



# Automatic generation of electrical projects

Date: 20/05/2018

## 1. Introduction.

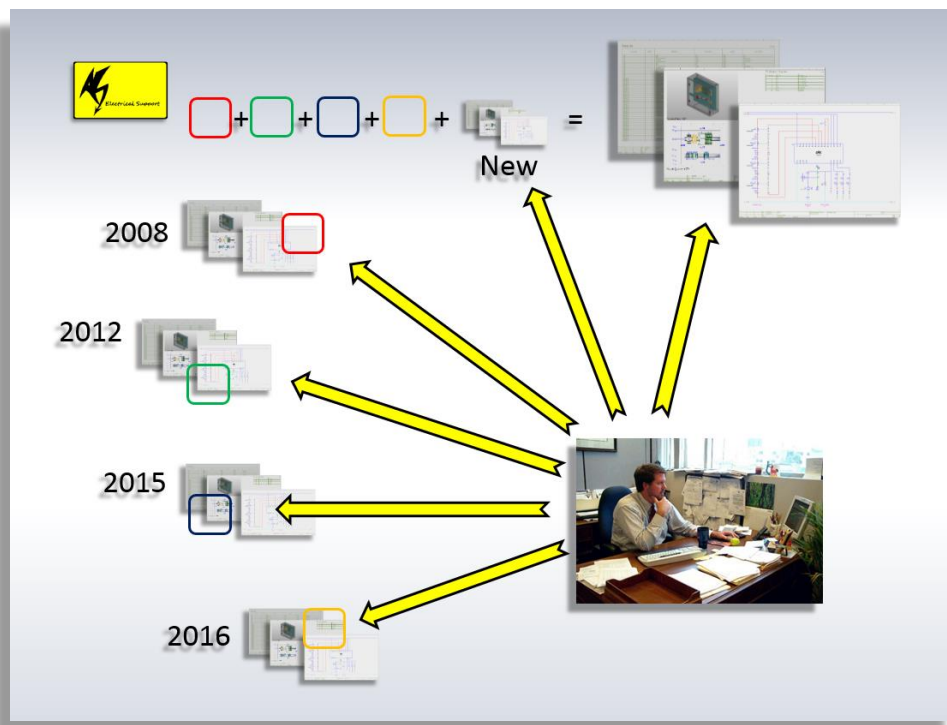
The current market drives machine manufactures to consider the following needs:

- Reduction in Design costs.
- Reduction in Manufacturing costs.
- Quality Improvement.
- Improved delivery times.

AS Electrical Support S.L. is an Electrical Engineering Company. We offer to our clients solutions to achieve these objectives.

## 2. Design stage.

Generally, when the engineers or draftsmen design a machine or electrical installation, they reuse drawings from previous projects. These drawings are modified slightly and then tailored to the project.



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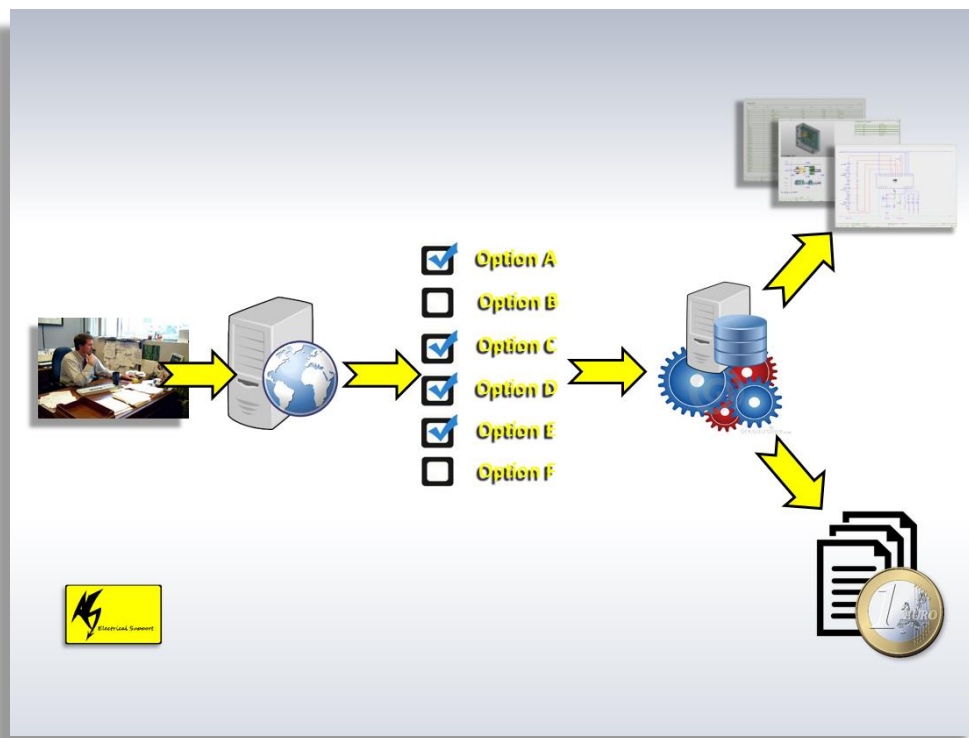
As a consequence:

- Engineers need to spend time to find similar designs.
- Errors appear during the process.
- The necessary changes are not made or they are only partially made.
- Obsolete devices are included in the project.
- Sometimes the price of the selected device is no longer competitive.
- Technical improvements are overlooked.
- There is a lack of uniformity in the design.
- There are extended revision durations and costs associated with poor quality.

### 3. Automation of electrical project engineering.

The solution to these problems include the creation of a standard engineering following two steps:

- Organize and update project templates that will be reused in future projects.
- Create and maintain a tool that allows the automatic generation of electrical projects using parts and the characteristics that define the machine, installation or electrical panel.





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AS Electrical Support offers customers the development of a standard engineering process with the following characteristics:

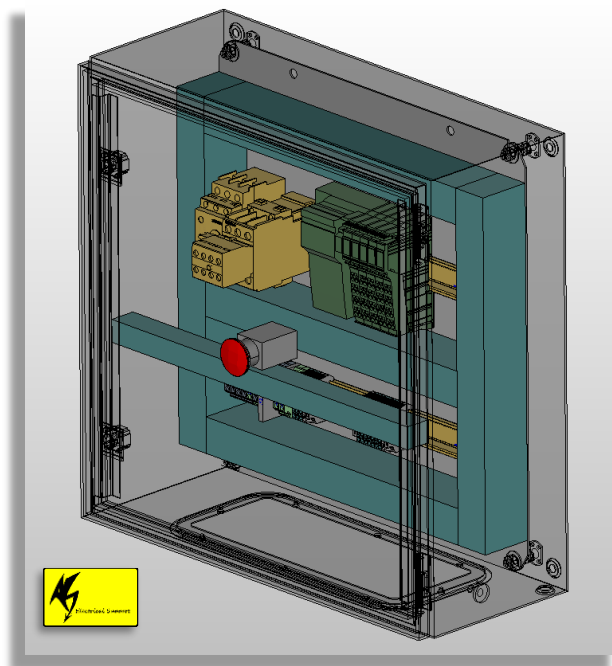
- Based on the Eplan platform (Electric P8, Propanel, EEC One and Cograer).
- Creation and maintenance of project templates and designs.
- Creation and maintenance of the electric project generation tool.
- Creation and maintenance of basic system data (forms, title boxes, covers, databases, export schemes, project templates, etc.)
- AS Electrical Support provides the necessary software licenses. No additional costs to the client.
- Legal and updated software licenses are used throughout the process.

### 4. Engineering and design of electrical projects.

AS Electrical Support offers customers the electrical design to complement previous work as well as provide turn-key electrical design solutions.

### 5. 3D design of electrical panels.

We offer the 3D design of electrical panels using the Eplan Propanel software.





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The following advantages can be obtained by using the 3D model:

- Easily coordinate the interference of devices located on the mounting plate and the devices placed on doors, roof or sides.
- Automatically calculate the length of the wires.
- Generate 2D layout views for the mounting plate and enclosure devices.
- Generate the installation templates for the mounting plate and doors.
- Export the drawings and templates for the machining of plates, boxes, and cabinets using CNC machines.

### 6. Generation of data, reports, and exports.

The Eplan platform allows the automatic generation of lists and other forms. Data can be exported to Excel, xml or txt formats necessary during the manufacture, assembly, programming and maintenance of machines and installations. Some of these evaluations could be:

- Purchase lists grouped by kits or panels.
- Bill of Materials.
- Terminal block drawings.
- Cable lists.
- Cable connection plans.
- PLC summaries.
- Connection lists.
- Label files ready to be printed.



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Using this tool, the time of elaboration of these lists is reduced to almost zero. This is especially relevant when it is necessary to carry out successive modifications in the projects.

### **7. Contact data.**

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