

Data-Driven Software Development Processes

Using Software Development Data for Process Improvement and Retrospectives

Software Development Data

- Software development artifacts such as code changes (in a version control system) and documentation (e.g. in a wiki) are produced during normal development activities
- Software developers effectively “self-document” their work
- This data is mostly used to communicate what and how things were done
- However, it represents a treasure trove of data for analysis and opportunities to better understand the executed development process
- Teams can be empowered to reason about their processes using their own, objective development data, without having to rely on gut feeling or third parties

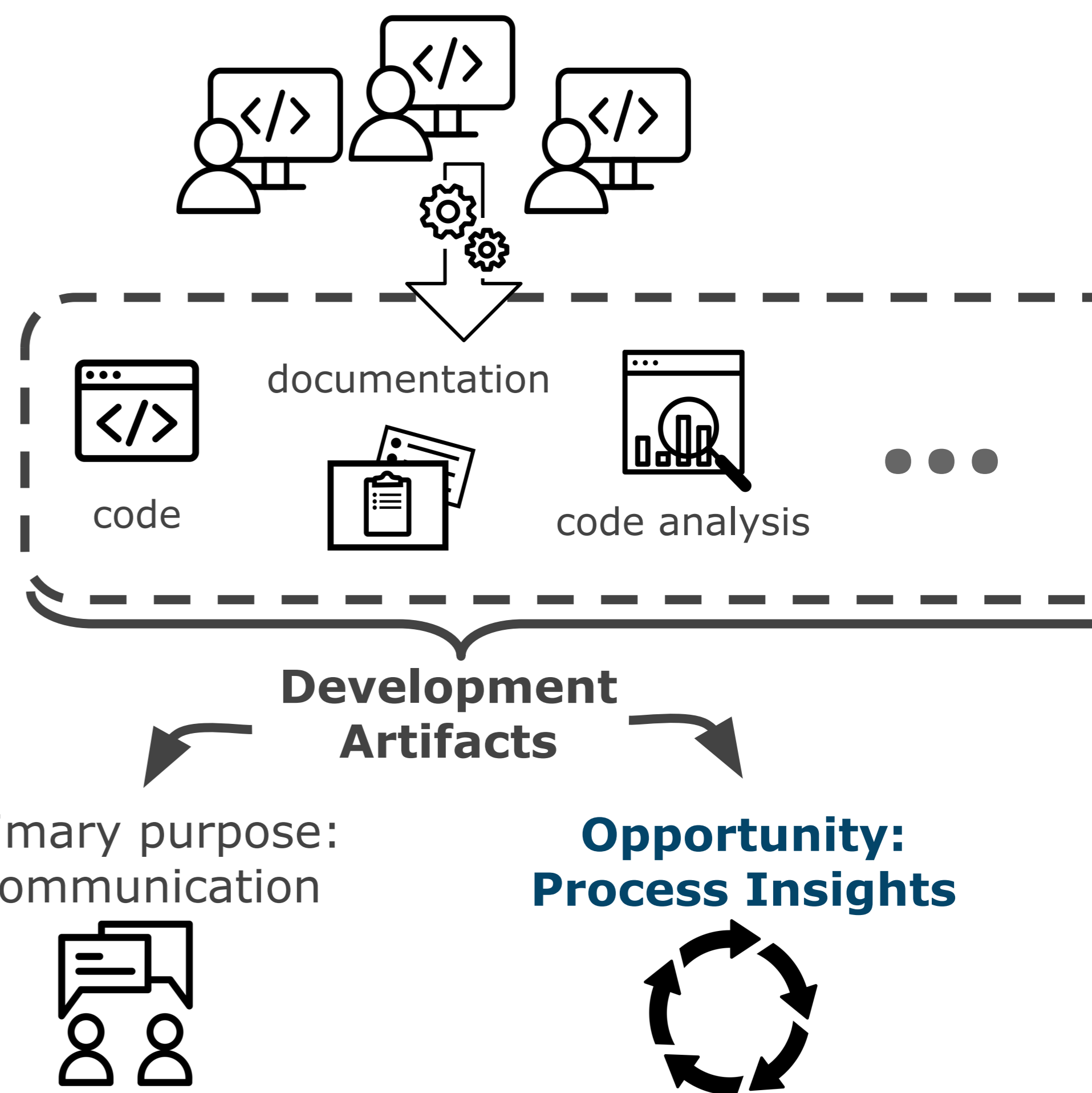


Fig. 1: Using development data for process insights

Agile Process Improvement

- Agile processes need to be adapted to the context in which they are used. In Scrum the dedicated retrospective meeting at the end of a sprint serves this purpose.
- Little research focuses on how these improvement discussions relate to the development data, e.g. commits or tickets, produced during the iteration.
- Development data can be used to track the impact of determined improvement actions.

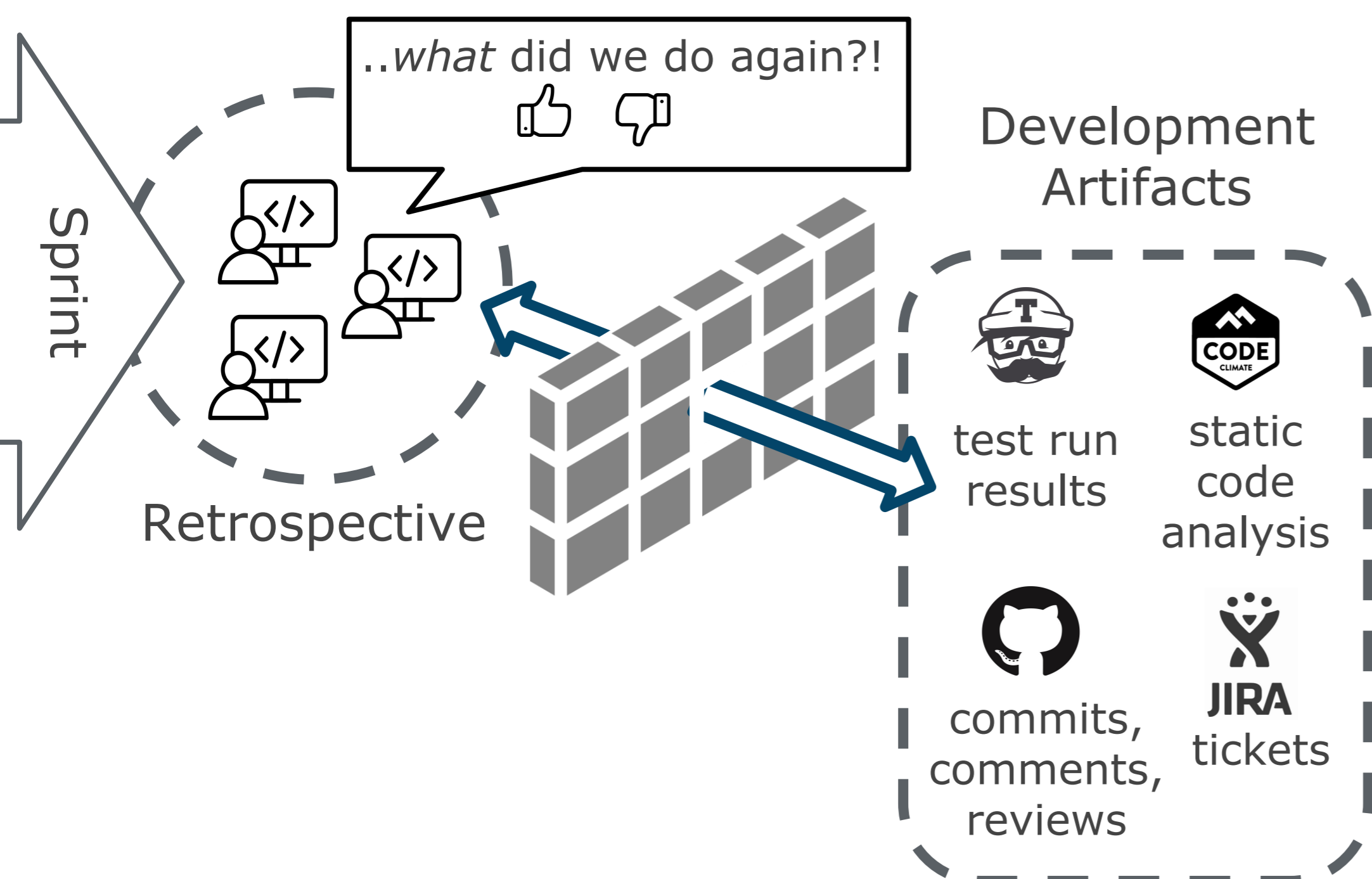


Fig. 2: Using development data during retrospectives