



September 12–16, 2016. Beijing, China.

# Using i\* with Scrum: An Initial Proposal

Leonardo Berbare de Araujo  
([leo.berbare@usp.br](mailto:leo.berbare@usp.br))

Fábio Levy Siqueira  
([levy.siqueira@usp.br](mailto:levy.siqueira@usp.br))

Escola Politécnica da Universidade de São Paulo  
Department of Computing and Digital Systems Engineering

# Motivation

- Scrum is a popular agile method
  - Framework for managing the development of complex products and services
- Requirements are represented as **user stories**
  - (Usually)
  - Focus on communication

*As a <type of user>, I want <some goal> **so that** <some reason>.*

- Difficult to reason about goals
  - Problem with high level goals
  - Limited goal refinement (epics)

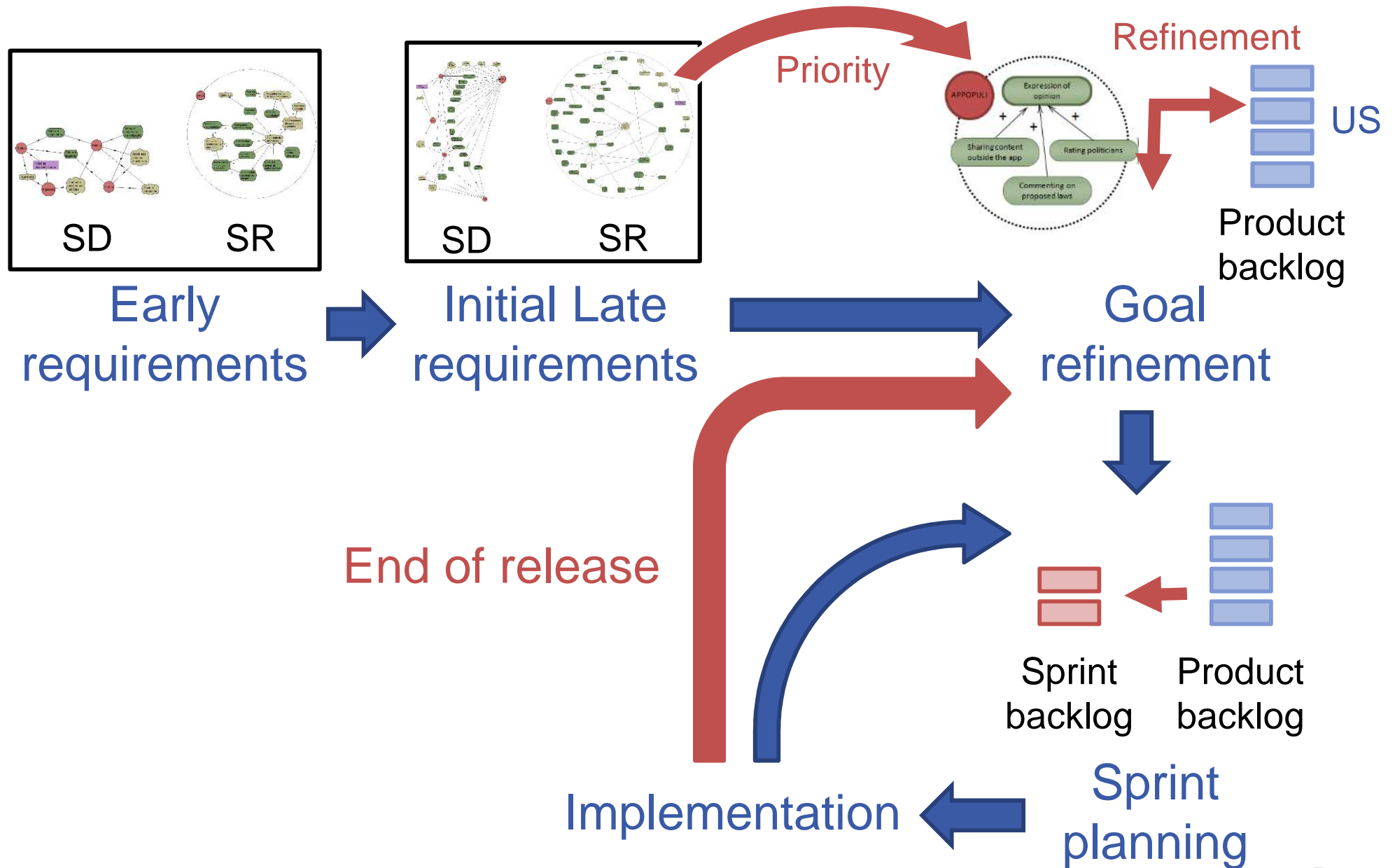
# Motivation

- Goal modelling helps
  - Understanding the domain / system
  - Choosing alternatives
  - Prioritize development based on goals
  
- **How to combine goal modelling with Scrum?**
  - **...and user stories!**
  - ...in an agile environment...

# Method

- Based on Tropos and Scrum
  - Does not impose AOSE
  - Follows initial Tropos phases
    - Early and part of late requirements
  - Follows Scrum framework for latter phases
- Hypothesis
  - Goals are more stable than requirements
    - Goal model won't change frequently
    - Goal model can be used as **release planning**
- 5 phases

# Method



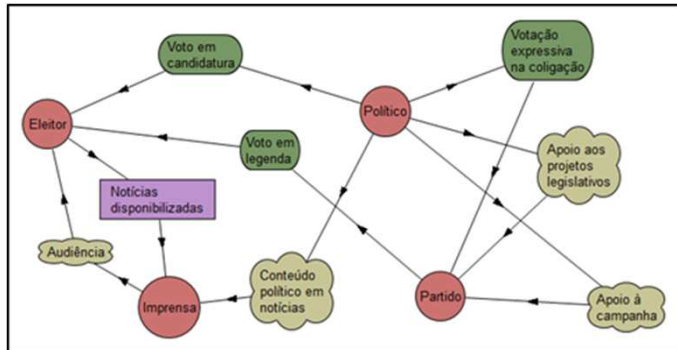
# Example

- Capstone project
  - Computer Engineering
    - 2 students
  - Mobile app: Appopuli
    - Bring political decisions closer to the Brazilian electorate
- Only high-level requirements
  - Problem when refining the requirements

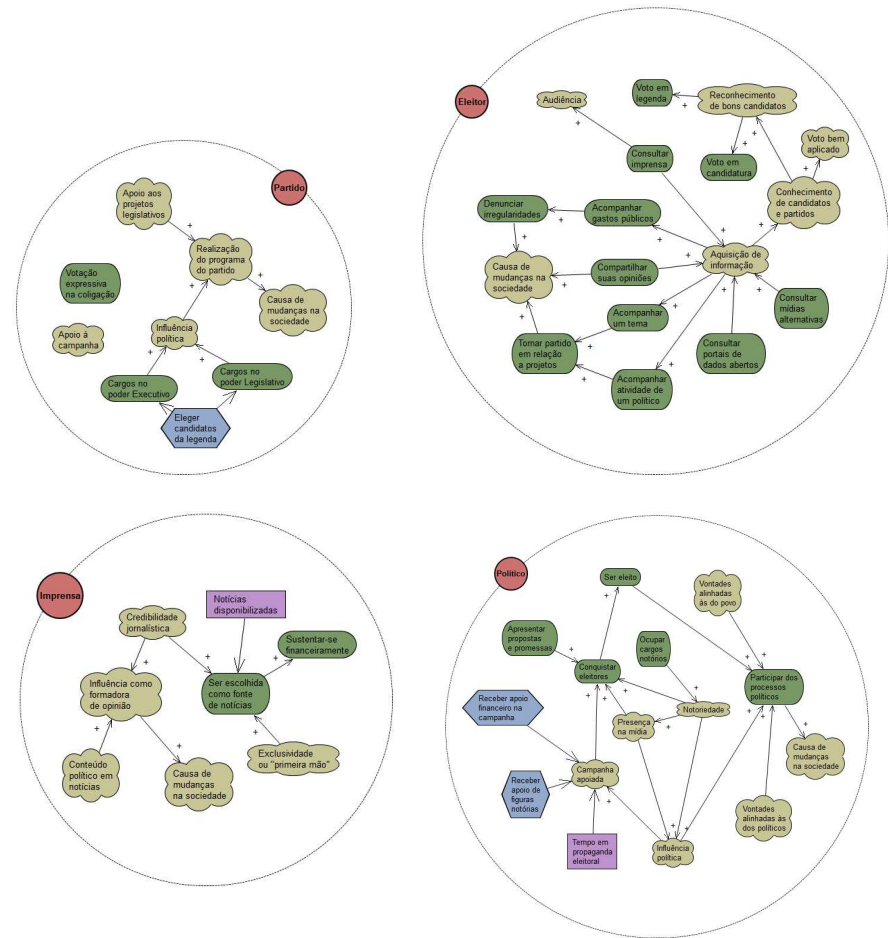
# Example

- Early requirements

- Actors: Electors, Politicians, Political Parties, and Press



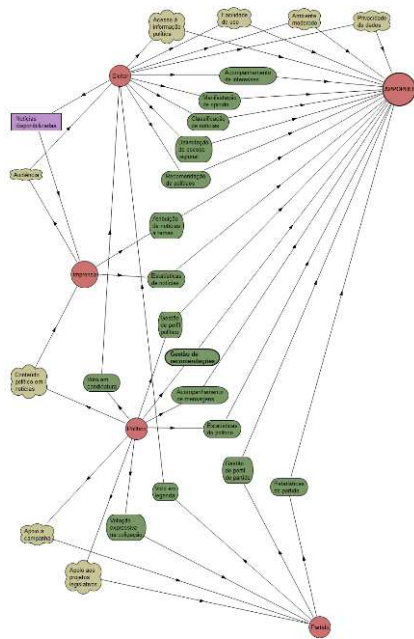
SD Model



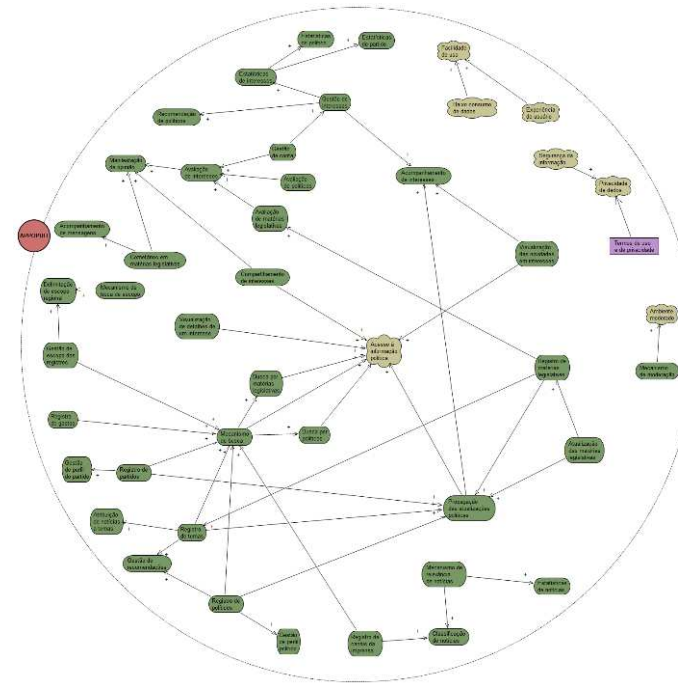
SR Model

# Example

- Initial Late Requirements
  - Model size increased a lot!
    - Complexity
    - Less agile than expected!



SD Model

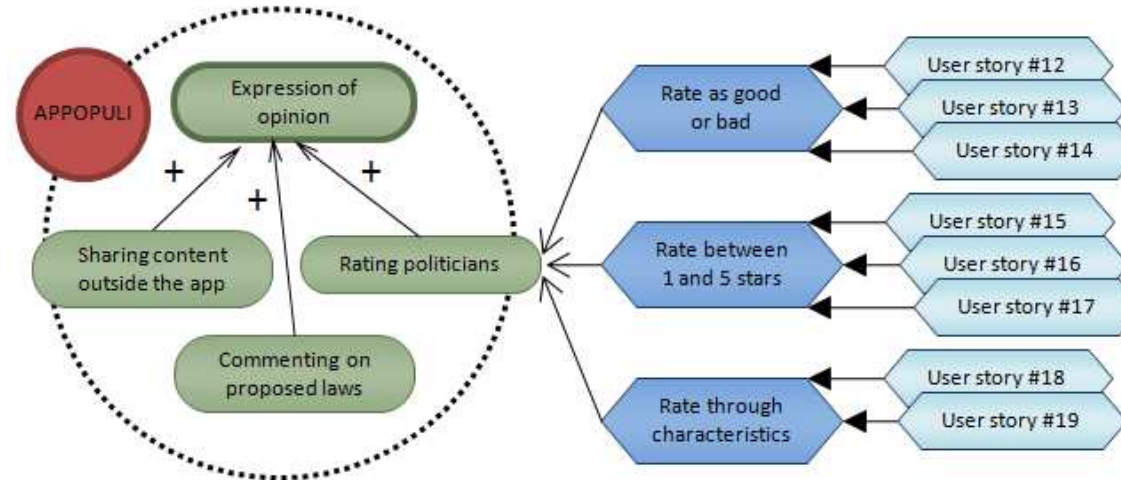


SR Model



# Example

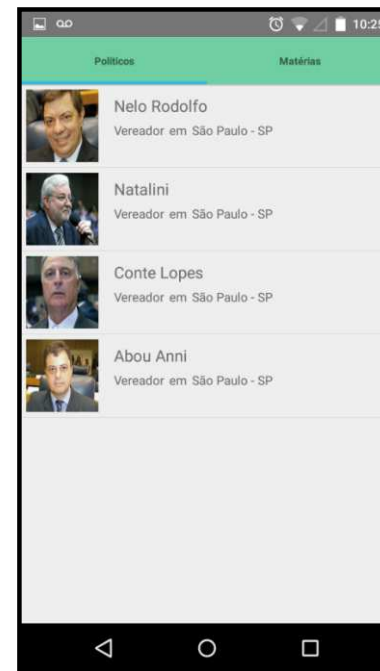
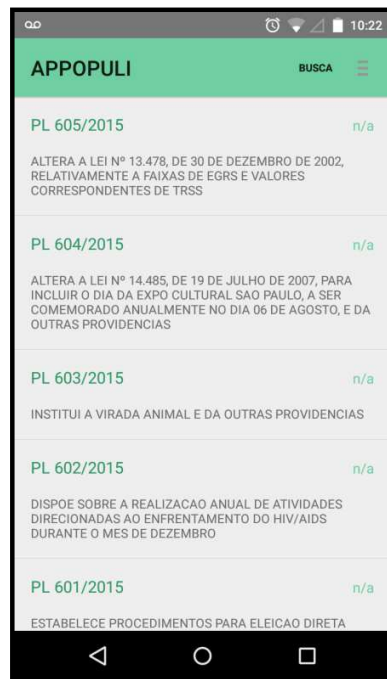
- Goal refinement



- Priority: 15 goals / tasks from 40 possibilities
  - MVP
- User story (some were at Scrum's task level)
  - An Elector may change the number of stars previously given to a politician
  - A user may search aldermen by name
  - ...

# Example

- Sprint planning and implementation
  - 4 Sprints
  - Only one of the students
    - (Other in an exchange program)
  - Development in Android & Ruby on Rails



# Conclusion

- Method that combines Goal modeling and Scrum
  - Tropos and Scrum phases
- Benefits of goal modeling and agile development
- *Problem: create SR and SD models*
  - “bureaucracy”
- In the example
  - Complexity of the model
  - Students without experience on goal modeling (and i\*)

# Conclusion

- Future works
  - Criteria to stop refinement in initial late requirements
    - Create a *less complex* i\* model
  - Create guidelines for the method
  - Analyze in a real environment
  
- How to make goal modeling more agile?

# Questions?

Fábio Levy Siqueira  
([levy.siqueira@usp.br](mailto:levy.siqueira@usp.br))



Grant: 2016/15050-1



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