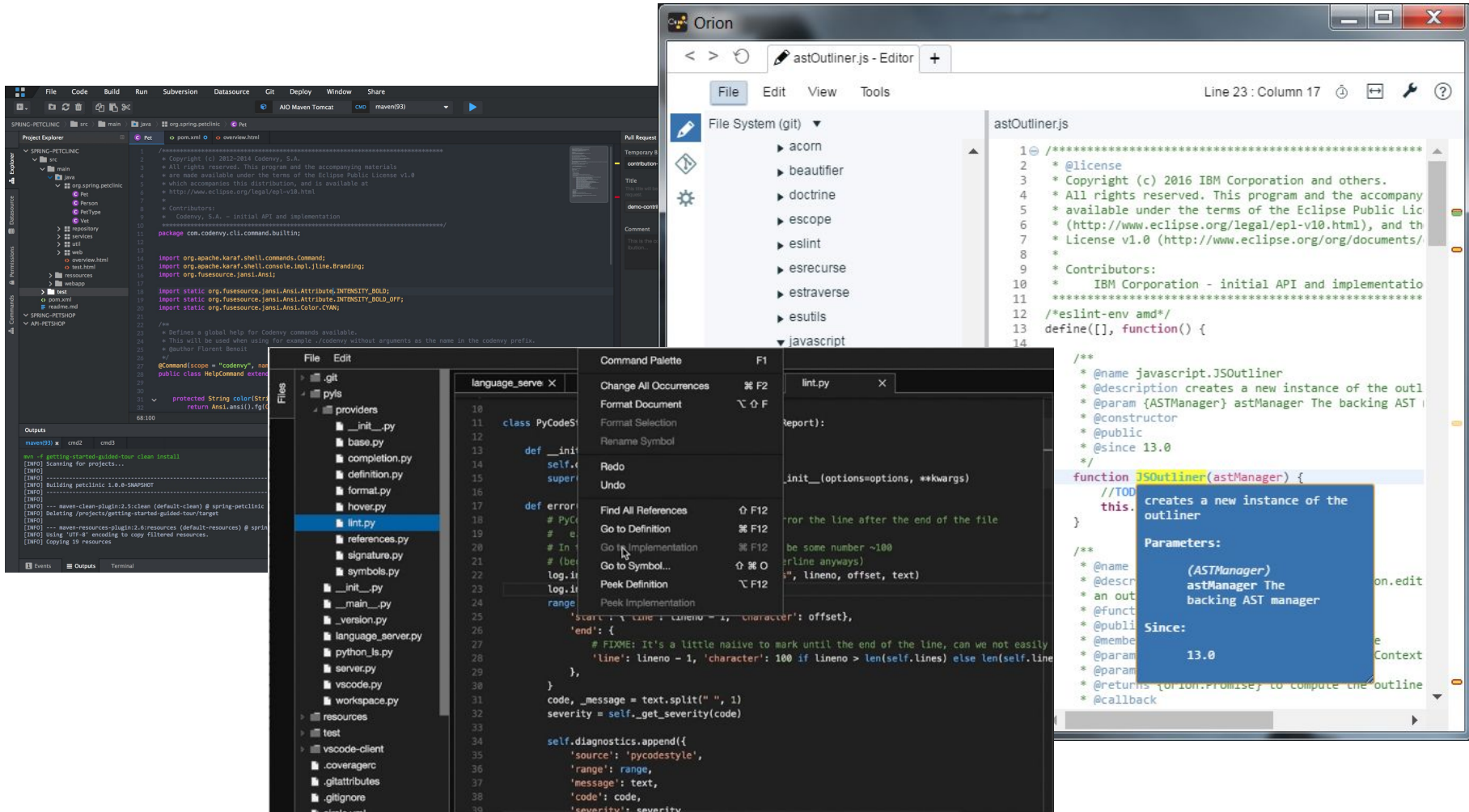


Web-based Modeling Tools

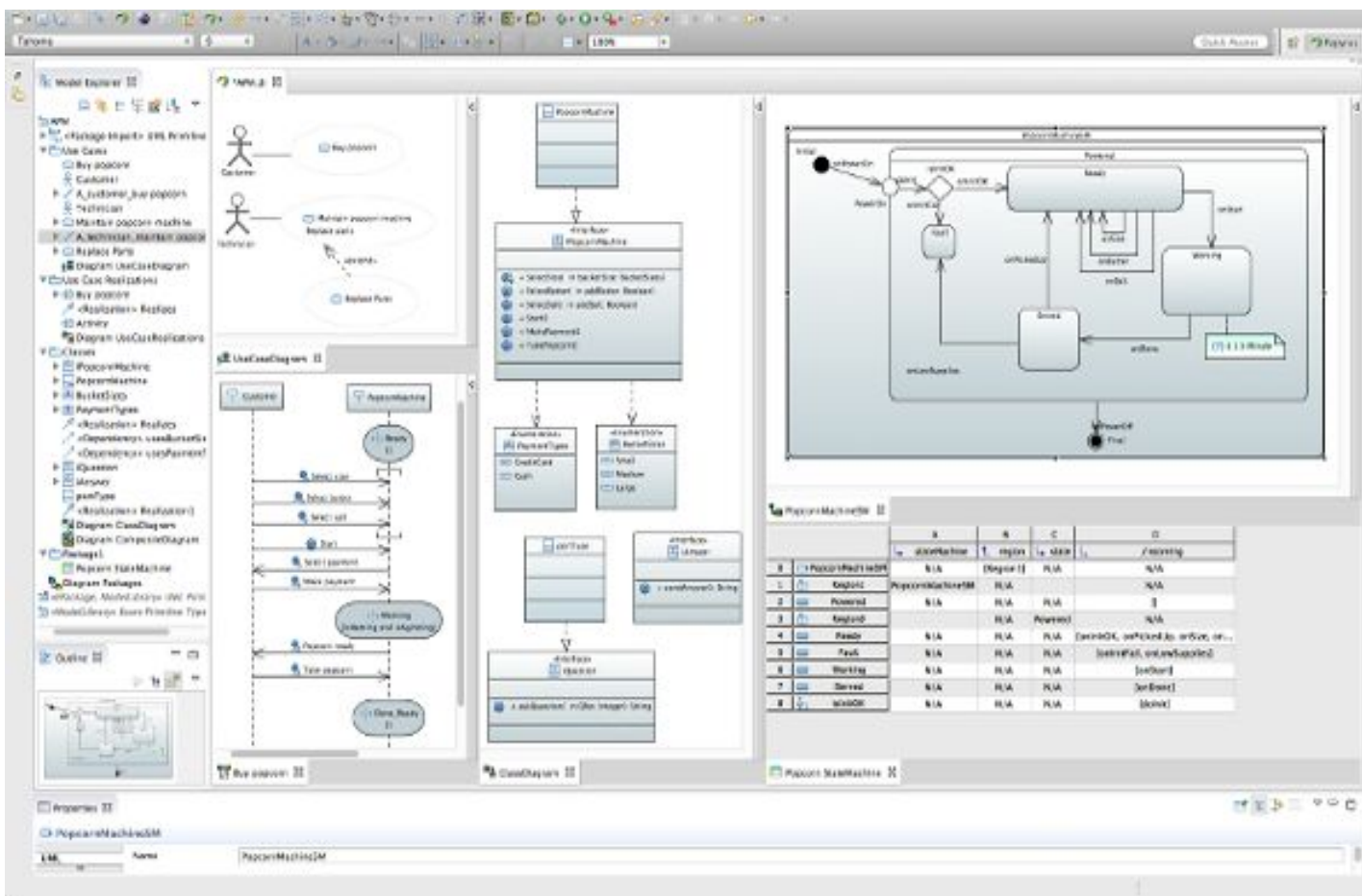
Jonas Helming, Maximilian Koegel



IDEs in the Web?!



Modeling in the web??!



The screenshot shows an Eclipse IDE workspace with several views:

- Model Browser:** A tree view on the left showing the project structure.
- UML Diagrams:**
 - Use Case Diagram:** Shows actors (Customer, Supplier) and use cases (Buy product, Return unexpired product).
 - Class Diagram:** Shows classes like Product, ProductMachine, and their relationships.
 - Sequence Diagram:** Shows the interaction between objects over time, including messages like search, add, and return.
- Properties View:** At the bottom, showing the properties of the selected element (ProductMachine).

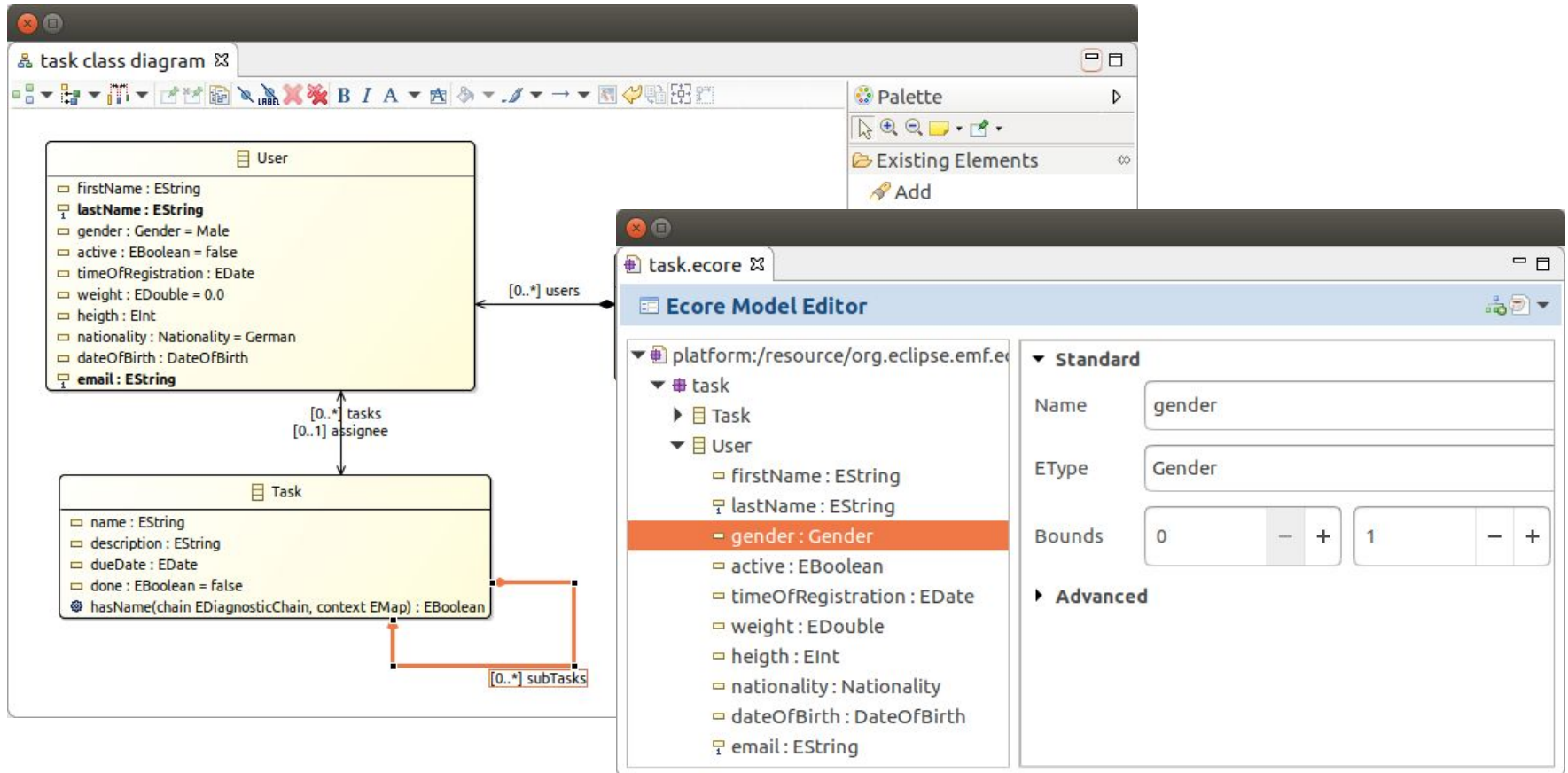
The Properties view for ProductMachine includes a table with the following data:

	R	A	C	D
	Abstract	Final	Final	Final
ProductMachine	N/A	Final	N/A	N/A
ProductMachineM	N/A	N/A	N/A	N/A
Product	N/A	N/A	Final	N/A
ProductM	N/A	N/A	N/A	Abstract, unexpanded, or...
ProductM	N/A	N/A	N/A	Abstract, unexpanded
ProductM	N/A	N/A	N/A	Abstract
ProductM	N/A	N/A	N/A	Abstract

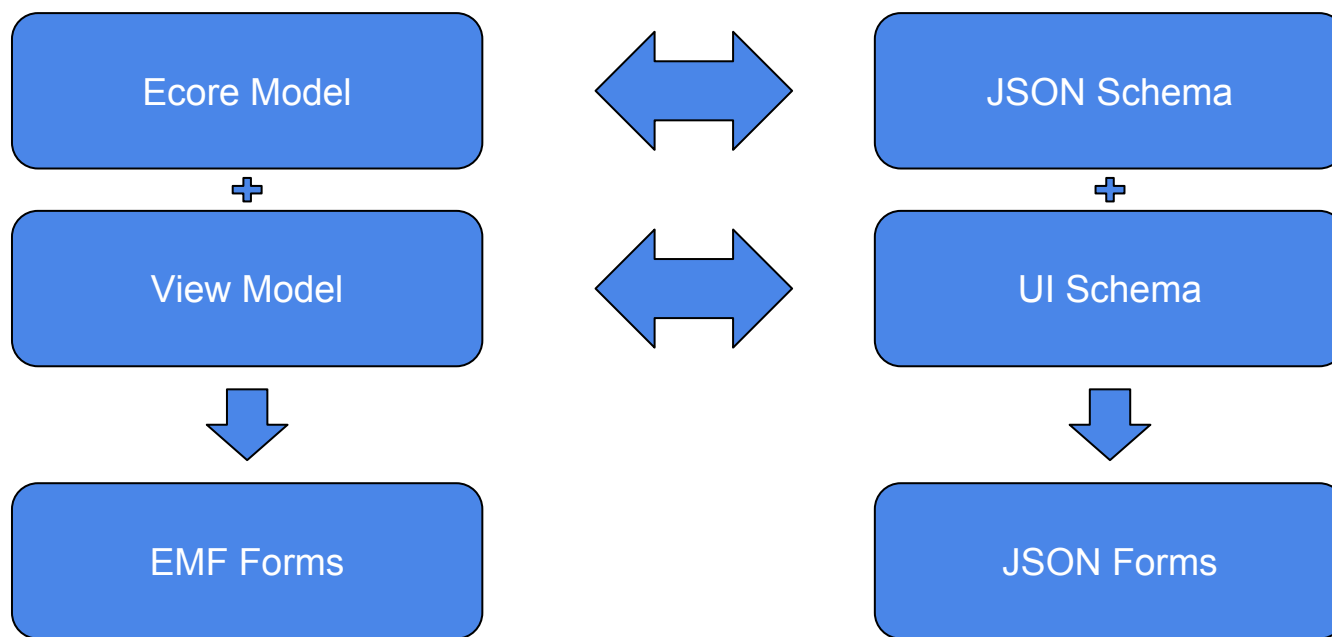
Challenges and Mitigations

- Huge investment in existing tools! Need to reuse...
 - Abstract features into services (e.g. code generation, LSP)
 - Use declarative approaches (Modeling for Modeling Tools)
- No clear technology winner
 - Abstract from concrete implementation (e.g. graph engine)
 - Use declarative approaches (Modeling for Modeling Tools)
- No clear IDE winner
 - Use thin integration layer

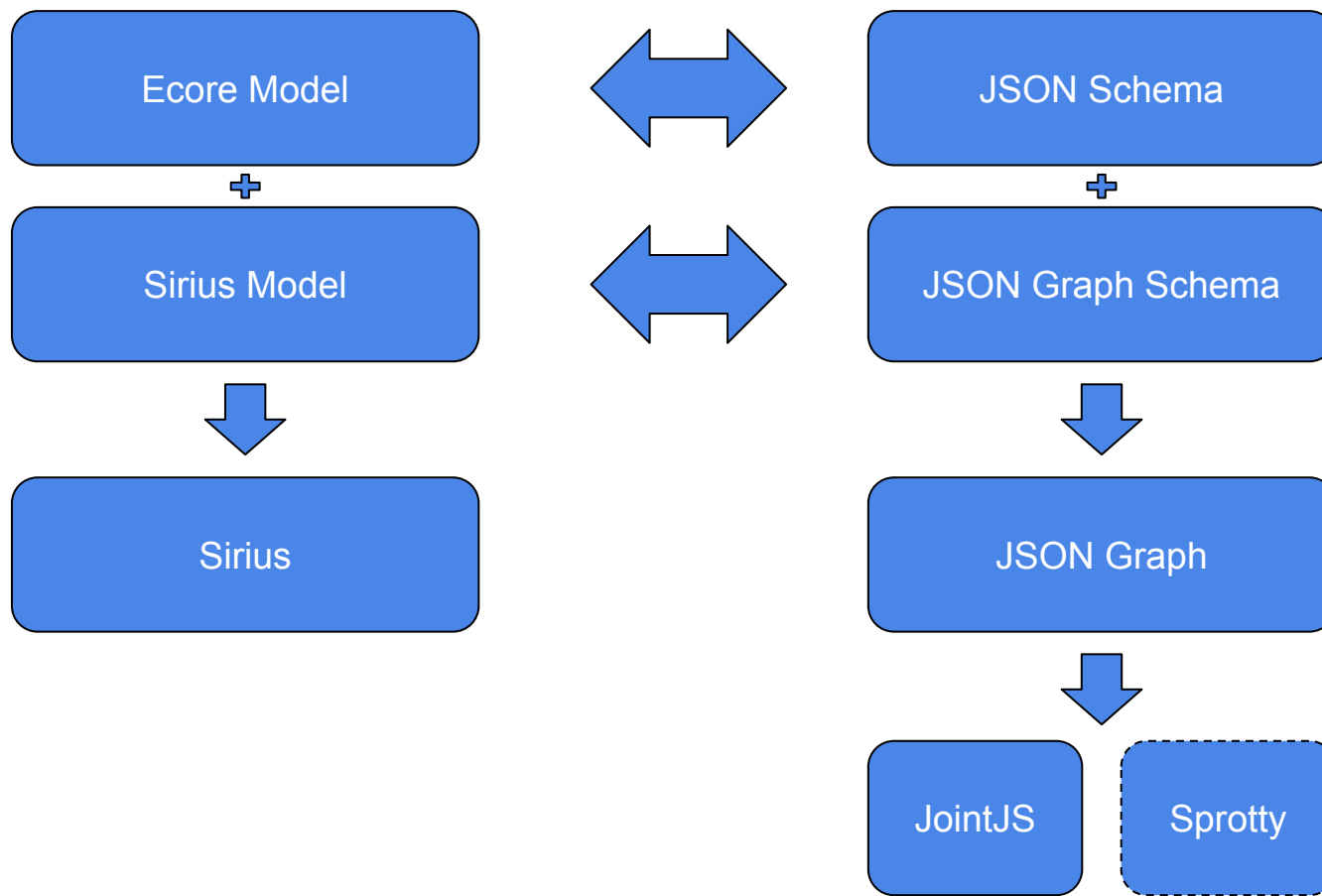
Example: Ecore Tooling



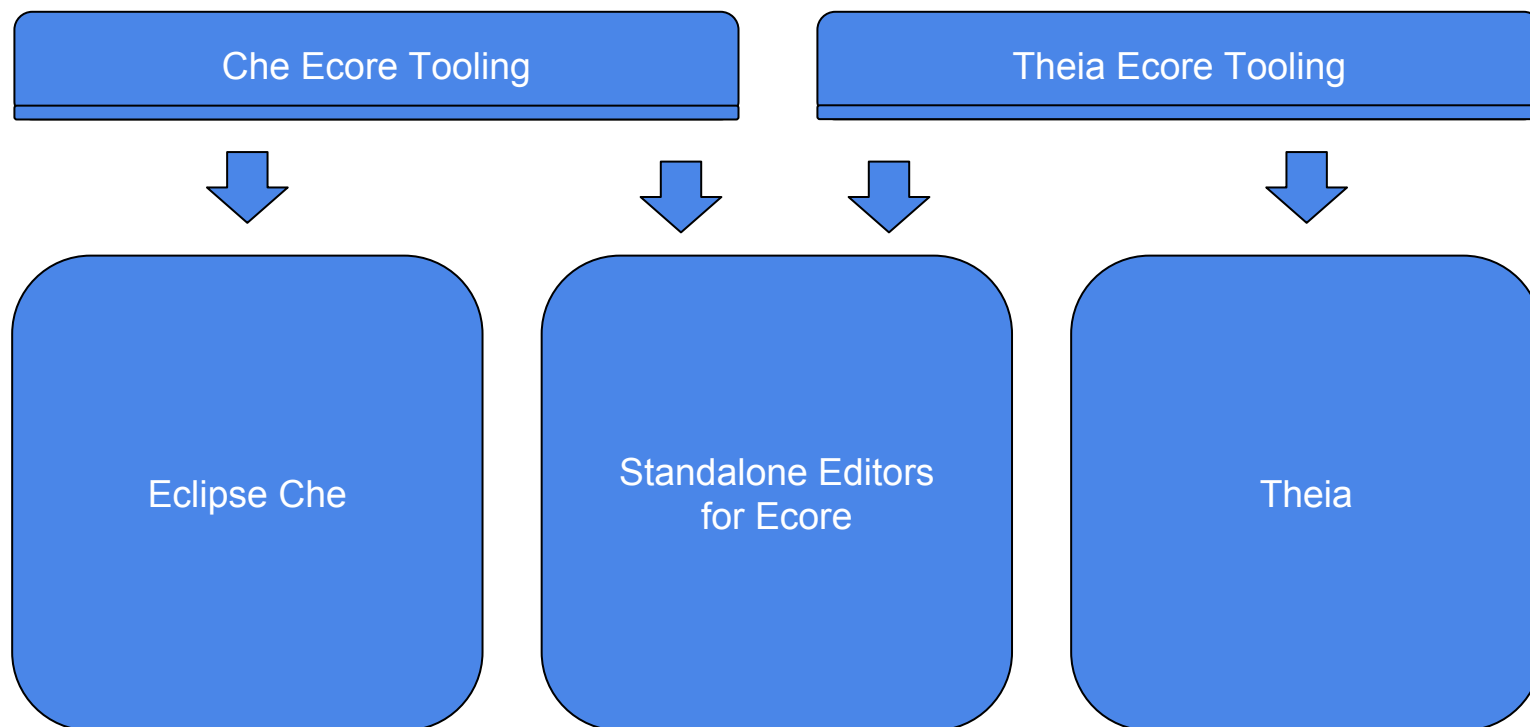
Tree-based Editor



Graphical Editor



Integration into Che and Theia



Conclusion

- Follow design principles:
 - Declarative (model-based) development
 - Service-orientation
 - Abstract concrete technologies from your custom code
- When to get started?
 - Evaluate advantages
 - Iterative migration
 - Develop a strategy now
- Talk to us at our booth or get in contact with us:
 - jhelming@eclipsesource.com
 - mkoegel@eclipsesource.com
 - Developing business web applications with form-based UIs, today 14:00, Silchersaal



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Thank you!