**MOTIVATION**

**ERP Systems**

What happens when the market demands change?

- Administration of resources (e.g., material, employees, finance)
- Data integrated in one common database
- Optimized business processes
- Time- & cost reduction
- Improved planning & control
- Complicated, time-consuming customizing
- Customization errors induce high follow-up costs
- Lack of flexibility to support changed business needs

**SOLUTION**

**REAlist project:**

- Database represents current and future business needs as business models
- Data structure based on Resource-Event-Agent (REA) ontology
- Specification of business needs with REA-DSL
- Individual ERP customizations based on saved business models

**Goals of this thesis:**

- Mapping REA-DSL business models to REA database
- Generate user interfaces based on saved business model data

**REA-DSL**

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- Description of tenant specific business models for customizing
- Generate user interfaces based on saved business model data

**RESULTS**

**Mapping REA-DSL models to the REA database:**

- Definition of rules that map REA-DSL models to respective database tables
- Specification of T4 Text Template files to create insert statements
- Execution of generated SQL scripts to populate the database

**UI-Generation prototype functionality:**

- Administration of resources and agents
- Automated generation of user interfaces based on saved business model data
- Ability to specify business case data in generated masks and persist it

**EVALUATION**

Evaluation of created artifacts based on 12 extensive REA-DSL business models:

- Based on real companies in the United States
- Encompass all relevant REA concepts
- Differ in complexity and size

Outcome:

- Created SQL scripts are complete and flawlessly populate the database when executed
- Generated UIs include all concepts of the underlying business models
- Business case data is correctly persisted

**CONCLUSION**

We demonstrated an approach to:

- Map REA-DSL models to a REA database
- Use persisted business model data to generate user interfaces and therefore ease customization tasks

**Extensions & future work:**

- Extend UI generation to support all REA concepts
- Support multitenancy
- Optimize generated user interfaces