SoMoX – The SOftware MOdel eXtractor
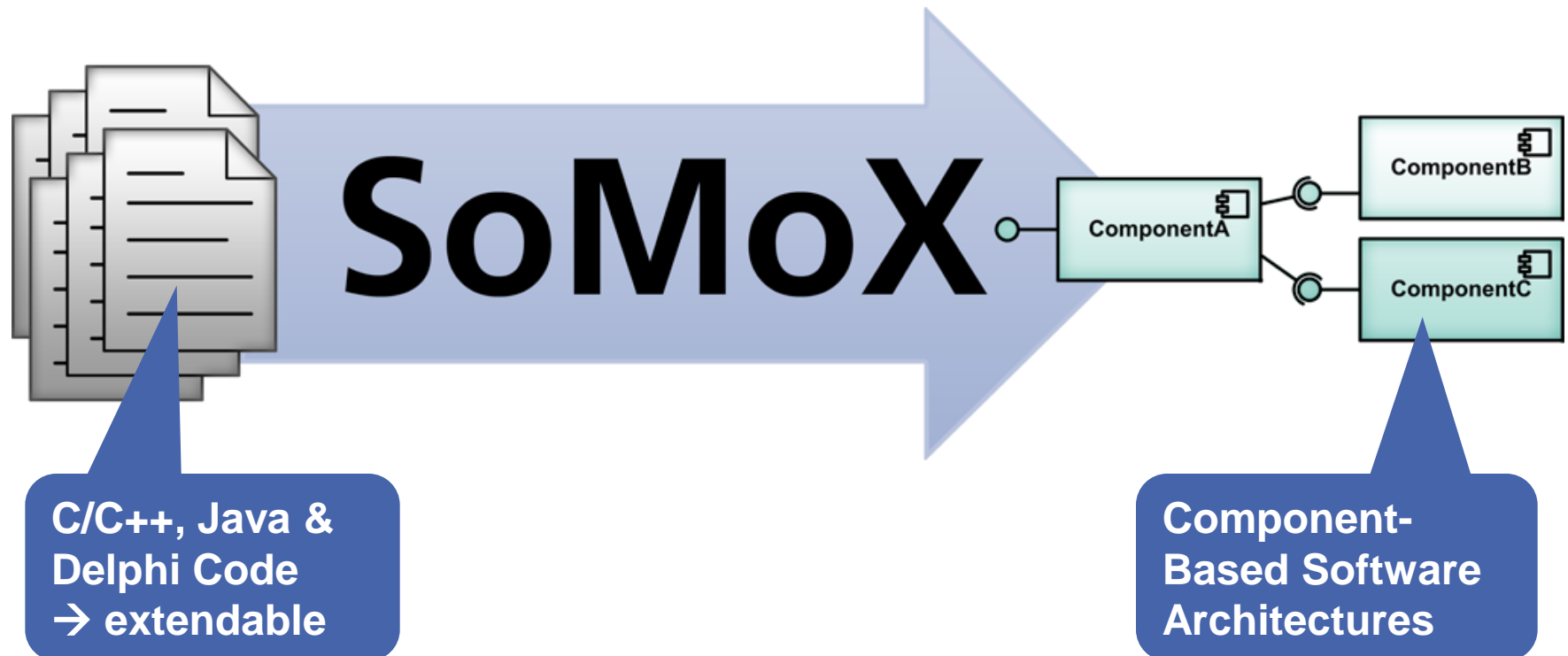
Reverse Engineering Component-Based Architectures from Source Code
Klaus Krogmann

What SoMoX does

C/C++, Java & Delphi Code → extendable
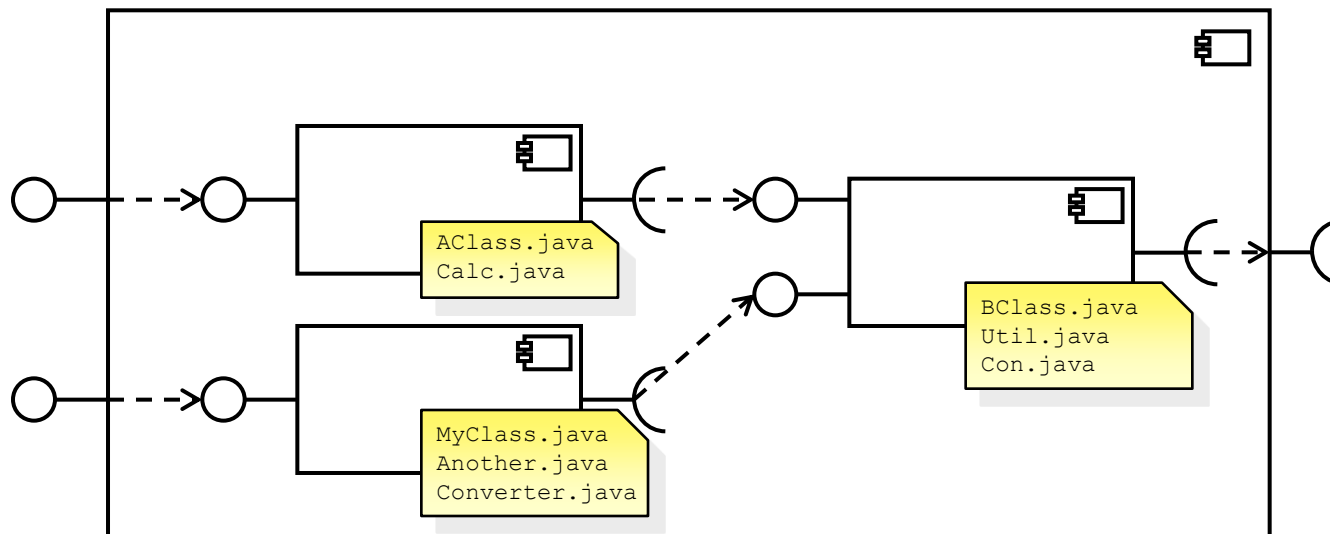
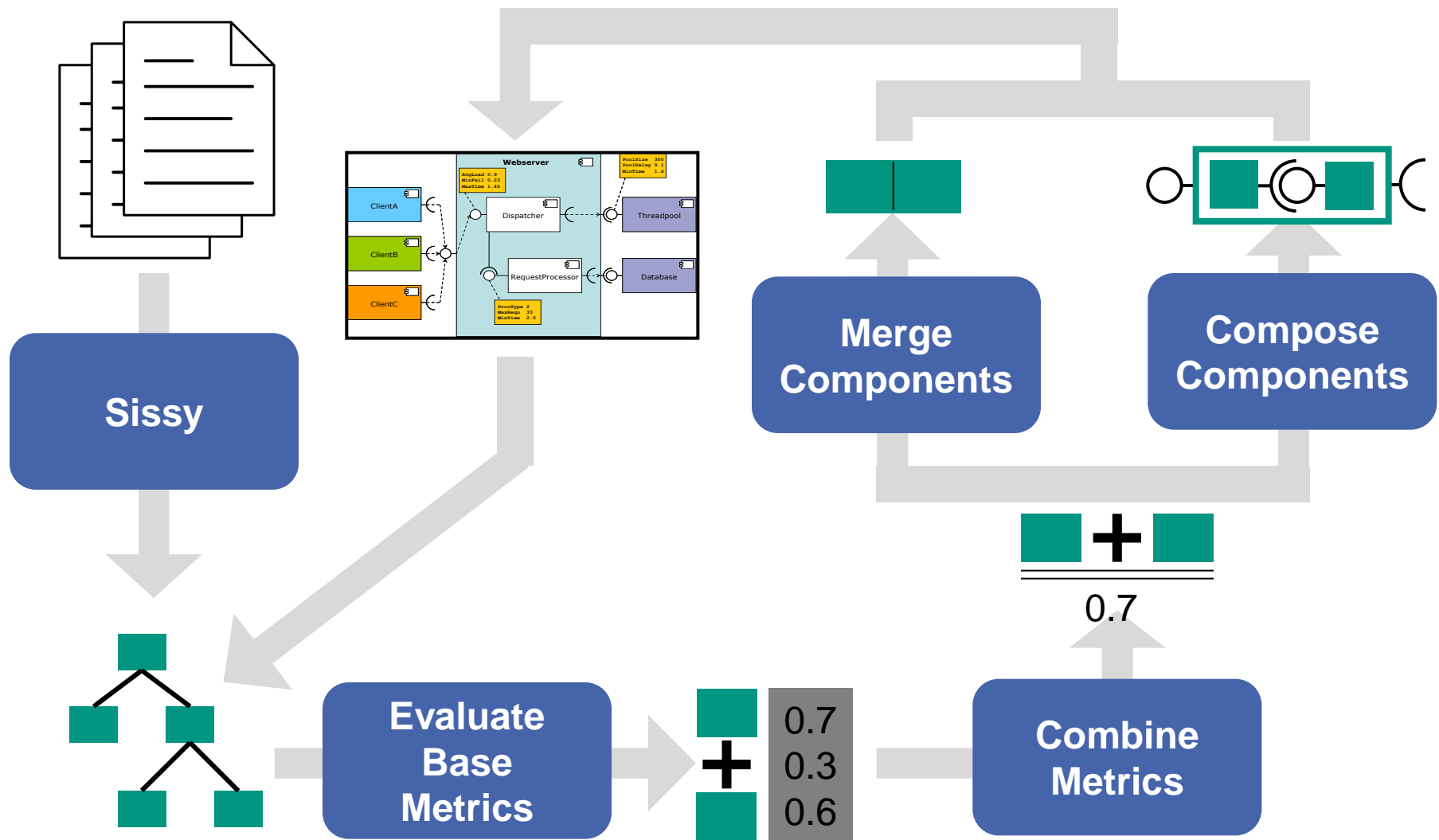Component-Based Software Architectures

What is Recognized?

- Components
    - Boundaries
    - Their related classes
    - Composite Components
- Interfaces
- Connectors
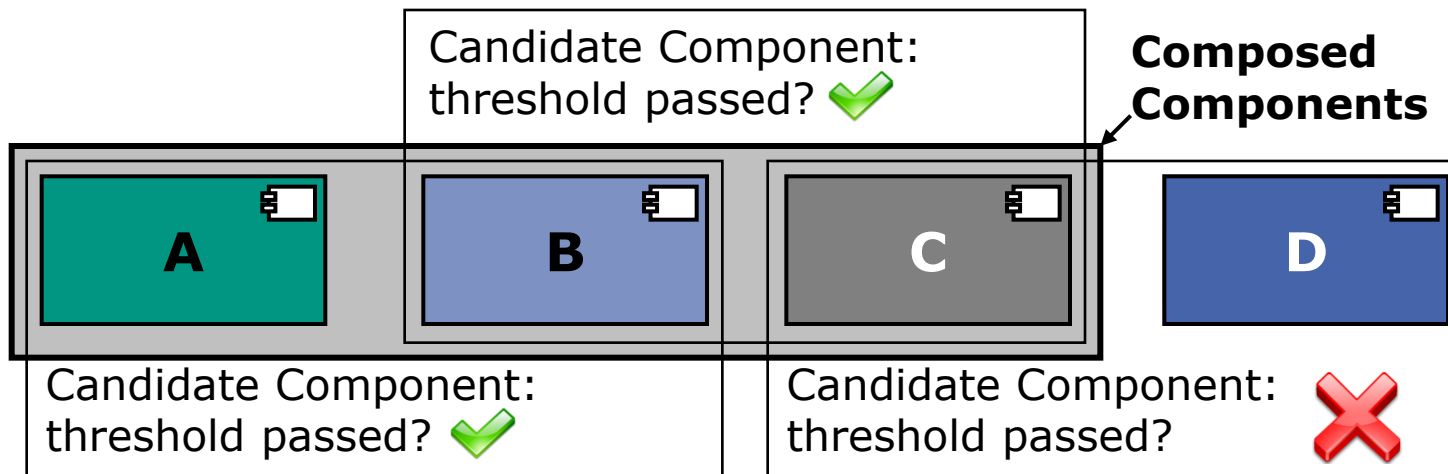- Additionally: Trace Model
    - Behaviour Model

- Target Model:
  Q-ImPrESS Software Architecture Model (SAM)
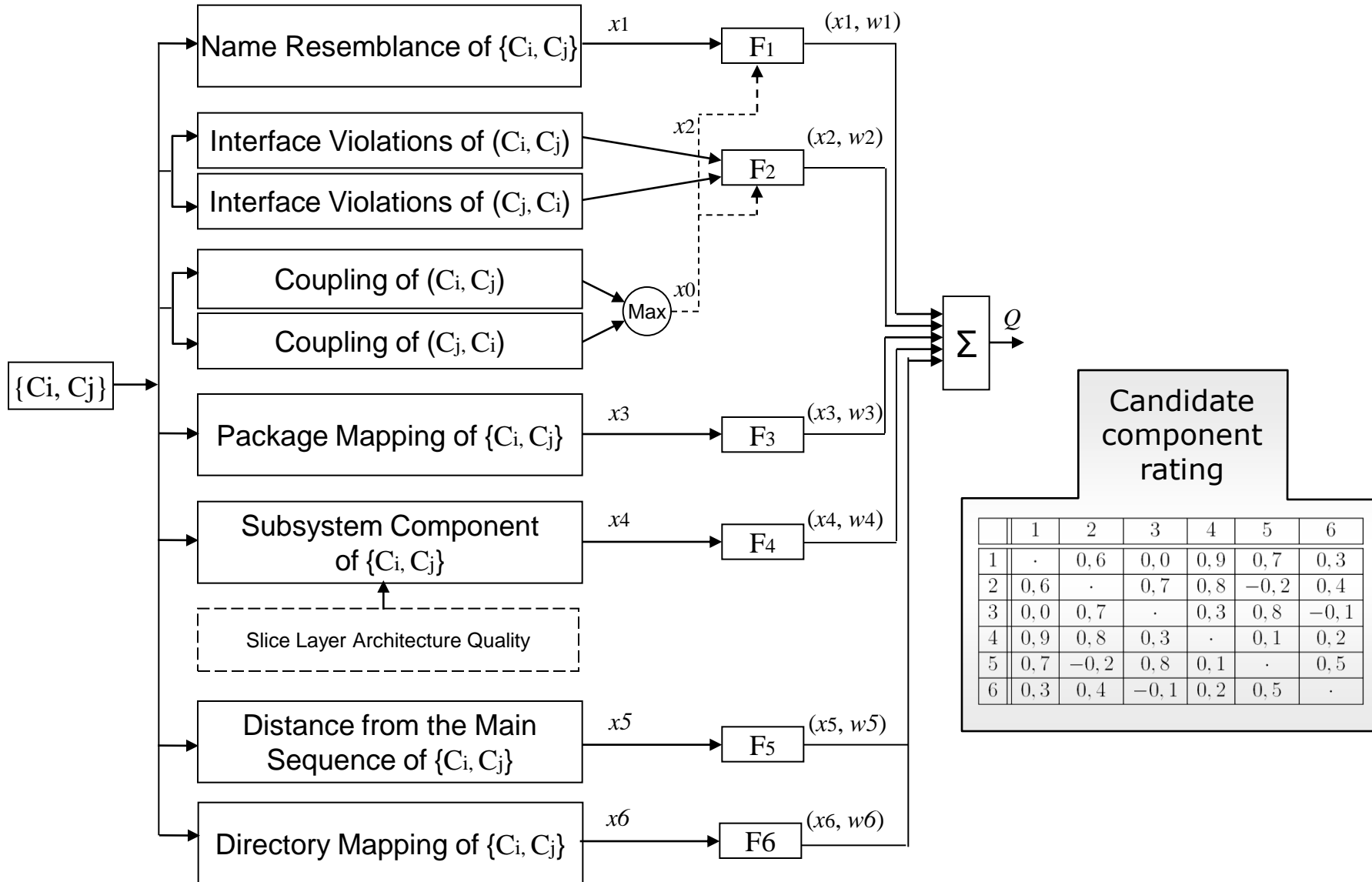
How SoMoX works

Composition

- Component candidates
  - Weakly connected components in the graph
  - Metrics evaluate pairs of component candidates

Candidate Component: threshold passed? ✅

Composed Components

A   B   C   D   E

Candidate Component: threshold passed? ✅

Candidate Component: threshold passed? ❌

Combine Metrics

Live Demo

Customize SoMoX

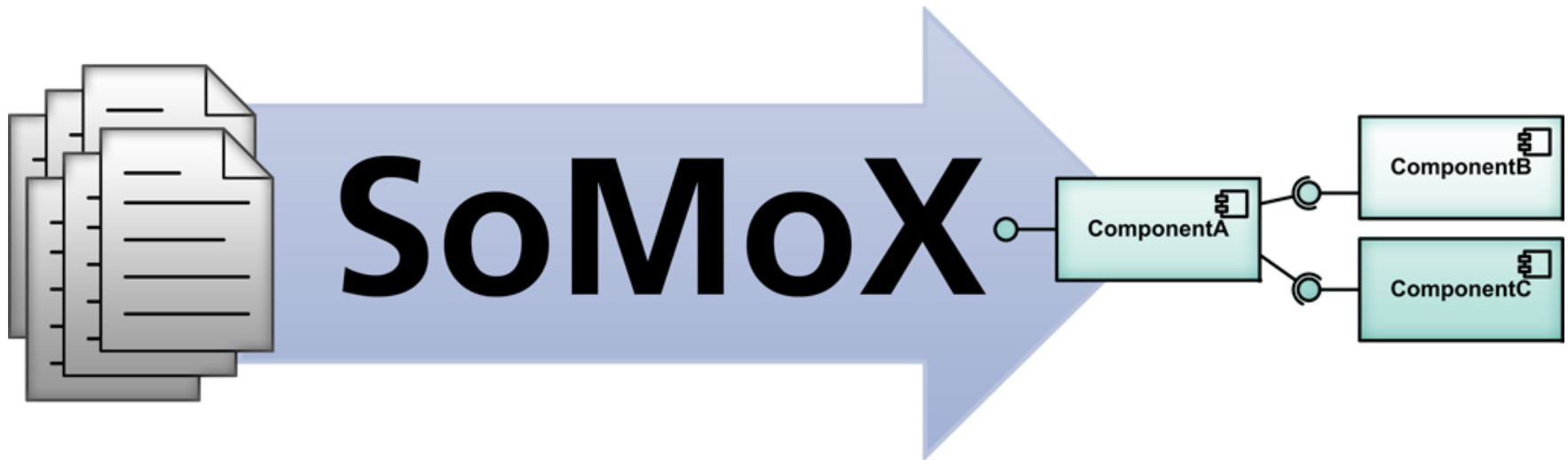## Adaptable to your needs

- Configure weights

- Change structure of metrics

- Plug in new metrics, e.g.

  - EJB deployment descriptor support

  - Custom interface definition language

- Eclipse Technologies

  - Data models and metrics: EMF

  - Graphical editors: GMF

Further information

> **Reconstructs a component-based software architecture from a pile of files**

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