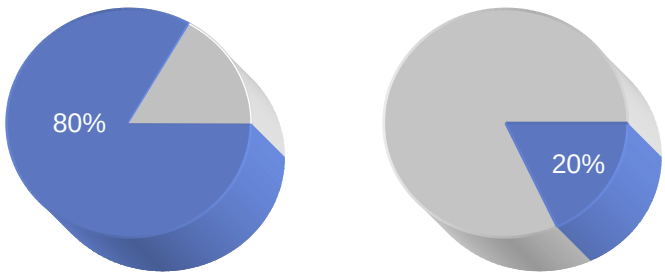


GUESS OR MODEL?

YOUR CHOICES

DRIVE YOUR SUCCESS

Your technological and economical environments leave no room for improvisation.

When **80% of design decisions are taken during the first 20% of a project lifetime**, making the right choices will make the difference between success and failure.

You may afford guessing, but you can't afford failing.

Modeling your electronic system with CoFluent Studio™ early on your project can help you take the right decisions when it matters: before it's too late.

When other Electronic System-Level (ESL) design toolsets provide results when you're already at 50% or more of your development time, CoFluent Studio lets you get an accurate model of your system **in the first 20%** of your project's lifetime.

Early simulation of your model lets you easily try different design choices and quickly **find once for all the optimal system architecture** that will deliver **the right functionality** on **the right platform** for the **best cost/performance ratio**.

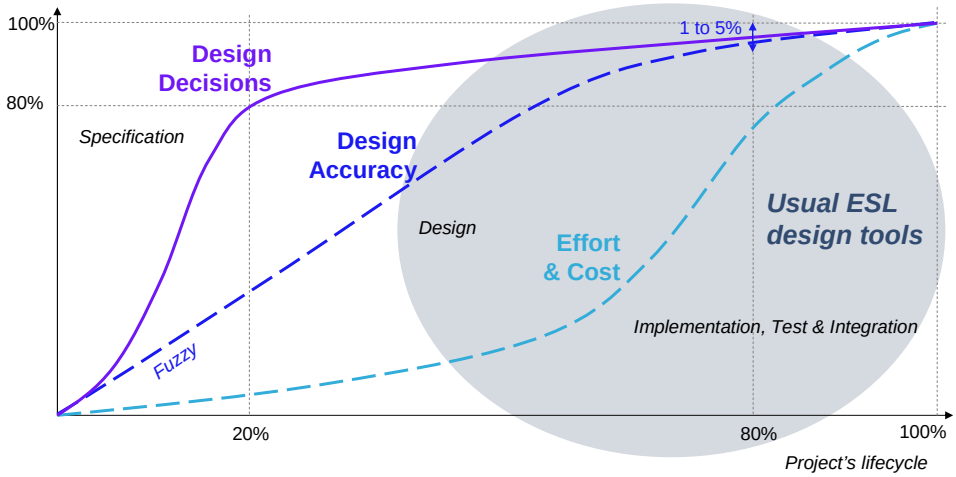
CoFluent™ Studio

ESL modeling & simulation environment

MODELING IS GOOD FOR YOU (AND YOUR PROJECT)

The development of electronic systems usually goes through the following main phases:
- *Specification* - *Design* - *Implementation* - *Test & Integration*.
In this process and as illustrated in the figure below, the percentage of design decisions taken always grows much faster and earlier than the percentage of effort and money invested in the project.

It is an admitted fact that **80% of design decisions are taken in the first 20% of total development time**. Design of the system is mostly driven by those early decisions ***usual ESL design tools do not help you take***.

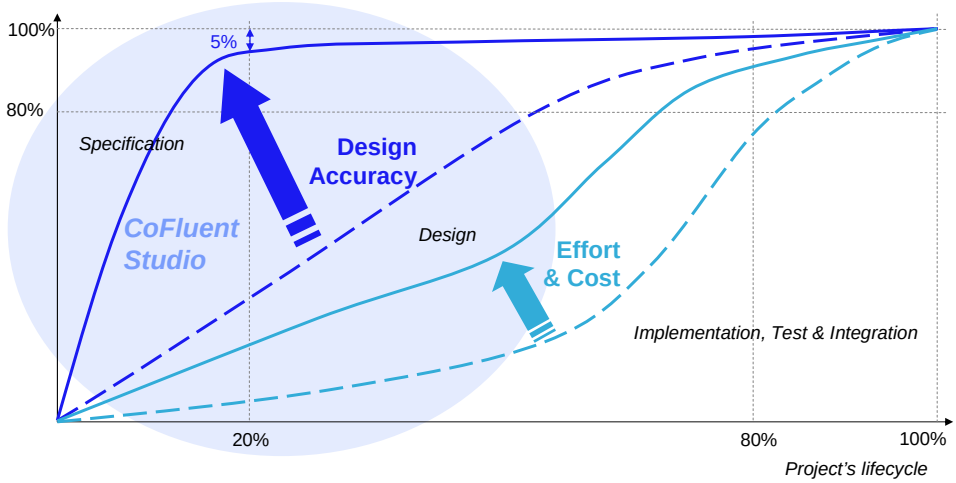


Hence, when characterizing the accuracy of the design solution against the future real product throughout the development process as in the figure above, it appears increasing progressively from a "fuzzy" description given by the customer up to a 95-to-99% accurate representation when the development is near the end of the implementation (at 80% of development time). Major design errors often result from wrong decisions taken at the beginning of the project. They're usually detected during the later development phases and heavily impact development costs and time.

Developers rely on quite few data at the beginning of the project for carefully taking decisions. They usually start from customer's requirements or system specifications and quickly decide on the system's architecture, including hardware, software and communications, mainly from Excel spreadsheets and their experience/expertise.

- **Model earlier and more accurately**

With CoFluent Studio as shown below, developers create an accurate-enough model of the system **in the first 20% of development time** that enables them to verify the functionality and decide on the optimal architecture of the system very early and efficiently. In addition, developers prepare efficiently for implementation as embedded software application code can be automatically generated from the model.



Overall, highly improving the accuracy of a model of the system in the first 20% of the project's lifecycle helps augment the visibility developers and marketers have on the solution they design and thus, favors their decision making process.
This is possible by shifting time and efforts in earlier phases of the project for creating a timed-behavioral and performance model of the system. This investment results in earlier growth of workload but, in the end, contributes to reducing the overall effort and time spent by increasing productivity and reducing specification and design errors.

- **Don't wait near the end of the project to analyze performances**

Performances are usually observed at 80% of development time because the only technique available is a cycle-accurate simulation of the system. This implies the availability of low-level detailed hardware models or IP and the almost completed software code, what takes time and money to obtain.
As the solution is almost finished when it's possible to analyze its properties, it's then very expensive to fix a potential issue revealed by such an analysis.

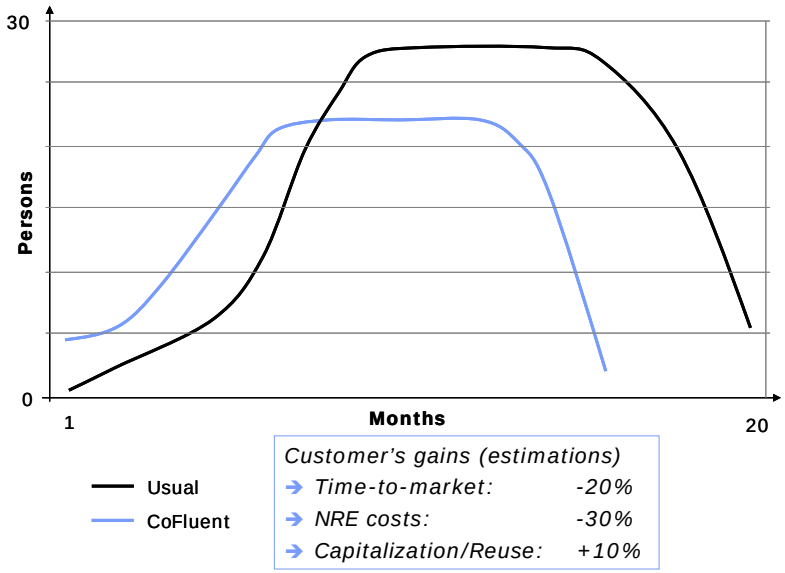
An alternative to this ineffective situation is to create a **high-level performance model** of the system **in the first 20% of development time**. Such a model can be created very quickly with CoFluent Studio, simulated at a high speed and provide accurate figures of the performances that can be expected in reality. Of course, accurate results are related to the quality of the model to which calibration on the base of developers' experience and capitalization from previous projects is essential.

- **Increase time-to-profitability**

Taking crucial decisions early on a project based on incomplete data can lead to damaging consequences: wrong decisions will at least delay a project and increase its cost. This problem can be solved by modeling early with CoFluent Studio at an accurate-enough level of details the timed-behavior and performances of the system.

⇨ The obtained model(s) can deliver prospective information on *how* and *how well* the real system is expected to behave. Such information can be exploited for taking architecture decisions in greater confidence, what contributes to **mitigating project delay and cancellation risks**.
⇨ In addition, finding the optimal architecture with the best cost/performance ratio helps **optimize the final product** and reduce cost of hardware, chip surface, number of connections, etc.
⇨ Last, up-front modeling investments help better structure developments and teams, facilitate communications, and reduce implementation work, what contributes to **improving productivity**.

In the end, CoFluent Studio contributes to significantly increasing time-to-profitability as illustrated below for a typical project.



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