

Agile methodologies

Crystal

This is a family of Agile methodologies, and **Crystal is one of the most flexible frameworks, giving tremendous freedom to the team to develop their own processes.** It focuses way more on individuals and how they interact rather than on the process or the tools – so communication is an essential key aspect.

Crystal has variants such as **Crystal Clear** (up to an 8-person team), **Crystal Yellow** (up to a 10 to 20-person team), **Crystal Orange** (up to a 20 to 50-person team) and **Crystal Red** (for big teams with 50 to 1000 people). Crystal focuses on principles such as People, Interactions, Community, Skills, Talent and Communication, aiming to deliver the best possible software development process. The core of this development process is interaction and symbiosis, which have to exist between the people allocated to the projects and processes in order to bring efficiency to the project.

Each project is unique and undergoes frequent changes, so the team must find their own ways to bring it to its conclusion using the best decisions.

According to its founder, Alistair Cockburn, “Crystal is a family of software development methodologies, which works with the power invested by people, and is extremely light and stretch-to-fit”. Basically, Cockburn believes that **talent and the way team members interact brings benefits for the whole project.**

It’s a light methodology in terms of documentation, where teams can find their own ways over preferred work modalities, removing management overheads and creating a “free” process.

Advantages:

- Crystal requires frequent deliveries, in order to identify eventual problems at every stage;
- There is always space to improve characteristics, taking some time from software development and allowing for discussions about how to perfect processes;
- Facilitates closer communication within teams and promotes interaction and knowledge-sharing between team members;
- Requires a technical environment with automated tests, configuration management and frequent integration.

Disadvantages:

- The fact that there are variants in the methodology family means that the principles might vary with the size of the team and the size of the project, resulting in projects that might not be so straightforward;
- It might not work best for geographically scattered teams, because of the constant need to communicate and reflect;
- Planning and development are not dependent on requirements;
- It is ideal for experienced, autonomous teams.

