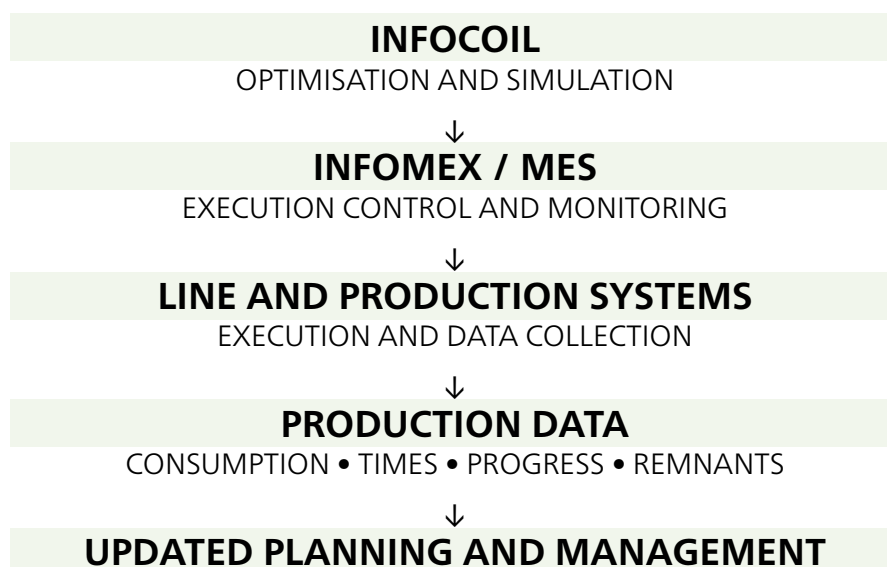
MORE FLEXIBILITY ACROSS LINES

When several plants are available, work can be allocated taking each machine's limits and characteristics into account.

FROM ORDER TO PRODUCTION SEQUENCE



INFOCOIL and **INFOMEX** are independent but complementary software solutions. **INFOCOIL** supports the optimisation of production combinations; **INFOMEX**, as an **MES** dedicated to the coil sector, controls and monitors process execution, from orders to storage, and can integrate with machines, ERP systems, planning systems and other production systems.



FROM NESTING TO DIGITAL WORKFLOW

The two modules have complementary functions: INFOCOIL optimises production combinations, while INFOMEX, as an MES, links planning with execution and collects data from the line.

DATA AND TRACEABILITY

INFOMEX can record material consumption and process duration for each batch, linking the data to production execution.

UPDATED REMNANT COILS

The information collected can update the availability of remnant coils for subsequent planning.

QUALITY AND REWORK

INFOMEX makes it possible to manage quality and potential batch defects; rework for non-conforming coils can be generated automatically.

From order to production: INFOCOIL quickly compares alternatives, takes account of materials, constraints and setups, and supports more standardised scheduling. With INFOMEX, the process can extend to execution control, traceability and data management.

INTEGRATION

The system can integrate with Gabella Machine SCADA, ERP, storage and planning systems, as well as other production machines. Labels for coils and pallets are customisable.

INFOCOIL OPTIMISING COILS STARTING FROM THE ORDER

ADAPTABLE TO THE PRODUCTION ENVIRONMENT

CUSTOMISABLE MACHINE AND ORDER PARAMETERS
ERP AND PLANNING SYSTEM INTEGRATION
XML/ODBC/SQL INTERFACES
EXPORTABLE REPORTS
REMOTE SUPPORT FOR TRAINING, INTEGRATIONS
AND CUSTOMISATION

INFORMA
IMPROVE YOUR BUSINESS

GABELLA MACHINE

**Want to put INFOCOIL to the test
at your company?**

**CONTACT GABELLA MACHINE FOR
A SIMULATION BASED ON YOUR
ACTUAL PRODUCTION PARAMETERS**



info@gabella.it

**GABELLA MACHINE LOOKS FORWARD TO SEEING YOU AT THE
INDUSTRY'S KEY EVENTS THIS OCTOBER AND NOVEMBER**

