

# ***Ecopaint Planning***



Planning, simulation and optimization



Technologies · Systems · Solutions

# ***Ecopaint Planning***



*Effective planning support*

This is the age of the surface: increasingly sophisticated color effects, finer paints and glossier surfaces are wrapped around products and vehicles to protect them and lend them status and appeal. 

Surface quality is indicative of the quality of the product as a whole, enhancing the interior and adding value. It becomes synonymous with value, with value in and of itself. It defines the market and opens up markets, even larger markets.

Superb quality is created through utilizing the best processes within an optimum overall concept. We are with you every step of the way, from planning to simulation and through to realization of your paint shop or factory. Thinking ahead is smarter than correcting things later – digital factory simulation and visualization techniques allow us to offer our customers planning reliability at an early stage.

## **Dürr delivers the key to process planning and planning reliability**

We plan and realize turnkey paint shops. Carrying out our task we work our way deep into your complex process environment and implement a customized solution. From an early stage Dürr guarantees highest quality along with lowest unit costs throughout the entire process – from body pretreatment and seam sealing all the way to top coat paint finishing – as a result of planning, simulation and optimization of your installation.

***Ecopaint Planning*** represents the comprehensive planning competence and related tools, with which we produce dependable planning for your installation and the specific circumstances attached to its realization, bringing everything together into one complete system.

This is how you achieve:

- highest standards of quality
- minimized unit costs
- resource conserving operation

In drawing on our capabilities you receive far more than just a standard solution; as a technology provider we offer you:

- profound process know-how
- years of experience
- our global presence

# System and process know-how – we provide you with nothing but the best

Dürr plans, implements and modernizes complete paint shop systems. With **Ecopaint Planning** we offer you comprehensive planning competence and the planning tools, with which to bring your paint shop or factory to realization: from layout to process and material flow optimization and up to virtual reality simulation and visualization.

In our search for the best solution for you, we develop alternative concepts, taking the peripheral circumstances of each case into consideration and particularly looking at:

- investment costs
- space requirements
- cycle time per body/per part
- operating costs
- environmental impact

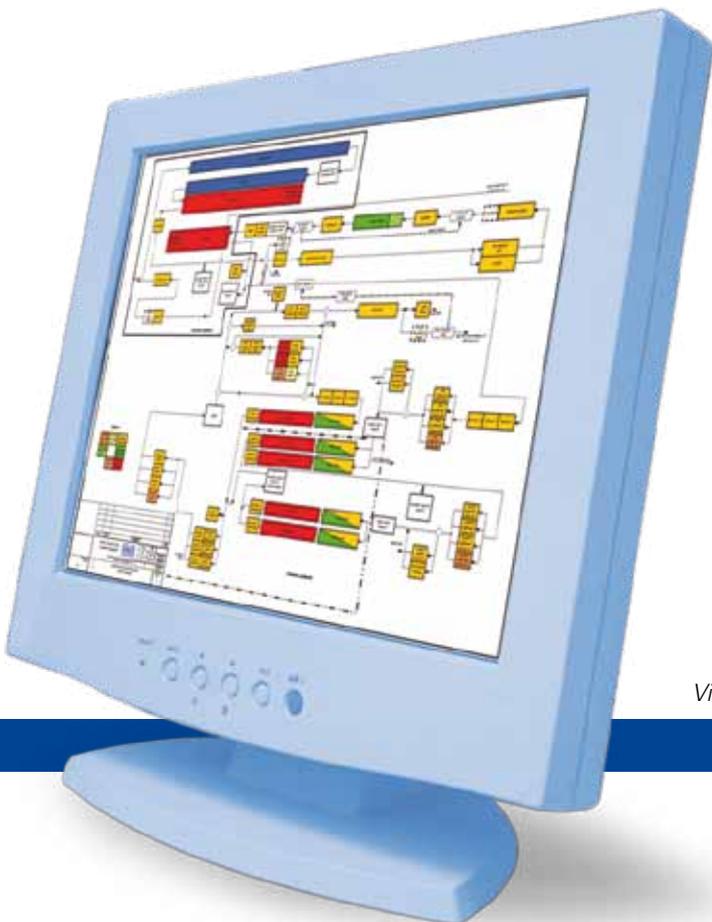


*Virtual reality models ensure planning reliability*

We also draw on the expertise we have built up in the development of processes and products and allow our multi-faceted experience to flow into our planning.

During the first phase of planning you receive a concept that is convincing due to the savings potential it demonstrates:

- an optimal plant layout
- shorter installation time
- faster production ramp-up



*Visualization of all details*

# Single source planning – customer proximity at all times

## Concepts designed to increase value addition

Every factory is different – and its planning is subject to the most varied of factors. We take account of these and offer you concepts that are optimized with regard to:

- an efficient and effective value addition architecture
- costs
- space requirements
- impact on the environment

We take into consideration:

- the requirements – vehicle types, unit capacities, work schedule models
- all process sequences and materials used
- the number of colors involved
- levels of availability and efficiency expected
- cycle times and line speeds
- the degree of automation requested
- space available
- targeted quality standards
- environmental protection aspects and regulations

Working in cooperation with you, we develop a basic concept that will serve as a basis for all subsequent steps: planning permission applications, design planning and tender documents. 

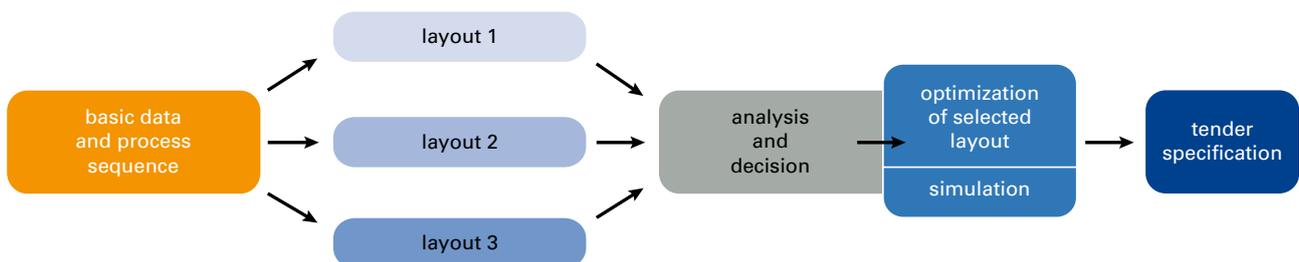
## Process planning with customer proximity

Our local presence forms the basis for our customer proximity – worldwide. We ensure that realization times are short and logistical operations run smoothly and we are well familiar with local requirements – from statutory regulations to approval processes.

We are your partner of choice for competence in design planning of:

- detailed layouts with longitudinal and cross sections
- all calculations
- auxiliary plant and equipment
- energy connection requirements and consumption values
- ventilation ducting and energy supply lines
- time scheduling
- interfaces between installation, building and infrastructure

You receive a tender specification that defines scopes of supply and stipulates interfaces. All formalities are completed on your behalf and the documents are handed over to you together with the specification, which includes “General Contract Terms and Conditions”. This ensures that you are well equipped to obtain and compare quotations. 



# Validation and optimization through simulation

As soon as the first steps of the project have been completed we check that our concepts are in line with your targets and adjust our planning as necessary. This is in the interests, on the one hand, of improving the cost-benefit ratio – and we offer a variety of alternative concepts for doing so – and, on the other, it enables us through process simulations to substantiate, quickly and inexpensively, the feasibility and the advantages or disadvantages of our solutions.

Once a decision has been taken for a specific concept, this is validated additionally by carrying out tests at our Technology Centers. We work with original bodies and paint materials here, in order to create production conditions which are as realistic as possible. 

## Powerwall virtual reality planning

As a special service we offer our 3D “Digital Factory” imaging of your complete installation.

## With Powerwall we supply:

- 3D visualization of your production installation across all plant and equipment types and sections
- simulation of
  - processes
  - material flow
  - robots
  - ergonomics
- appropriate supervisory control systems

Experience your factory – live and in color – even before it is built. That’s how we optimize your installation, improve processes and validate them, plan material flow and eliminate potential collision points. At the same time, we ensure that there is sufficient space available to exchange component parts and to carry out cleaning and maintenance tasks.

## Powerwall assures that:

- the time required for assembly and implementation is reduced
- planning and operating costs are lowered
- your products meet the required standards of quality
- you have flexibility for modification and adaptation in the future

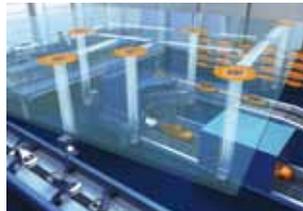


# Ecopaint Planning

## The benefits you gain from Dürr's competitive edge:

- utilization of state-of-the-art planning and simulation processes
- access to benchmark know-how and the experience gathered across various branches of industry
- quality based on process expertise and validation
- resource conserving processes and environmental compatibility/eco-friendliness
- digital factory creation of virtual reality models to master complex processes
- the technological edge that results from a continuous commitment to improving processes and plant and equipment

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