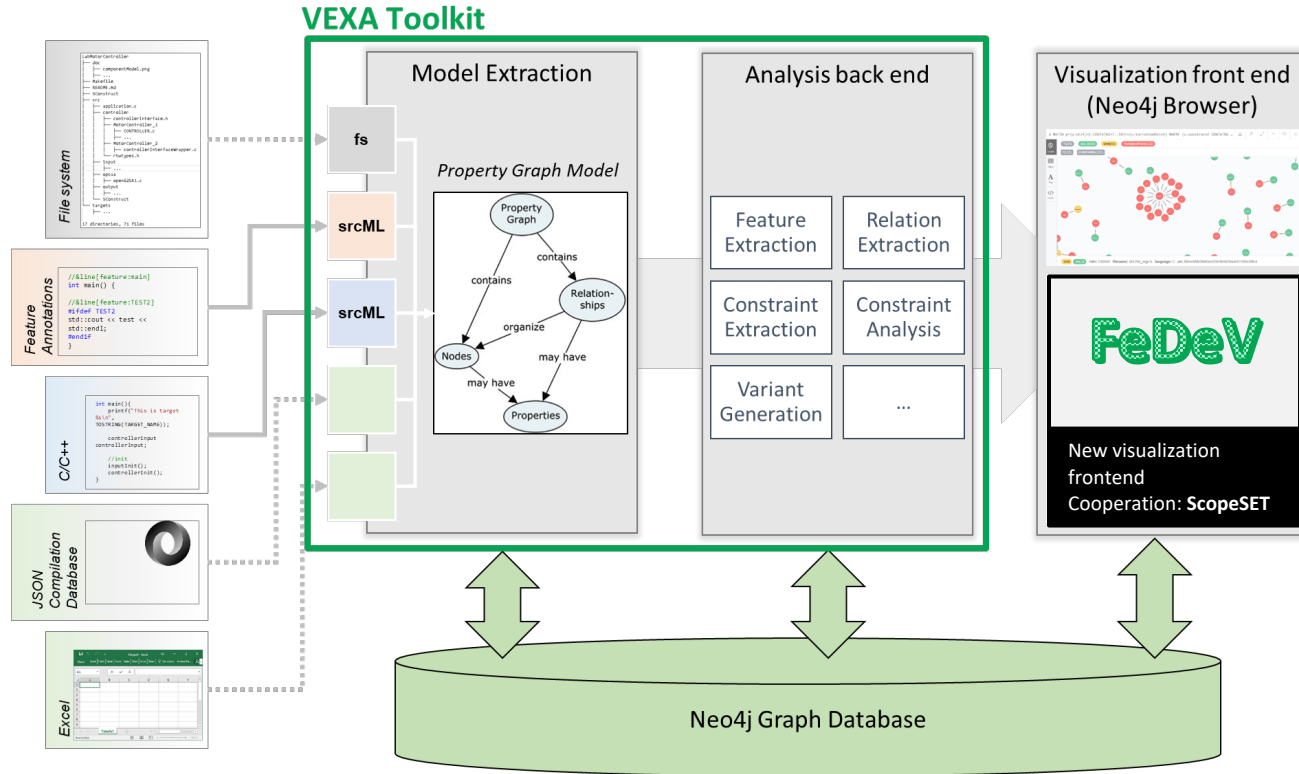


# REVaMP<sup>2</sup> VEXA

Variability Extraction and Analysis Toolkit  
FZI Forschungszentrum Informatik

# VEXA Methodology



- Collection of extraction and analysis procedures/functions for
  - Variability extraction
  - **Feature (effect) analysis**
    - *Nadi, S., Berger, T., Kastner, C., & Czarnecki, K. (2015). Where Do Configuration Constraints Stem From? An Extraction Approach and an Empirical Study. IEEE Transactions on Software Engineering, 41(8), 820–841. <https://doi.org/10.1109/TSE.2015.2415793>*
  - Code metrics generation
  - Exploratory code dependency analyses
- VEXA is a plugin for the Neo4j Graph Database
  - Runtime environment: server or standalone application
  - Supported OS: Windows, Linux
- Tool integration
  - VEXA functionality can be called from all Neo4j Drivers
    - Supported languages: .NET, Java, JavaScript, Python, Go, Ruby, PHP, R, Erlang/Elixir, C/C++, Clojure, Perl, Haskell
    - Binary protocol (Bolt)
    - REST API (Neo4j HTTP-API)
  - E.g., integration with FeDeV via the Bolt protocol

- Feature effect analysis with VEXA



Case study:

**lwIP** (lightweight IP) is a widely used open-source TCP/IP stack designed for embedded systems

<https://git.savannah.nongnu.org/cgit/lwip.git>

### ▪ Partners involved

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### ▪ Download

- Currently not open source
- Demo on request



FZI

ScopeSET  
The Tools Experts