



# CROSSMINER

**Developer-Centric Knowledge Mining from  
Large Open-Source Software Repositories**

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Helping people better manage their software project by providing in-context recommendations and analytics.

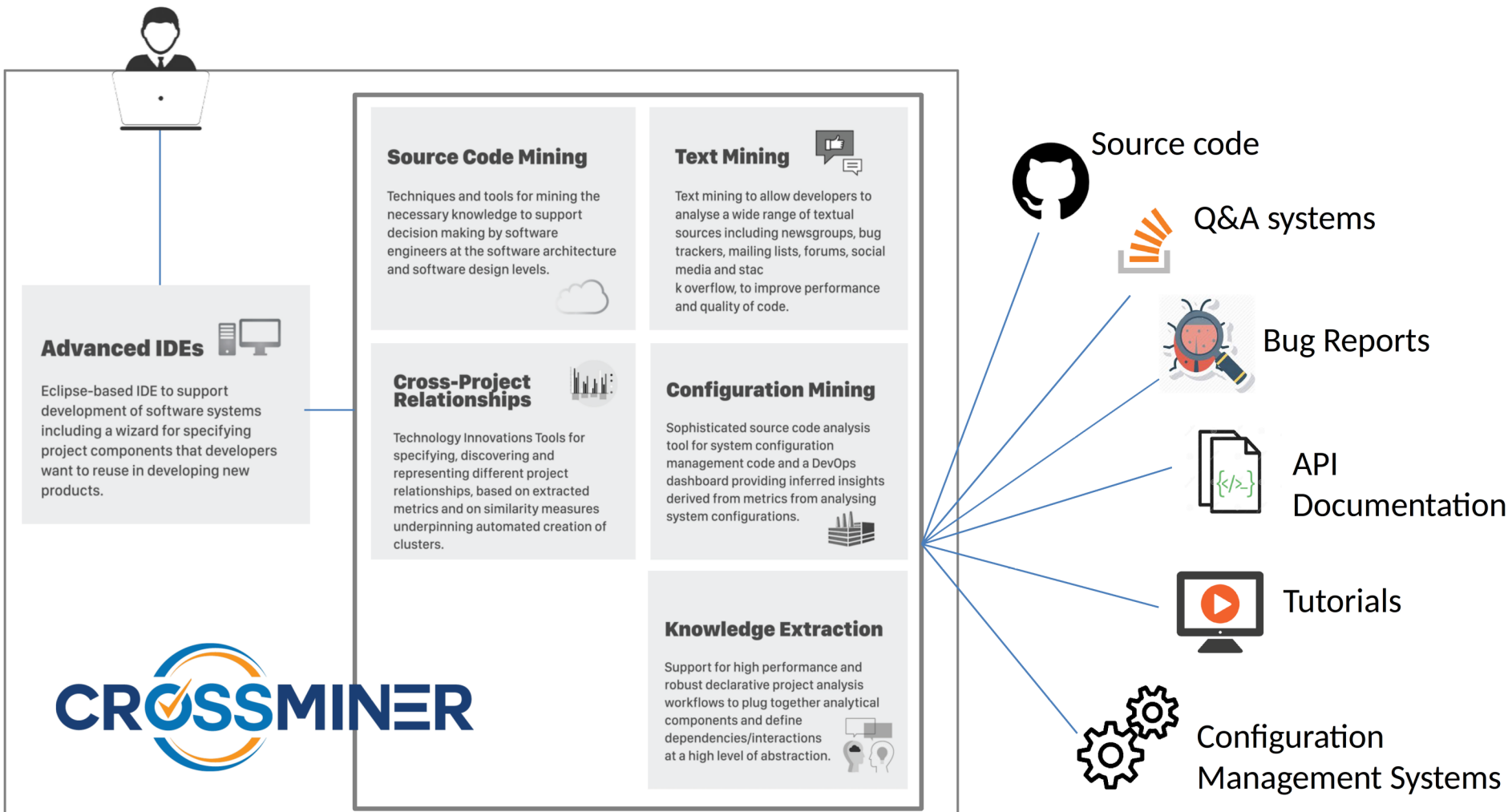
Crossminer:

- **Mines project data** from a wide range of **data sources**
- Builds a **knowledge base**
- And provides **recommendations** to the user through:
  - ◆ A dedicated IDE plugin for in-place advice.
  - ◆ Web dashboards with analytics and recommendations.

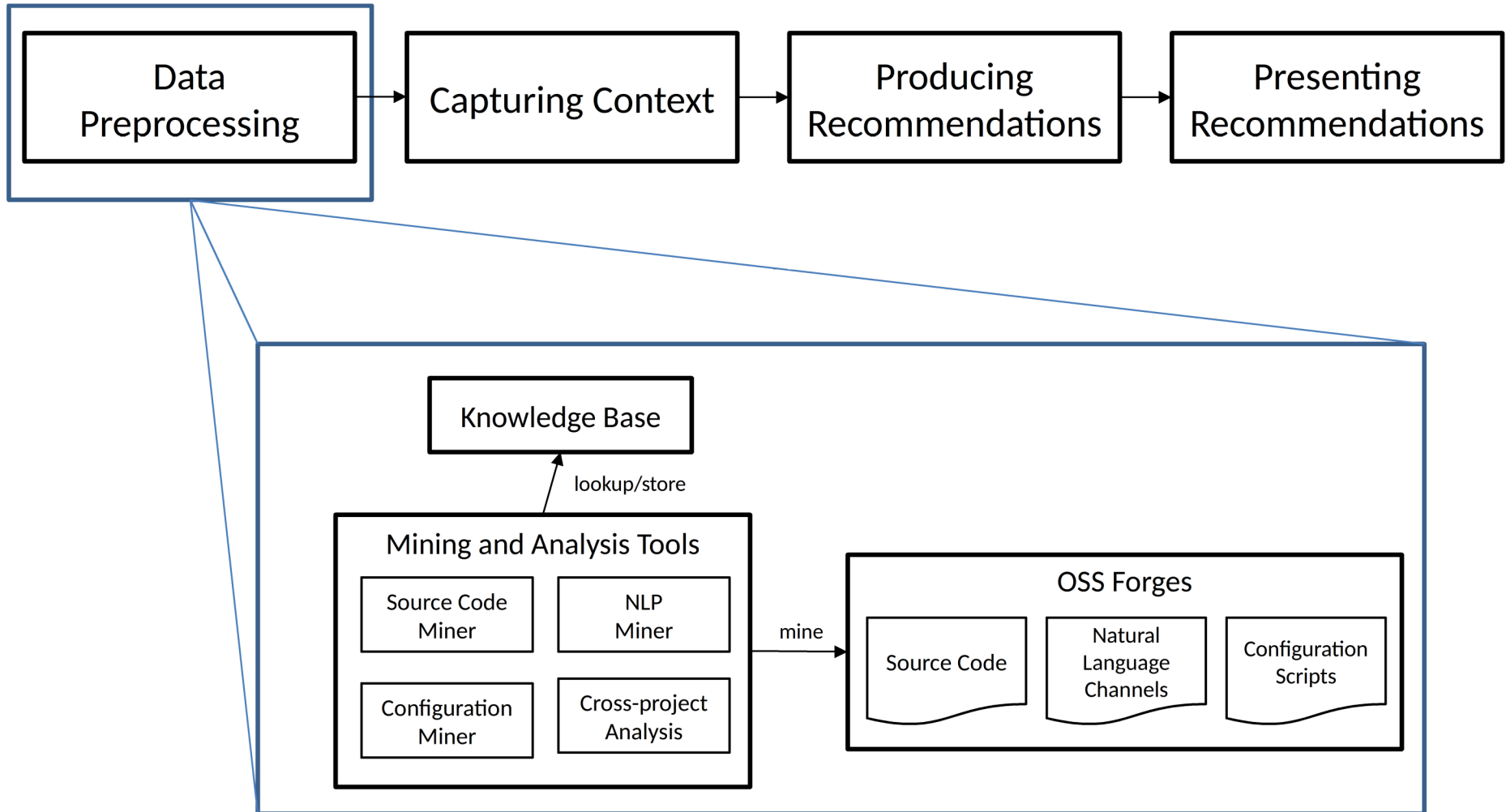
# About Crossminer

- Crossminer is a EU-funded research project (H2020 program)
- It is the continuation of another EU-funded research project: Ossmeter
- The project involves research teams from all over Europe to address specific concerns and specialties:
  - ◆ Configuration management (puppet, docker..),
  - ◆ NLP (Natural Language Processing)
  - ◆ Deep Code Analysis
  - ◆ Integration with major forges
  - ◆ Software dashboards, recommendations & IDE plugins..
- Sustainability for the project is achieved with the creation of an Eclipse project to foster development and develop community.

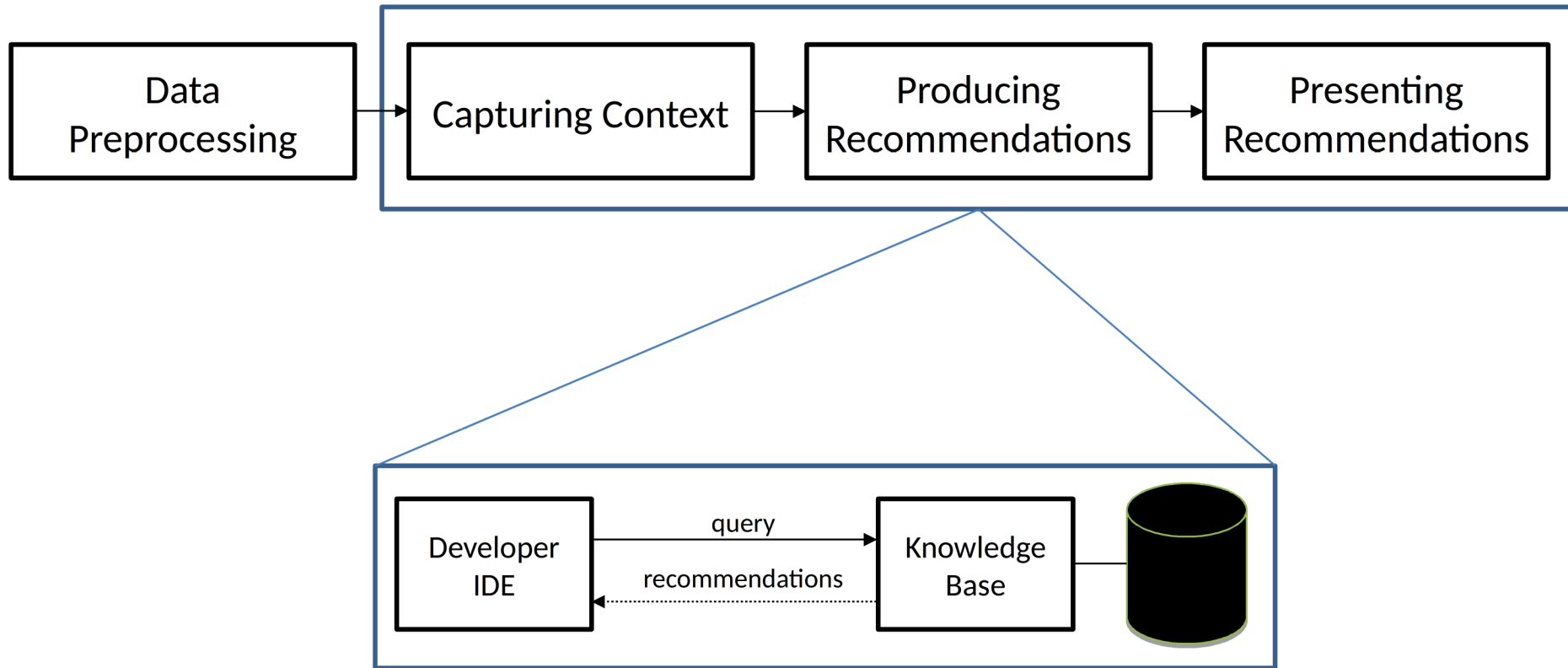
# CROSSMINER Innovations



# CROSSMINER: High-level view



# CROSSMINER: High-level view



**Real-time recommendations that serve to increase productivity and quality**

# Industrial Use Cases - examples

- Arduino-based Internet of Things devices
  - ◆ Selecting and monitoring forked libraries aligned to platforms
- Multi-sector IT software services
  - ◆ Analysis and selection of OSS components for bespoke solutions
- Software APIs coupled evolution
  - ◆ Maintaining alignment with evolving third-party APIs and libraries
- Quantitative software analytics
  - ◆ Extending commercial analytics dashboards with additional metrics
- Software quality assurance and trustworthiness
  - ◆ Improving project quality on OSS forges
- Knowledge extraction from Eclipse forge projects
  - ◆ Cross-domain analysis and policy verification for OSS projects





Web: [www.crossminer.org](http://www.crossminer.org)

Twitter: [@crossminer](https://twitter.com/crossminer)

GitHub: [github.com/crossminer/](https://github.com/crossminer/)

Eclipse: [projects.eclipse.org/projects/technology.crossmeter](https://projects.eclipse.org/projects/technology.crossmeter)



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