



WOODENGINEERING

team

WHO WE ARE

We are a team of managers with technical background and we have acquired long and strong experiences in all company areas including technical management or general management in some of the most important Italian manufacturing companies in furniture sector.

During the development of our industrial groups we have studied, designed and realized various production units in the biggest developing areas in the world such as South Asia, Middle East, East Europe. In these projects we also went into the training of technical management people coming from these countries.

Realization and publication of multimedia contents concerning machinery and production processes and papers relevant to company organization complete our professional skill.

The knowledge and practical experience in applying the most suitable production cycles, the machinery and plants choice adequate to implement these processes and the related company organization procedures aimed to gain the company goals, allow us to say that the consultancy given by this team is an opportunity of growth for all companies belonging to the wood field that want to compare as a leader in their own reference market.

THE PROJECT

This project was born starting from the comparison among our personal experiences as managers in entrepreneurial realities of our sector, in which we have been working for a long time and we had the possibility to gather positive and negative aspect of its growth .

The idea has been developed by projecting our experience in the situations of companies in emerging countries and finding out the same positive and negative situations.

Technical and organizational solutions that were successfully adopted in the past joined with our capability to apply them in favour of the customer companies make our projects successful.

We do not want to be an aseptic engineering society but present ourselves to the market as we are: a team of persons.

THE TEAM

The team has an horizontal organizational structure with a Team leader and the support of young engineers to guarantee effectiveness.

The skills and experiences of each member are merged in the preparation of analysis for single projects, are marked out in the development and are reinforced in the executive phases. Cooperation with specialized companies that proved to be reliable partners allows us to enlarge our offer to collateral activities and services as for example graphic works and design.

Part of the team is dedicated to relationship with universities for the development of new research projects and eventual technological updates.



THE PROGRAM

We are not conceited but realistic if we propose a complete program as described below.

In fact our experience has already successfully met all the described sectors and we are therefore able, with the opportune customizations, to offer to companies all or part of the specific services.

FEASIBILITY ANALYSIS

Feasibility analysis involves the detailed assessment of the following:

- product type to be produced;
- technology for product realization;
- production quantities (number of compositions per year, number of units per day, etc.);
- raw materials;
- analysis of production cycles;
- choice of machinery;
- general design of the plant (lay-out, building and plants);
- safety and environmental impact analysis, polluting emissions analysis and safety standards for job safety;
- investment analysis;
- product costing;
- identification of labour requirements;
- detailed scheduling of the activities;
- business plan (if specifically required).

ENGINEERING SERVICES

Engineering services may involve any of the following:

- schematic design of the plant and specifically calculation of the production areas of the plant starting from raw materials to finished products warehouses including space requirements for each production department;
- calculation of surface requirements for service rooms;
- layout of machinery and equipment according to production processes;
- layout of main technological systems.

building design

Building design:

- technical specifications concerning the buildings complete with minimum standards based on production requirements;
- general project and/or executive project for building and civil systems;
- floor design with special foundations, footings, pits, drainage systems and whatever else necessary for the installation of machinery and equipment.

project management and supervision

Project management and supervision:

- check of the executive building drawings made by the building firm for compliance with supplied specifications;
- coordination of the activities carried out by the different parties involved in the project;
- management of activities and resources (Gantt chart);
- on-site supervision during the construction phase carried out by specialized personnel.

design of the mechanical systems in support of the production machinery

Design of the technological systems in support of the production machinery:

- dust suction, filtering, transportation and storage system;
- compressed air production, treatment and delivery system;
- electrical power transformation and distribution system;
- thermal energy generation and distribution system.

assistance in

Assistance in:

- selection of the most suitable machinery, equipment and systems according with the production requirements;
- selection of suppliers and selections of contractor for the purchase of materials;
- machinery testing at the supplier site, verification that machinery and equipment correspond to the purchasing specifications, final on-site functional testing, verification of machinery documentation (operation and maintenance manuals, electrical diagrams, pneumatic equipment, etc., spare parts lists etc.).

assistance with machinery assembly

Assistance in machinery assembly:

- preparation of drawings of the machinery complete with information concerning electrical power requirements and the type and positioning of connections to technological systems;
- drawings necessary for the installation of supplied equipment;
- installation schedule of the machines, equipment and plants agreed with the various suppliers.

THE ABOVE SERVICES ARE SUPPLIED COMPLETE WITH TECHNICAL DRAWINGS, TECHNICAL SPECIFICATIONS AND QUANTITY ESTIMATE.

technical assistance at the job site

Technical assistance at the job site:

- jobsite supervision during the construction and installation phases (building, machinery, systems and equipment), with responsibilities of coordination and verification that the built works correspond to the construction specifications;
- supervision in the factory of training of all personnel assigned to the use of the machinery and equipment;
- coordination of technical and organizational functions for product engineering (adaptation, customization and realization of the product);
- adequate assistance to the plant supervisor in the development and production start up of the first series.

Personnel training

The training program is designed for both management and specialized technicians selected by the customer based on the indications of our Team. Some of them may have previous work experience, whether or not in the specific sector, while for others it may be their first work experience.

Differences in skills, language and culture, the very values on which cooperation and learning processes are based, pose significant didactic and organizational challenges.

Training is generally based on the following requirements:

- *basic knowledge and skills that will permit the employee to work, with gradual and increasing autonomy, in a modern company operating in a competitive market;*
- *new and clearly identified skills in terms of interpersonal relations, evaluation methods and commitment;*
- *differentiation by professional areas and by type of responsibilities, integrating individual requirements for specialized training in a coherent global context.*

The training program is thus designed as a unified itinerary, though it is organized and articulated in various phases, depending on the location (Italy and the home country), the content (technical-practical and theory) and the specific objectives (learning why and learning how).

Company organization chart

According to customer's needs the Team can supply organizational consultancy services to define and codify the company organization chart, whether this entails the formal codification of an existing structure or the creation of a new company structure.

In particular, instructions can be furnished for:

- the creation of the organization chart for the whole technical and production areas, from top management to department foreman;
- the tasks of each responsibility centre, its optimum size, its functions and its interactions with the involved other levels, taking into account the actual local situation.
- the selection and evaluation of the personnel to be included in the company organization chart.
- delegation assignment to the employee staff.
- definition of production plant departments staff and company services staff in a full capacity situation (after defining products and quantities to be manufactured).

Products and product models

The Team can design and support the development of one or more product lines or restyling existing lines, depending on customer requirements.

- Based on indications of customer management and sales department proposals for such sales tools as photographic and technical catalogues are developed and evaluated.
- Support can also be supplied for the design and installation of the exhibition spaces for the proposed new product. The purpose of this service is to guide the customer in evaluating a marketing approach suitable for the proposed product type.



Company organization

The type of support that the Team can provide in terms of company organization can be summed up as follows:

- preparation of documentation to support plant operations;
- consultancy for managing the flow of information and documents within the company.

More specifically:

preparation of documentation in support of factory production:

- support documents for preparing a technical catalogue;
- manufacturing drawings of semi-finished elements;
- manufacturing drawings of the product;
- technical specifications of raw materials and purchased components;
- bill of materials;
- item coding plan and database system;
- processing cycles;
- machining parameters;
- determination of standard processing times for cost estimate purposes.

This documentation is fundamental for putting a new product into production. It not only allows all company operations to be implemented, it constitutes the basis for the flow of information within the company.

Consultancy for managing the flow of information and documents in the context of a computerized management system

In reference to the established production objectives, the Team can furnish consultancy services for the implementation of a computerized management system capable of supporting the production levels foreseen during the planning phases.

In most cases, it becomes clear that managing the flow of documents and information in a systematic manner is essential to ensure that customer orders are delivered on time.

This objective can be attained through an adequate Factory Operating System (FOS), coupled with a just as adequate Factory Information System (FIS).

Below are the main points of the program normally implemented for the supply and installation of the proposed management software and the activation of the plant's organizational procedures. It should in any case be noted that the program described below is generic in nature and must be personalized according to the needs of the client during the design phases or in response to developments that may come up during implementation phases.

Consultancy services for understanding the databases and performing entry operations:

- general demonstration of the characteristics of the proposed management system, analysis of the main modules that make up the system and schedule for their introduction;
- explanation of the special technical characteristics of the system and the basic principles involved in using it to facilitate management, instruction on data entry and management of the basic parameters.
- demonstration of the coding system;
- support for the creation of an item database using the proposed coding system and the integration of this database into the management system;
- demonstration of the special characteristics of the bills of materials database, and how to integrate it into the management system;
- analysis and demonstration of the production cycles database and how to integrate it into the management system;
- detailed analysis of the functions of all of the other necessary databases (price list, customers, suppliers) and instructions for their integration in the management system.

Consultancy services for implementing the main functions of the management system

Instructions on how to:

- enter a customer order;
- analyze the production process based on make-to-stock manufacturing, with production and printout of the relative management and factory scheduling documentation;
- analyze the production process based on make-to-order manufacturing, with production and printout of the relative management and factory scheduling documentation;
- print shipping labels;
- prepare shipping documents, customer delivery notes and invoices;
- manage the raw materials, semi-finished and finished products stocks and stores.

Consultancy services for the implementation of additional functions of the management system

Instructions on how to:

- Prepare cost estimates;
- Utilize sales statistics

Naturally, during all instructional and training phases, the instructors will alternate training periods with sufficient review periods to verify and consolidate what is being learned. In this way we ensure that participants correctly assimilate the basic concepts of company management together with the practical application of the proposed management system.

To facilitate optimum assistance, we request access to the company computer system via Internet, where local conditions make this possible.

THE OPERATIVE METHODOLOGI

Our experience has conducted us to find out an operative methodology to be suggested to the customer that is easy to be understood. It allows our Team and the Customer to operate step by step to the achievement of the requested goal in an extremely clear way and without any misunderstanding.

The phases here below are exhaustive for a complete project that includes the realization and organization of a new production plant. Anyway these phases can be partially employed by our Team also in case of partially re-organization of production or processes for an existing unit.

1. STARTING PHASE

basic analysis of products, markets and available resources. In this stage it is necessary to outline the development strategies for the target product, the production structure and the distribution strategies.

required information:

- product type to be produced (kitchen furniture, bedroom, etc.)
- technology for product realization (melamine chipboard, veneered panel, solid wood, etc.)
- expected quality of the product (top-end product, average target product, etc.)
- production quantities (number of compositions per year, number of units per day, etc.)
- target market (reseller, contract, local market, foreign market, etc.)

required resources:

An analysis activity by our Team will be needed at Customer's site in order to evaluate products, technologies and product quality level.

In our office it will be required to write the summary and explanatory documents about the technologies in use and the target production quantities for the project.

If required it will be possible to foresee a meeting of the Team with the customer technicians for presentation of the achieved results and for training for the understanding and sharing of the project.

expected results:

The output of this step is the realization of a report that will summarize all information pertaining to:

- product types;
- technologies used for products;
- raw materials needed;
- identifying a typical composition for calculating sales quantities;
- identifying target sales quantities for the elements of the typical composition (i.e. target production quantities attainable within 10 years).



2. FEASIBILITY ANALYSIS

this preliminary study is aimed to outline a masterplan in order to evaluate the feasibility and profitability of the project. It includes the design of a block layout, the definition of the general work cycles (also by element type), a proposal for the organization of the factory, the evaluation of the required facilities and the parameters for an estimation of the investment costs.

required information:

The final confirmation by the Customer on the project objectives defined in the previous step is required. These objectives are the necessary data for drawing up this preliminary study.

required resources:

In our office it will be required to prepare the preliminary study complete with all documentation for explanation and presentation of the project.

If required it will be possible to foresee a meeting of the Team with the customer technicians for presentation of the achieved results and for training for the understanding and sharing of the project.

expected result:

The output of this step is the realization of a study that will summarize all information pertaining to:

- production quantities for each semi-manufactured element of the finished product;
- production cycles;
- definition of the logic for managing the factory;
- design of a block layout of the production factory;
- identifying the areas needed for the facilities to be built;
- definition of aggregate parameters for evaluating the investment costs in order to let the customer do its own profitability analysis of the project.

The material provided to Customer will allow The Company to draw up a business plan for an investment analysis.

3. PRELIMINARY PROJECT

after releasing the feasibility analysis and selecting the preferred solution, a preliminary project will be worked out. This includes a detailed layout, the list and specifications of machines and equipment, compressed air system, dust suction and filtering system, electrical power system, technical specifications for designing the building, definition of personnel and internal logistics, industrial safety, environmental impact, definition of tools for company organization and computerization, scheduling of the activities.

required information:

the final confirmation by the customer on the validity of the feasibility analysis is required. The feasibility analysis provides the guidelines for developing the preliminary project. It will also be necessary to acquire information about the plant location, the terrain or the building(s) that the customer has identified according to the specifications provided in the feasibility analysis.

required resources:

In our office it will be required to prepare the preliminary project complete with all documentation for explanation and presentation of the project.

expected result:

The output of this step is the realization of a preliminary project that will summarize all information pertaining to:

- detailed layout of the production factory;
- list and specifications of machines and equipment, compressed air, dust suction and electric power systems;
- technical specifications for designing the building;
- identification of labour requirements;
- design of internal logistics;
- safety and environmental impact analysis;
- selection of specific tools for company organization and computerization;
- detailed scheduling of the activities;
- detailed binding quotation for the realization of the whole project.

The output document will be worked out in detail and will become the technical attachments to the supply contracts for carrying out of the whole project.

Experiences and references

On the behalf of the companies where we have worked along our professional history we did : feasibility studies, design, suppliers coordination, optimization of containers loading, coordination of consignment, work scheduling and control, final and process testing, choice and installation of suitable MRP systems, personnel training aimed to data arrangement, to data base inputting and to the operative methodology required by the system, product study, product engineering, sales catalogues analysis and realization.



CONTACTS

Team Leader :
Antonio COSSIO

info@woodteam.it
www.woodteam.it