

From Start to Start-up

How to build a new factory? Every project has its development phases: problem definition and feasibility study, analysis, design, realization, implementation and evaluation. Right from the start, any decisions made will have a large impact on the people in the new factory. How many workplaces should there be and where? What will be the influence of automation and mechanization on the job at hand? In our view, ergonomics and organisational design are closely linked. Is ergonomic input expensive? Not necessarily, if it is taken on board right from the start. Once a project is in progress, opportunities to make adjustments to the design will diminish, while the adhering costs will rise rapidly. Any corrections after the event will always be more costly.



In a number of large projects ErgoS has led the way *from start-to-start-up* from within the project management for engineers, contractors and suppliers and has implemented the ergonomic design of:

- waste incineration unit, Avi Twente
- Esso Flexicoker Consolidated Control Centre
- extension for a waste processing facility ARN
- automation systems for NS rail traffic control
- various modernization projects, Avebe
- wheelhouse of dredging ship HAM318, HAM (HBG)

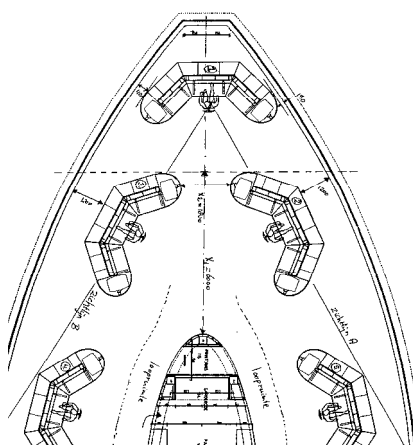
Project Ergonomics

ErgoS is active in a broad range of ergonomic activities, often within the context of industrial projects, such as:

- workplace analysis and (re) design
- task analysis and task allocation
- lay-out, routing & logistics
- instrumentation, visual display units
- software, human-computer interaction
- workorganisation design
- user participation projects
- ergonomics courses for engineers
- risk inventory and evaluation.



Assessing specifications and construction plans



Right from the early stages of any design, project ergonomists are able to assess the plans for buildings, shop floors, etc. and test for aspects of user-friendliness and future working conditions. This calls for an overall testing procedure using standards, guidelines and legal requirements.

In the adjacent example, a controlling station for the Department of Public Works and Water Management, the key issues were: sight lines, general shape of the workplace, communication between workplaces and routing systems throughout the building.

ErgoS Engineering & Ergonomics

is specialized in human-centered design of production systems, control rooms and human computer interaction. ErgoS is an independent consultancy and engineering company for all kinds of Human Factors projects, including job design and work organization design. The range of activities includes contributions to feasibility studies up to detailed design of individual workplaces or computer screen layout.

ErgoS works according to the international Code of Practice for European Ergonomists.

More information is available on our website www.ergos.nl (though mainly in Dutch).

You may contact:
 ErgoS Engineering & Ergonomics
 ir. R.N. Pikaar Eur.Erg., managing director
 P.O. Box 267, NL 7500 AG Enschede

tel. +31 53 428 0500
 mail info@ergos.nl or r.pikaar@ergos.nl

DIY Ergonomics?

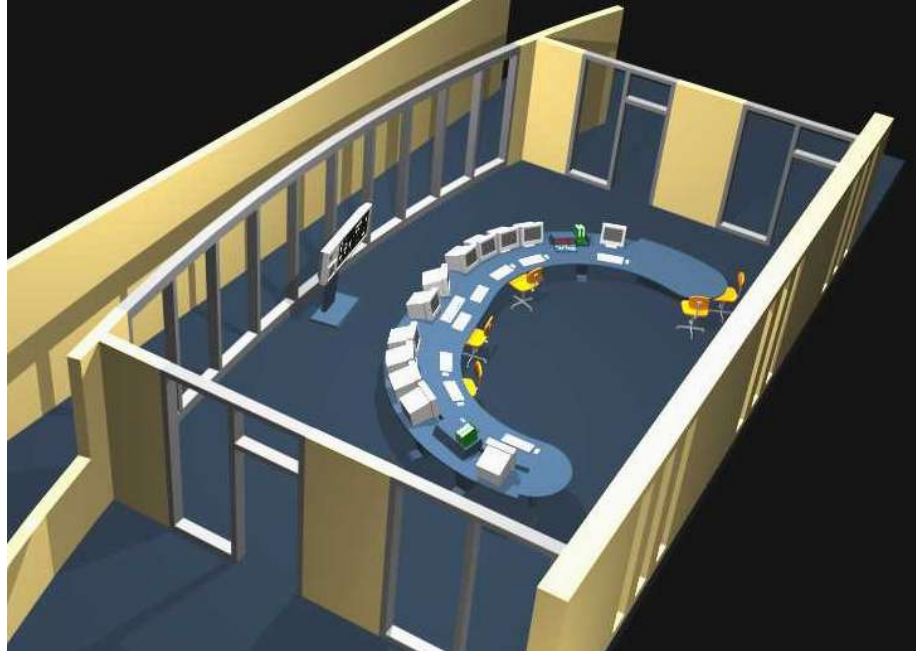
Putting people first seems an simple choice to make in any production process: when there is a lifting problem, you buy a lifting device. Yet, there is usually more to it than meets the eye: it might be a much better or cheaper option to make changes to the load or to mechanize the job.

ErgoS ergonomists are trained to broadly survey the causes, the solutions and the often complicated cohesion between all aspects involved. In addition, they are specialists in dealing with user input during (re-)design projects, using tools like 3D drawings and mock-ups (full-sized models) in the process.

References: Total Refinery, Gasunie, Esso, AviTwente, RWS, etc.



Control room design



Designing control rooms has been an ErgoS specialism for twenty years, and intensive user input is extremely valuable to us. One potential obstacle is that users are often unaccustomed to interpreting technical diagrams and specifications. In a recent control room project for DSM Special Products Rotterdam, ErgoS developed several lay-out variations in the shape of 3D-diagrams. These can be produced within a few days and give future users a much clearer perception of spacial proportions.

Ergonomists can facilitate the valuable translation from users' wishes into functional designs or specifications. In the DSM example this has led from detailed design via specification to delivery of the console in the picture.

Discrete manufacture

One typical phenomenon in discrete manufacture is the large number of parts and products that has to be processed or made. That is why logistic processes are important. Whether it is the assembling or the packaging of foodstuffs, it ultimately all comes down to large volumes, transport, storage, repetitive labour, working against the clock and health hazards such as RSI, back problems, boredom and stress.

Remarkably, we often encounter highly hazardous activities that add little or no value to the product. What are the health risks and how can they be prevented?

These issues can be resolved by ErgoS without losing sight of the overall production costs.

ErgoS ergonomists all come with a tool box packed with techniques for mapping out tasks, activities, timeframes and details of any production. The sharp eye of our experienced ergonomists will instantly spot the risks. Some of our references are: Mars, Fresenius Hemocare, Peijnenburg, Philip Morris, several SW companies, Philips, Vredestein and Heineken.

