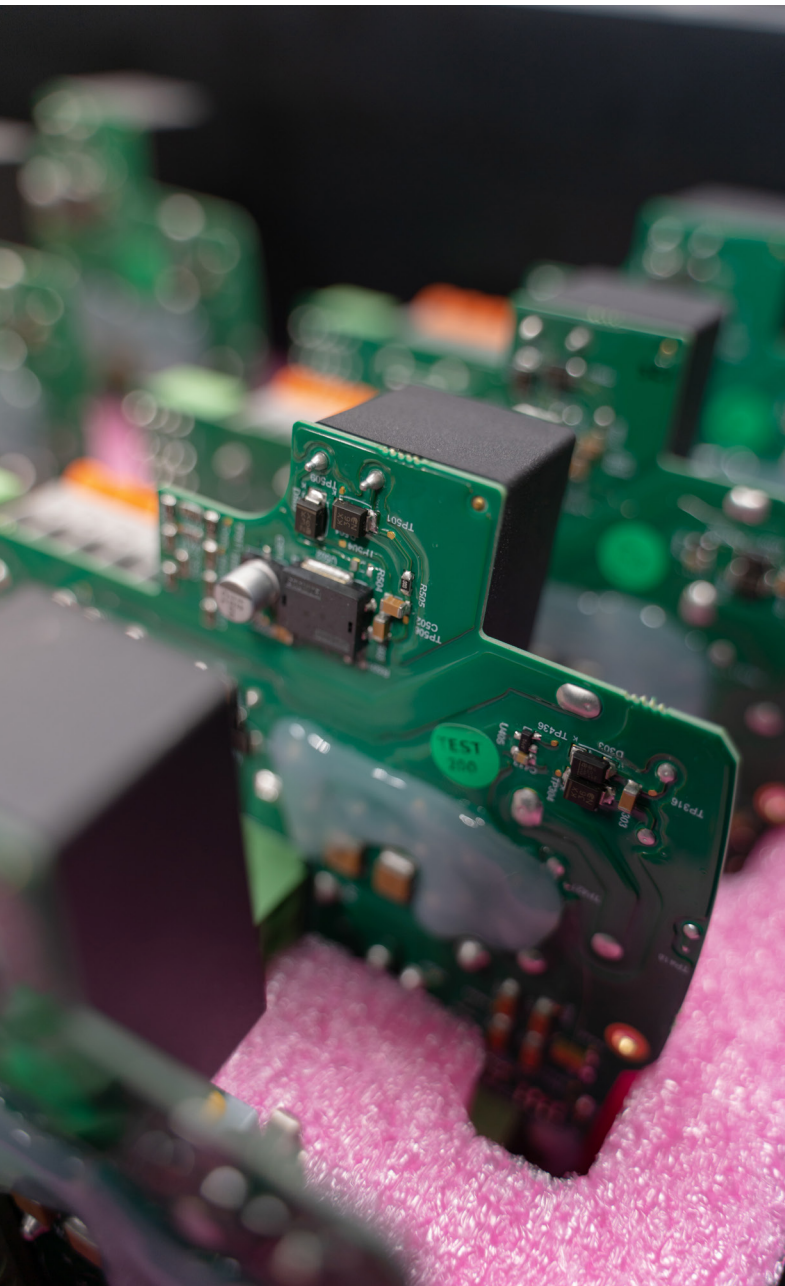


# NPI: the 3 rounds

How an EMS develops the New Product Introduction process

## Clear objectives

The NPI process starts when our Product Engineering team receives a product documentation package for the first time. This means that the product described in the package has never been manufactured in our production plant. It could well be a new version of a product or a totally new one.



### FIRST STEPS

Some questions need to be clarified before starting the introduction of the new product:

- > What is the customer's expected launch date?
- > Are there specific certifications required?
- > Are there any specific standards that need to be fulfilled?

### ASSESSMENT

With clear answers to the above questions, our NPI team, which integrates Process Engineering, Supply Chain, Quality and Test, will be able to assess whether

- > A realistic schedule can be set to hit the customer's expected launch date
- > The expected cost is achievable based on the target price and the product documentation
- > There are any risks to be aware of that could ruin the plan

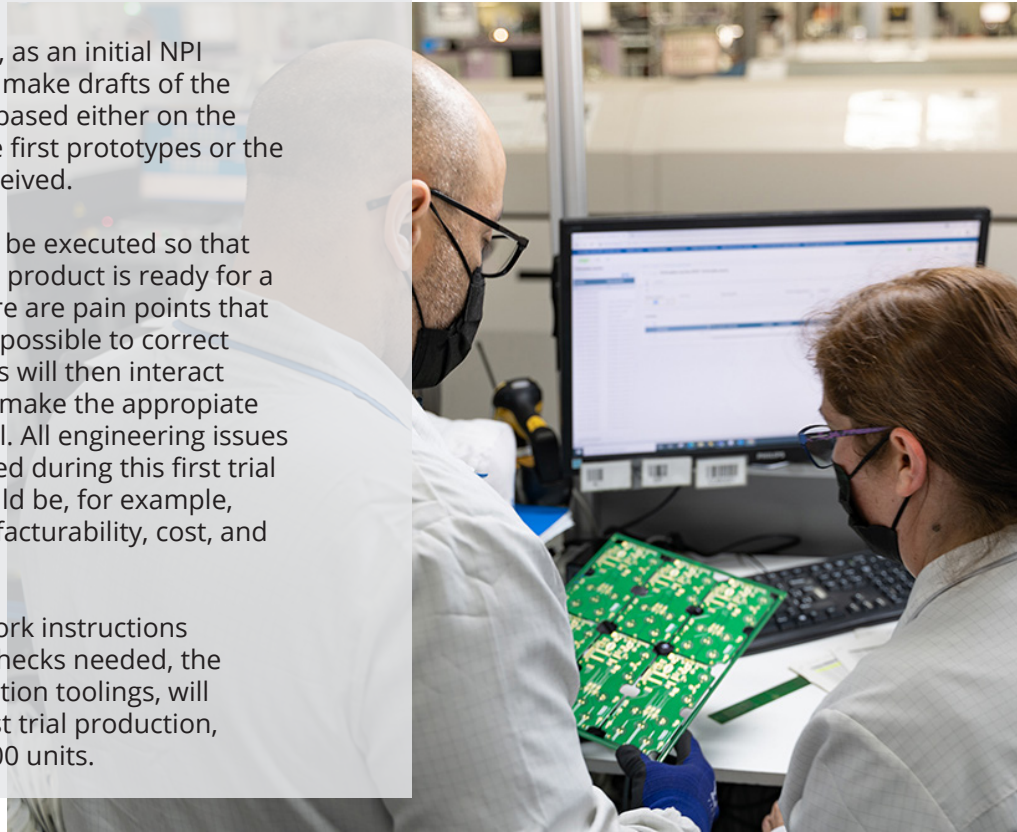
The next stage will be the creation of a timeline on which both DigiProces and the customer will agree. We will also clarify the expectations of our requirements to the customer to achieve the expected goals.

# 1st ROUND

For the first trial production, as an initial NPI step, process engineers will make drafts of the manufacturing procedures based either on the process they needed for the first prototypes or the documentation package received.

A DFM and DFT analysis will be executed so that we understand whether the product is ready for a smooth introduction or there are pain points that need to be identified. If it is possible to correct these, the process engineers will then interact with the product owners to make the appropriate changes at engineering level. All engineering issues should be identified and fixed during this first trial production batch. They would be, for example, issues that can affect manufacturability, cost, and schedule.

The initial versions of the work instructions and the quality inspection checks needed, the test procedures and production toolings, will be produced to face this first trial production, targeting a batch of 50 to 100 units.



# 2nd ROUND

During the second iteration we set up a real production line. It means that the test systems and all production tooling will be final.

The batch volume will cover from 300 to 500 units, with the purpose of creating a consensual golden sample, which is a sample product satisfying all the functions, reliability and quality standards defined by the product owner.

Mass production yields will be monitored and process failure effects will be analyzed to improve the output.



# 3rd ROUND

To finish the NPI phase, a production batch of 500 to 1000 top rated units will be launched with the objective to confirm the production process.

During this last production batch within the NPI, the process will be continuously optimized to reach a yield of 95% or higher, from where the NPI process will be considered as finished.