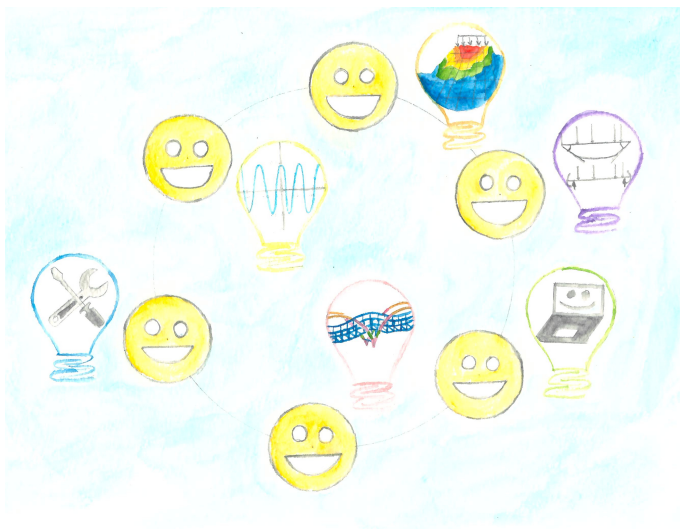

One year ago I joined the crew

Ana Ortega, structural engineer



I certainly not had read the recent article *Hacking structural analysis. Join the crew* on the open source finite element software **XC**, but I had witnessed the birth, the many births, of the program. I'm not a very skilled software programmer and for several years I was a non-source-aware user, becoming an occasional beta-tester. All the huge code was written in the powerful but tough C++, that hardly invited to get one's teeth into it.

Over the last two years, those C++ classes have been exposed to Python, which makes it quick to provide additional functionality without modifying the core system and also, I might add, saves much mental overhead. On top of that, it allows you to take advantage of the wonderful scientific and technical libraries developed by the Python community, like NumPy, SciPy and many others.

So, what are the benefits of becoming a co-developer?

This is about things that can't be measured or quantified, as typical with some important things in life.

1. Use and develop the program provide you with unlimited freedom to take the control of your structural analysis and to customize procedures.
2. As a consequence of the above, if you are not steered by predefined procedures, you can carry out a more creative design, in opposition to purely formalist solutions. It seems very clear that creativity and "human touch" will be essential components of those jobs that are not to be replaced by robots, artificial intelligence or machine learning.
3. Ideally, you'll take part in a community that acts on the principle of shared understanding, where you can recognize good ideas from others and gain reputation through yours.
4. Finally, you may be interested in contributing to disrupt on the growing digital Taylorism that invades our trade, which **enables innovation to be translated into routines that might require some degree of education, but not the kind of creativity and independence of judgment that is often associated with the knowledge economy. In order to reduce costs and assert proprietary rights, companies are experimenting with new ways**

to move from knowledge work to working knowledge; that is, from the idiosyncratic knowledge that a worker has and applies, to working knowledge, where that knowledge is codified and routinized, thereby making it generally available to the company rather than being the 'property' of an individual worker. (Phil Brown, UKCES)■

Find out more

In case you've become interested, you can take a look to the following links:

- [XC home page](#).
- [XC documentation](#) (largely incomplete)
- [XC on GitHub](#) (code shared)

Enjoy it!