



**RULES FEST**



**FICO**<sup>TM</sup>



# Emergency Services Processes, Rules and Events

Mauricio Salatino

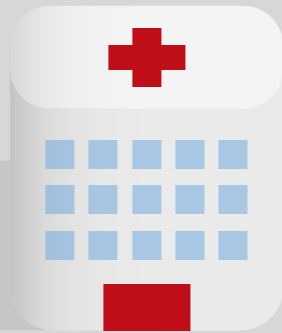
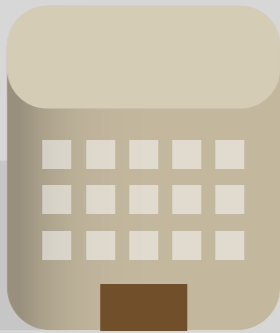
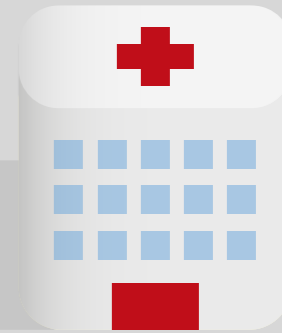
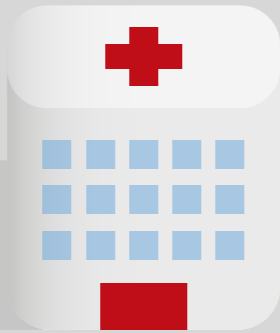
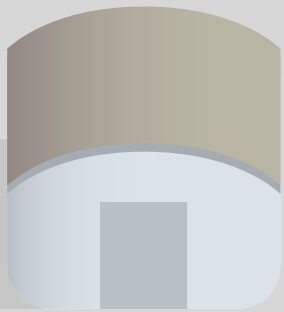
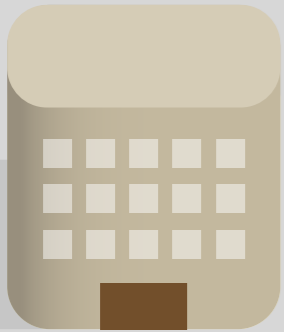
CTO

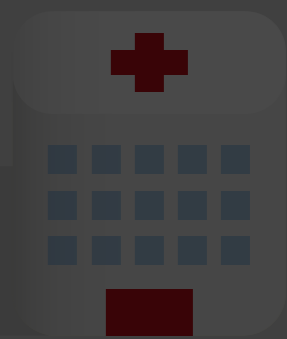
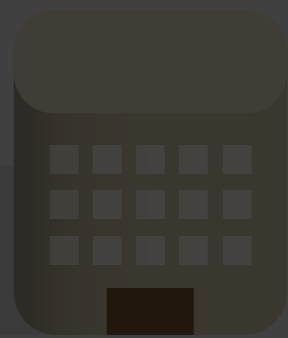
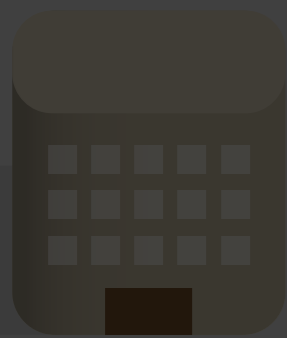
Plugtree



# Emergency Services

Processes + Rules + Events



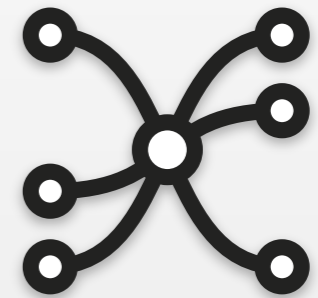
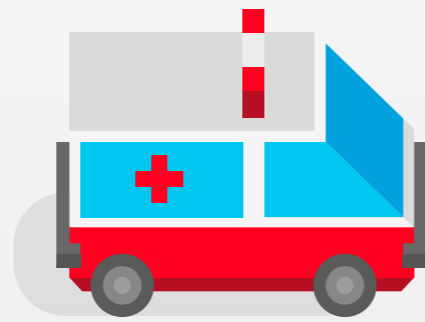








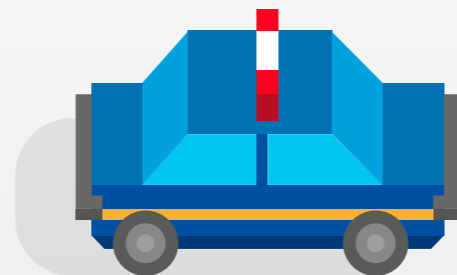
# 911



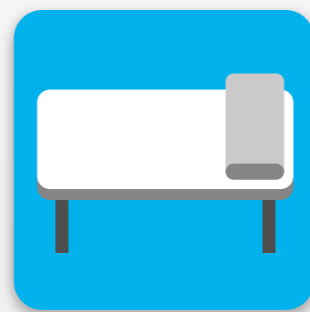
# Fire Department



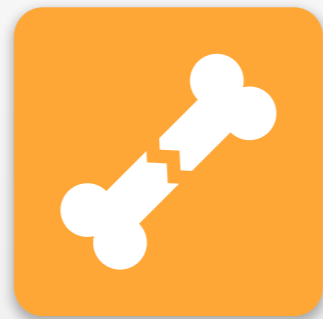
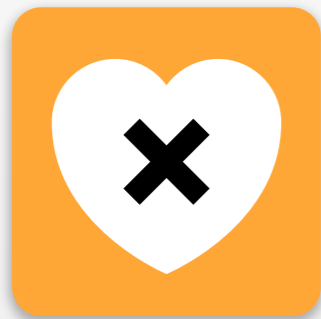
# Police Department



# Hospitals



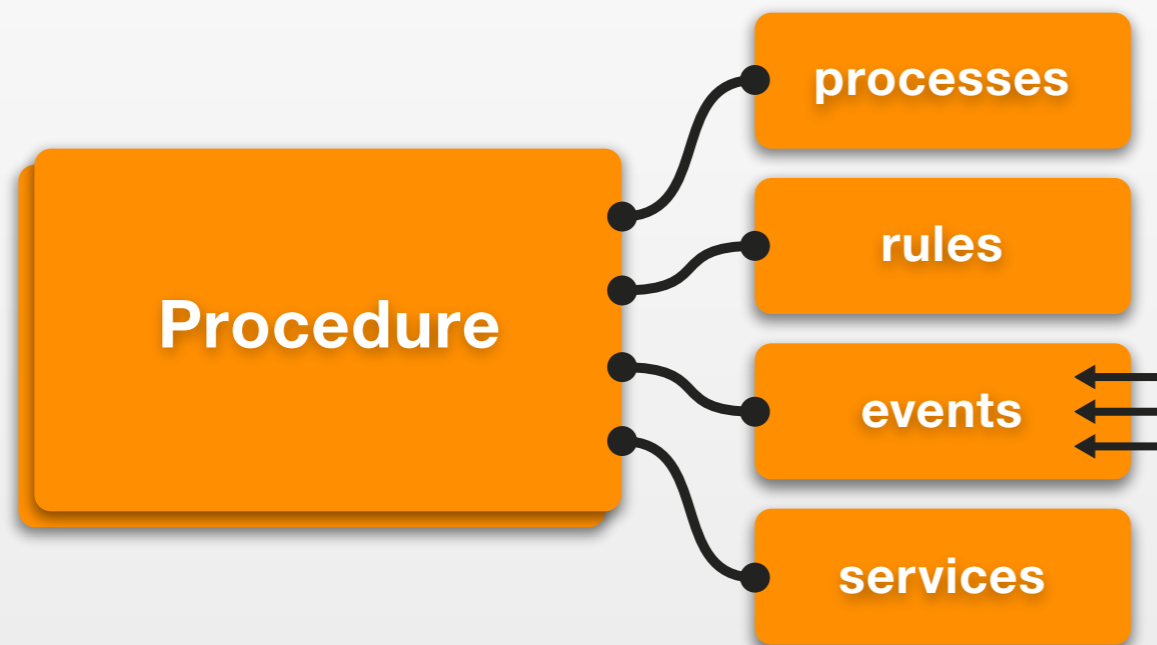
# Emergency types



# Proposed Architecture for V3

- Built on top of the business concepts
- Designed to scale with the company requirements
- Focused on taking advantage of the declarative knowledge representations (bp, br, events)

# Procedure Runtime

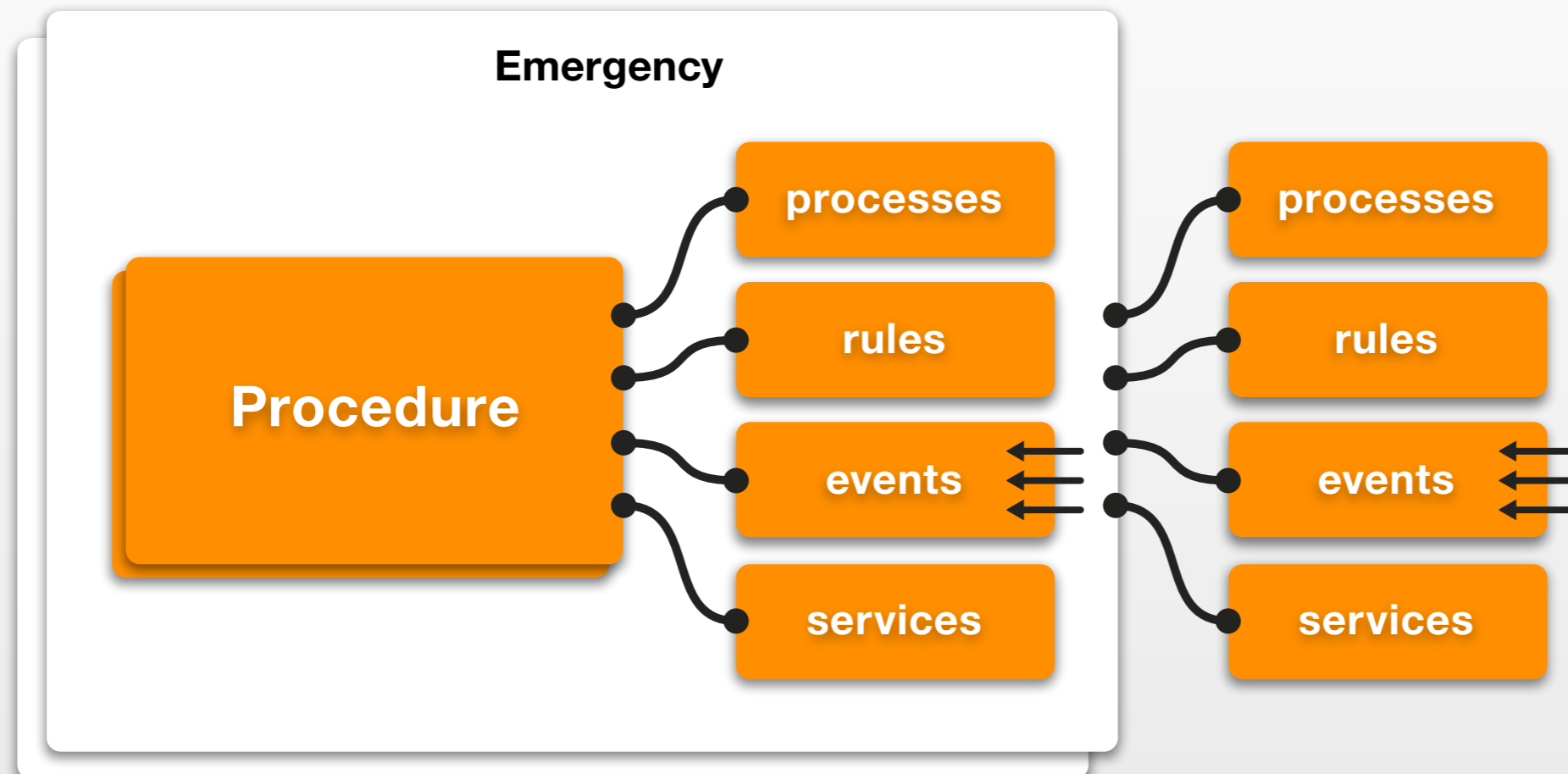


# Emergency Level Knowledge Example

Knowledge Related with the context of the emergency.  
Example:

- Keep track of the resources that are being used by the emergency
- Create warnings if some procedure gets stuck and jeopardize the overall emergency control
- Generate dynamic tasks to deal with exceptional paths
- Keep track of the resources that are available for each kind of emergency
- Planning inside the emergency

# Procedure Runtime + Emergency



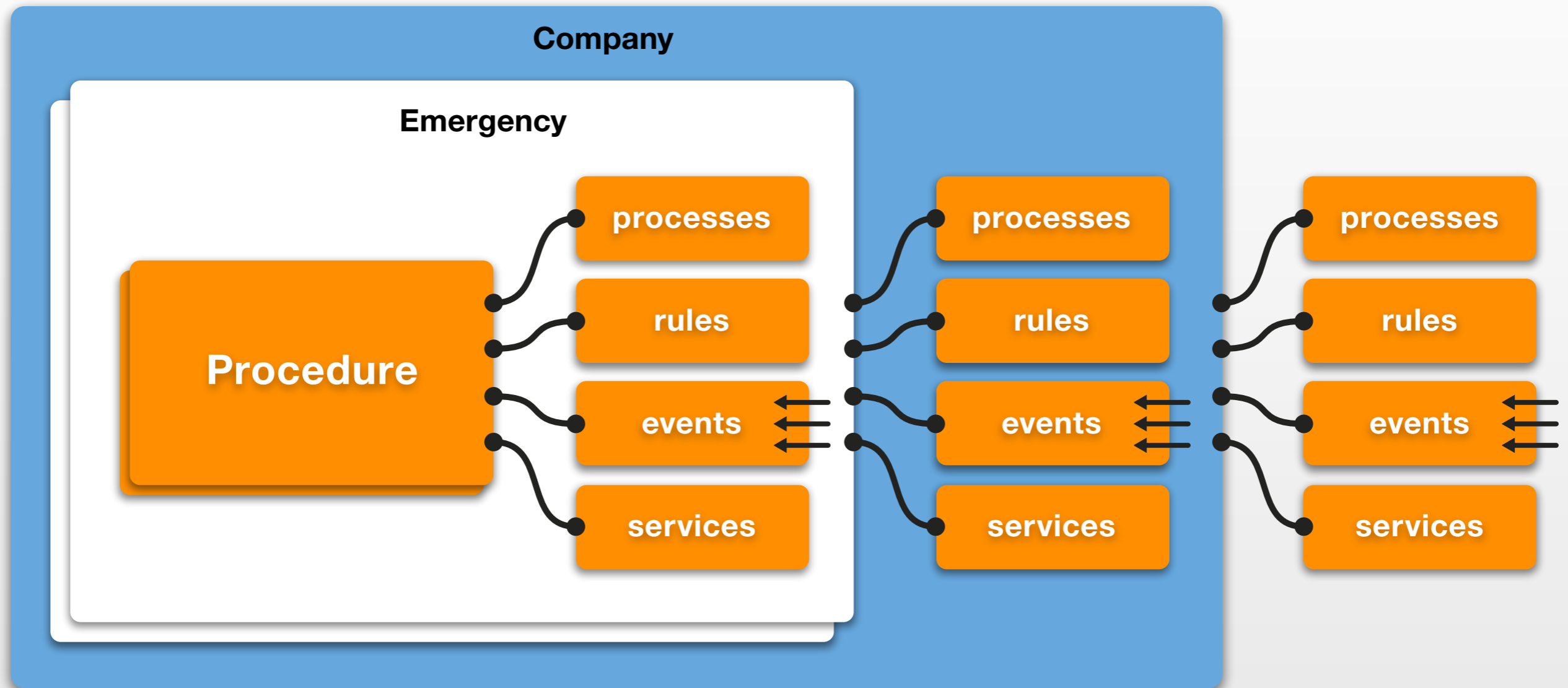
# Procedure Runtime Knowledge Example

Knowledge Related with the context of the procedure.

Example:

- Keep track of the vehicles attached to a procedure
- Keep track of the completion percentage of the procedure
- Control the amount of resources required by the procedure
- Generate contextual alerts depending the type of procedure
- If something goes wrong suggest alternative paths

# Procedure Runtime + Emergency + Company



# Company Level Knowledge Example

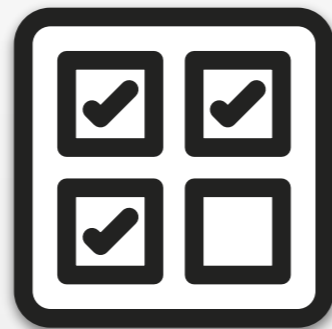
Knowledge Related with the context of the company.

Example:

- Keep track of the current emergencies that are being handled by the company
- Load Balance the resources that are being used in different emergencies
- Generate company level warnings to address big situations
- Planning at company level

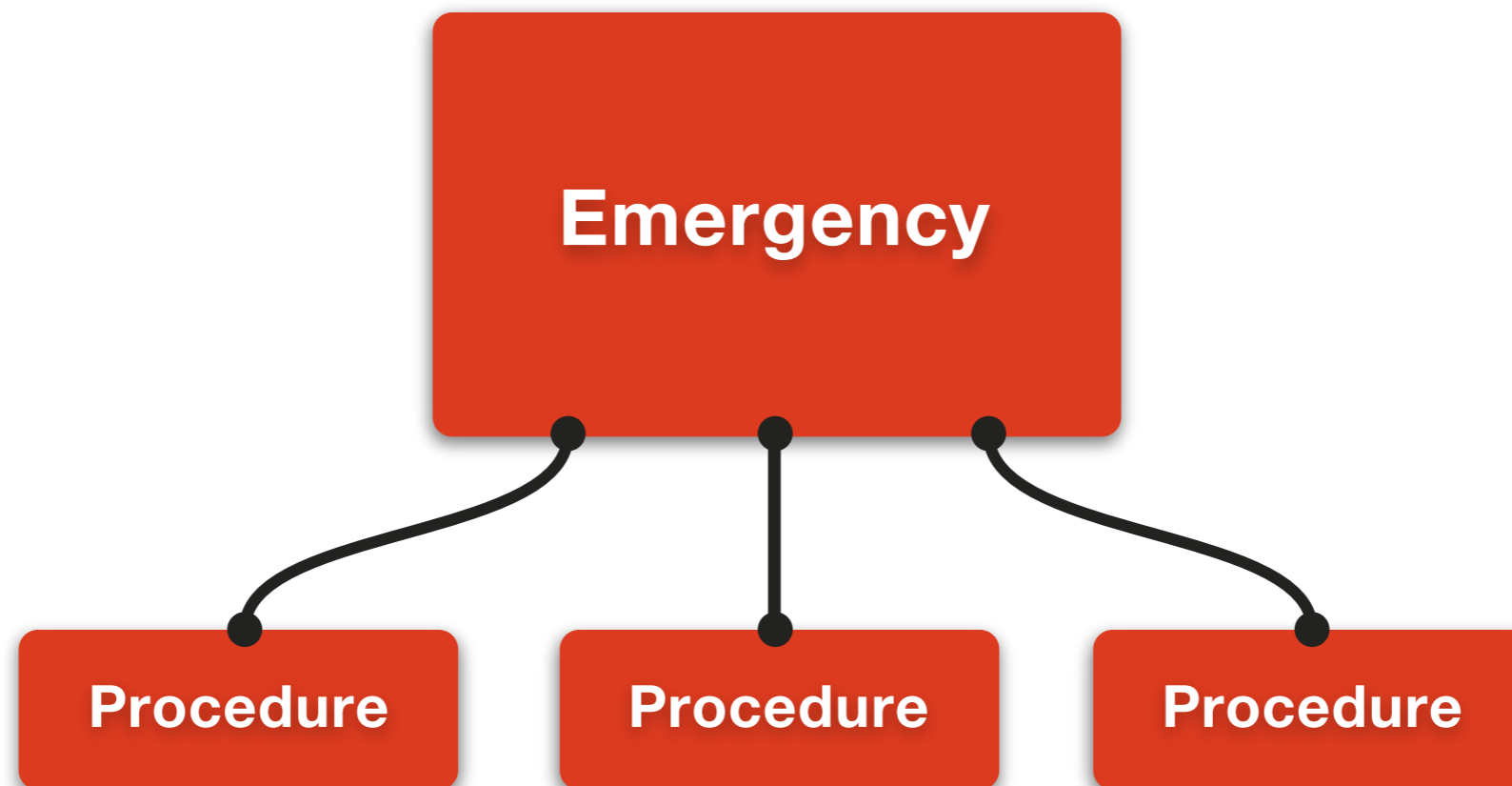


# Components Overview



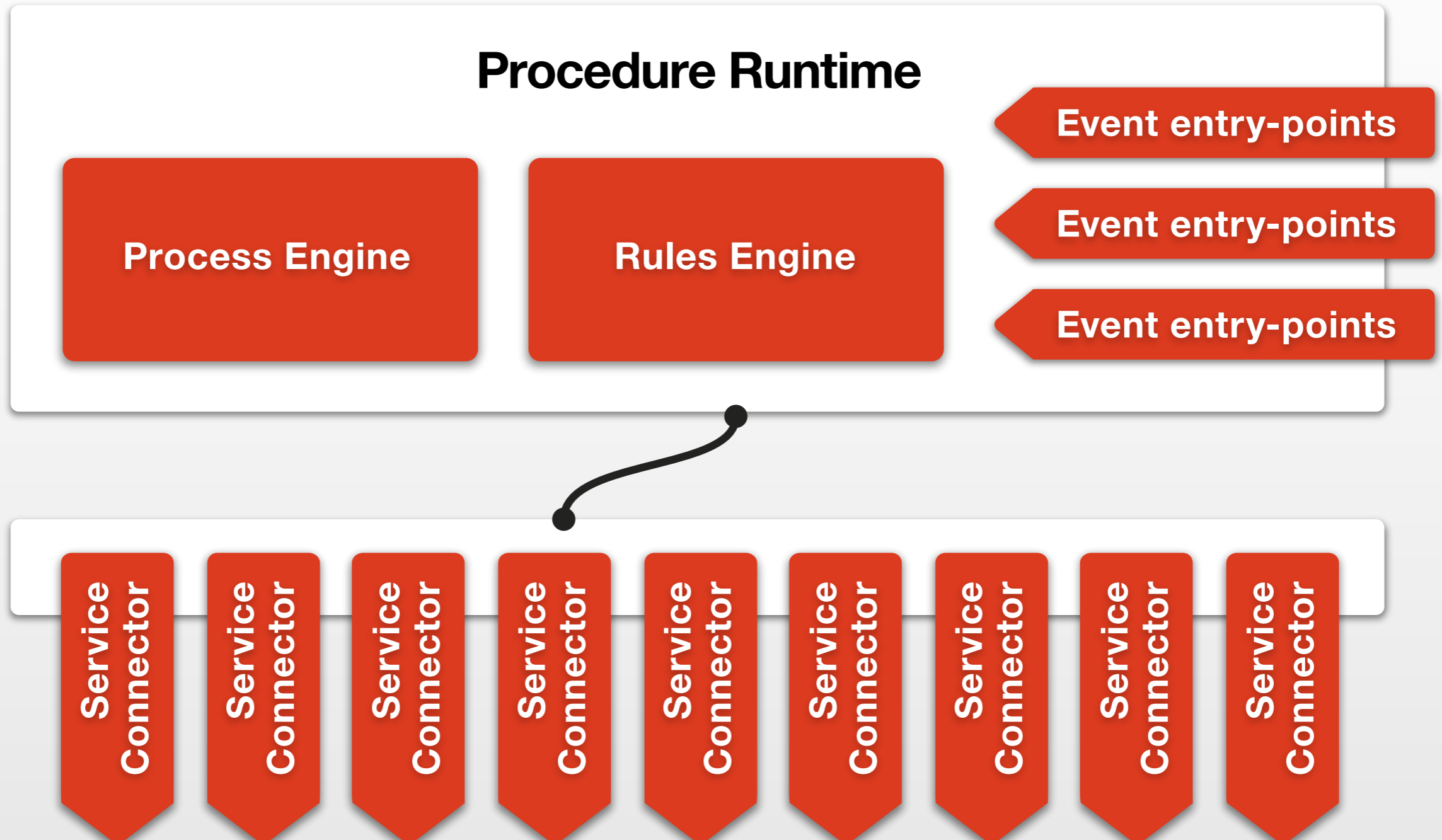
# Single Environment

**Java Virtual Machine**

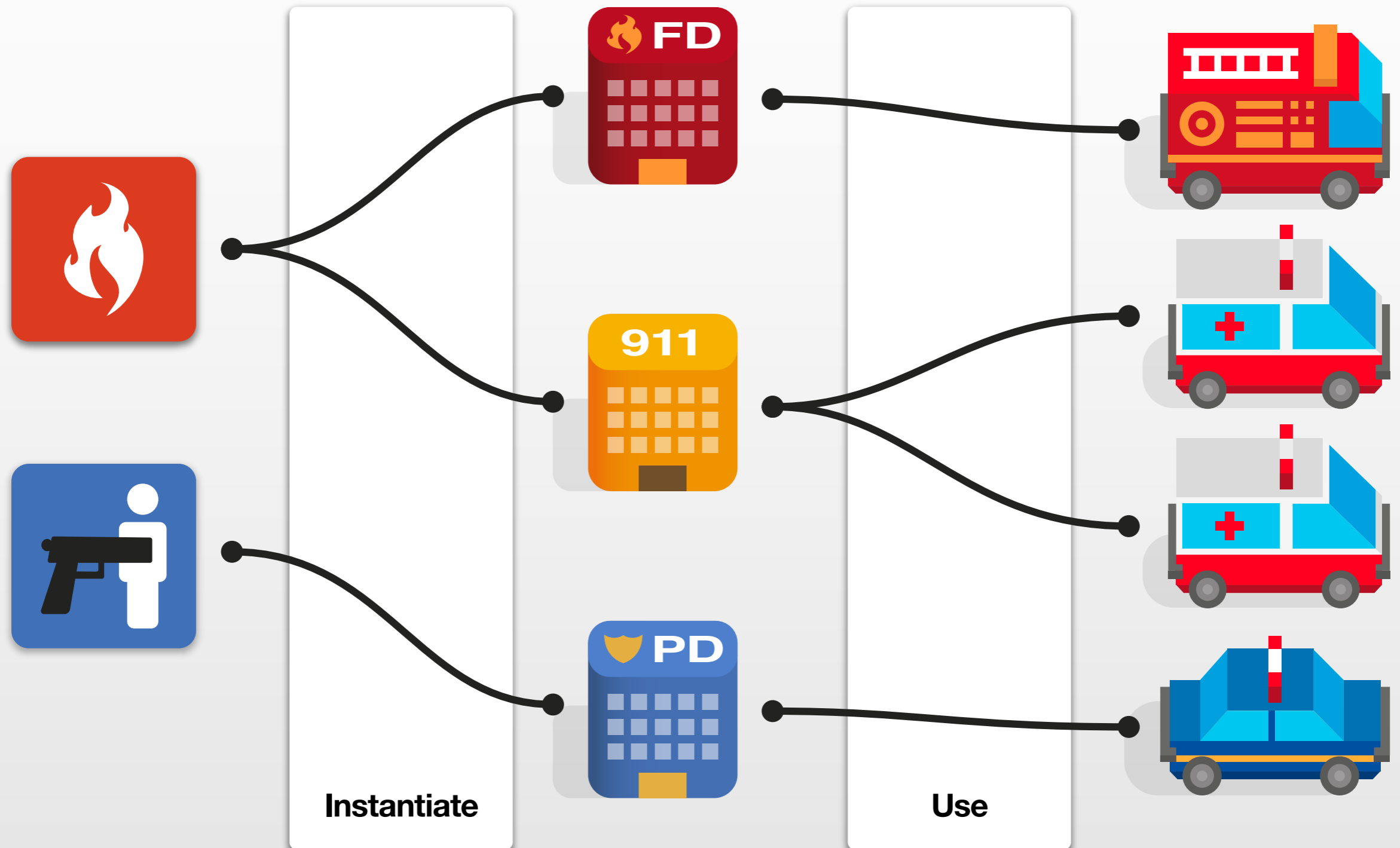




# Runtime Component



# Relationships - Graph Database



# Audit Log + Reporting



# Demo



# Standard Fire Emergency



# Key Points

- Lightweight Components
- Integration => (rules + processes) engine
- Temporal Reasoning
- Knowledge Formalization

# Conclusion

Rude Events

# Conclusion

Rules  
Processes  
Events

# References



[www.plugtree.com](http://www.plugtree.com)

[salaboy.wordpress.com](http://salaboy.wordpress.com)

[ilesteban.wordpress.com](http://ilesteban.wordpress.com)

[dcalca.wordpress.com](http://dcalca.wordpress.com)

## Download and Play

[github.com/Salaboy/emergency-service-drools-app](https://github.com/Salaboy/emergency-service-drools-app)