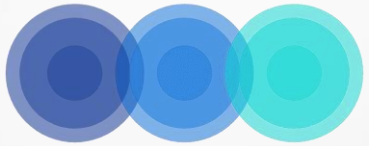
Estimate Correctness of BPMN Models



freebpmnquality

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About Us

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Motivation

- Business process modeling helps organizations to represent **scenarios** of their activities in graphical way in order to find possible **drawbacks**, identify potential **improvements**, or just to **instruct employees** with detailed descriptions of workflows they should follow
- Business process modeling require certain training, but even experienced analysts that know literally everything about workflows under description may commit some **mistakes**: models could be **redundant** and workflow paths could be **inconsistent**, which lead to **poor quality** models that are not understandable enough and barely modifiable
- Business process models of high quality are expected to be deployed and executed without **errors** that may lead to **extra expenses and delays**

Prerequisites

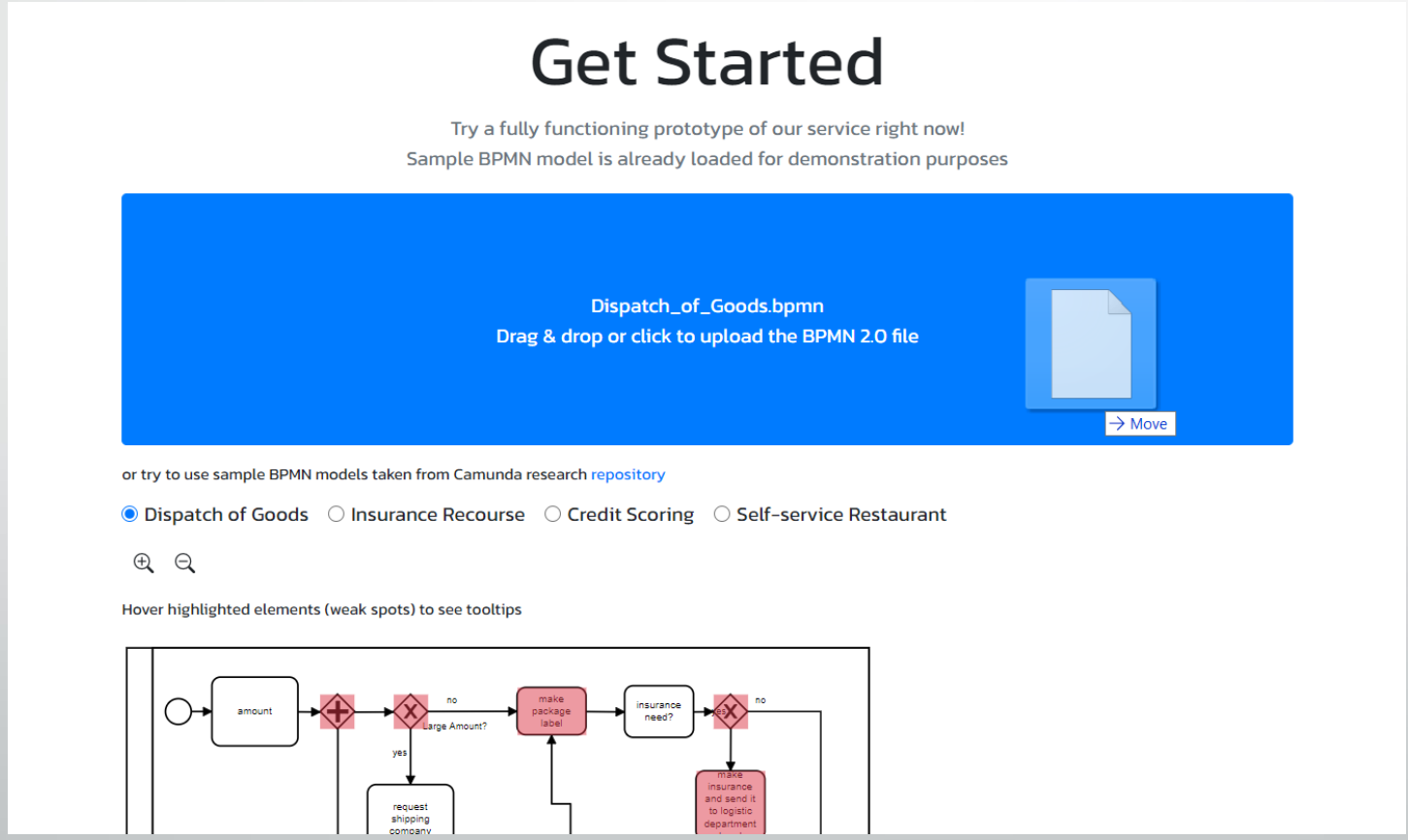
- Our solution should be compatible with the de-facto standard of business process modeling – BPMN 2.0 (Business Process Model and Notation)
- It should be accessible and easy-to-use for all non-technical users involved into the business process modeling activity
- It should detect various modeling faults and poor design solutions, and highlight them on a model diagram, so users do not need to find which exactly element causes troubles
- Highlighted weak spots should be interactive – users may hover them and the detailed enough explanation (or at least some comment) what is wrong with this element should be provided

Proposal

- This product could be developed as the web-service with the user-friendly interface and API for its integration with business process modeling and automation systems
- According to our idea, the basic features (mostly described in the following slides) should be free-to-use, so customers get interested by trying these features; however, advanced features, such as integration API, detailed model analysis and recommendations generation, auto-correction of typical modeling mistakes or “typos”, repository of assessed BPMN models, and some others could be provided after subscription or one time purchase
- We already have initial prototype of this product, which is then briefly described with some screenshots of fully-functioning solution

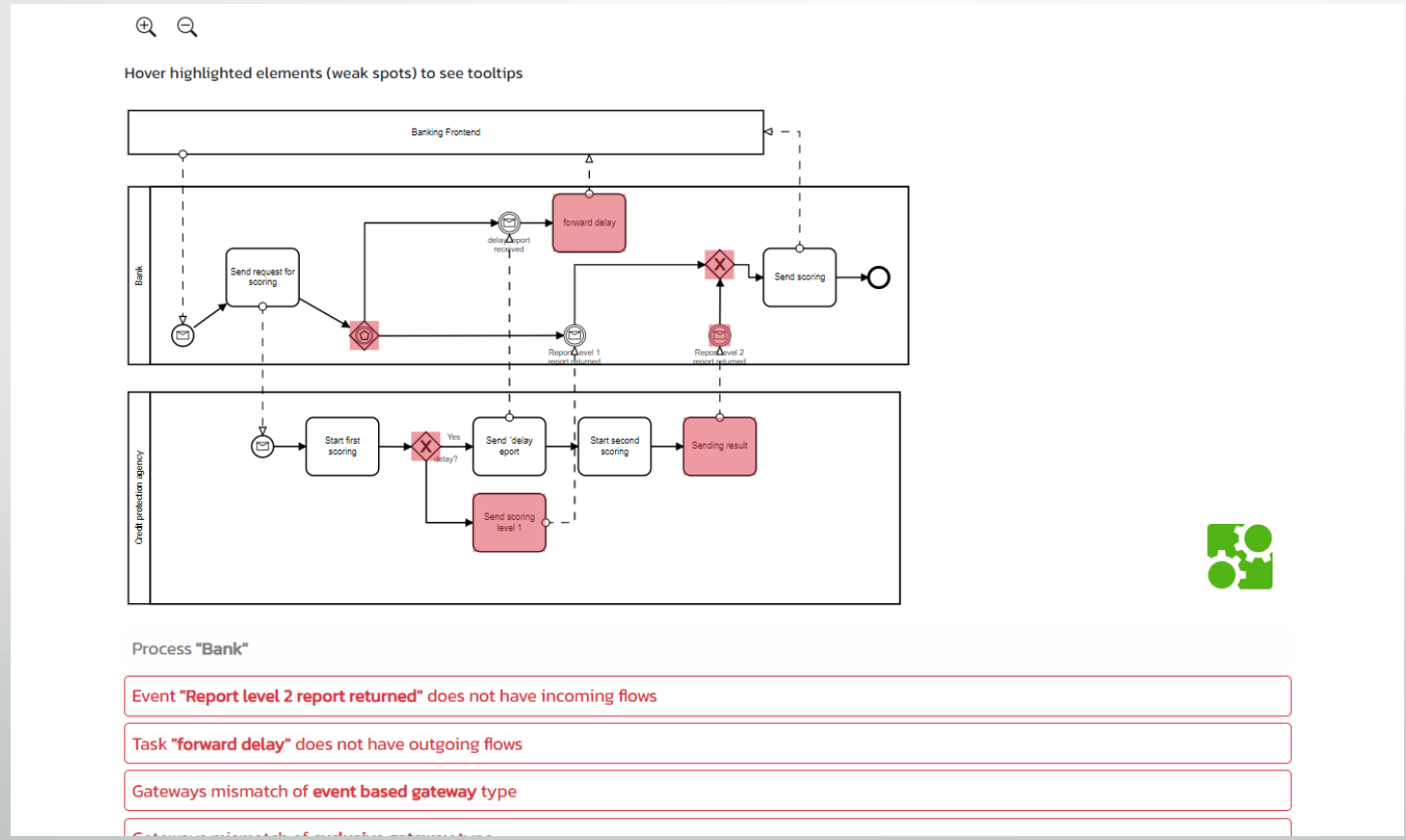
Prototype

- Drag & drop BPMN 2.0 file or use file selection dialog



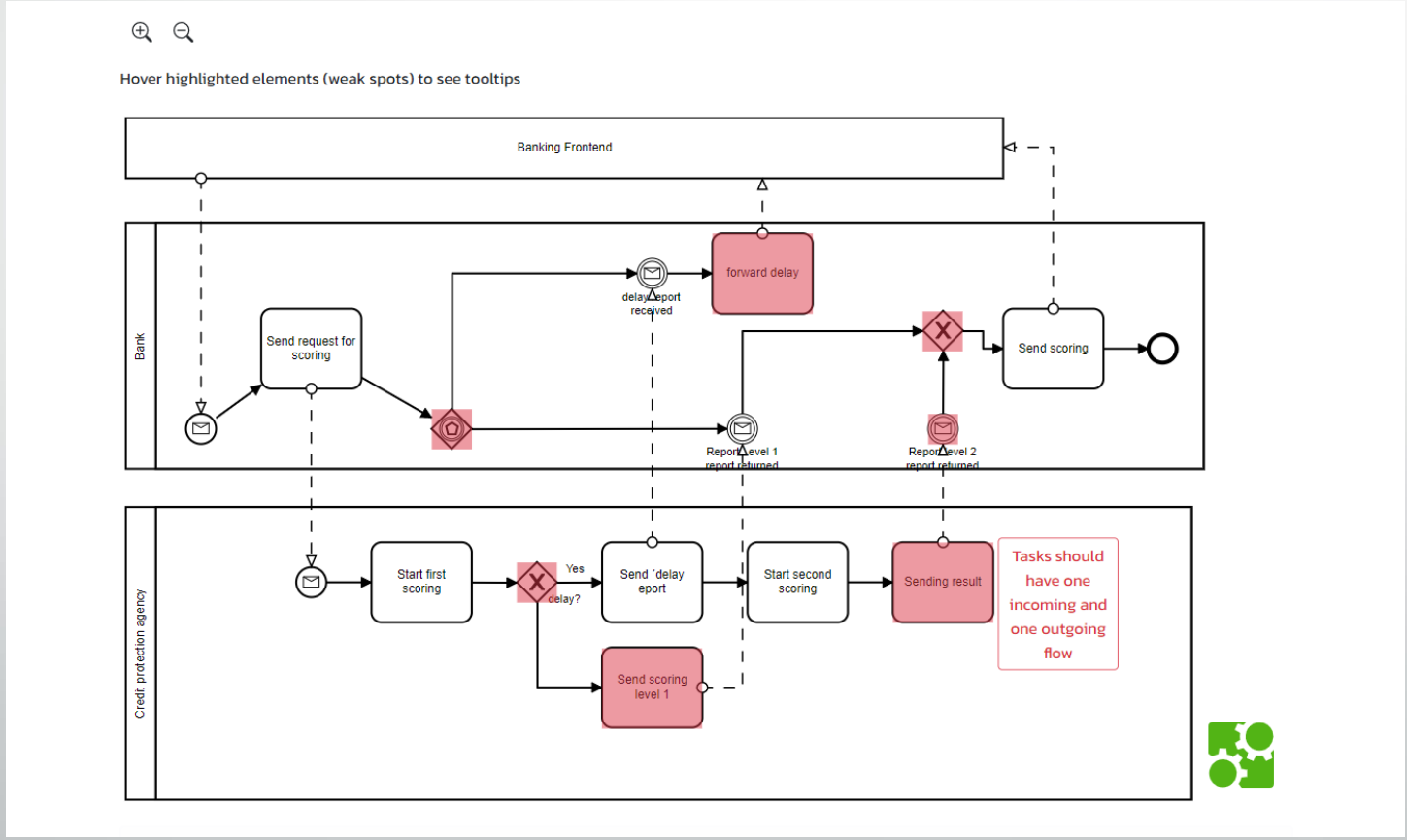
Prototype

- Uploaded model is displayed with highlighted faults



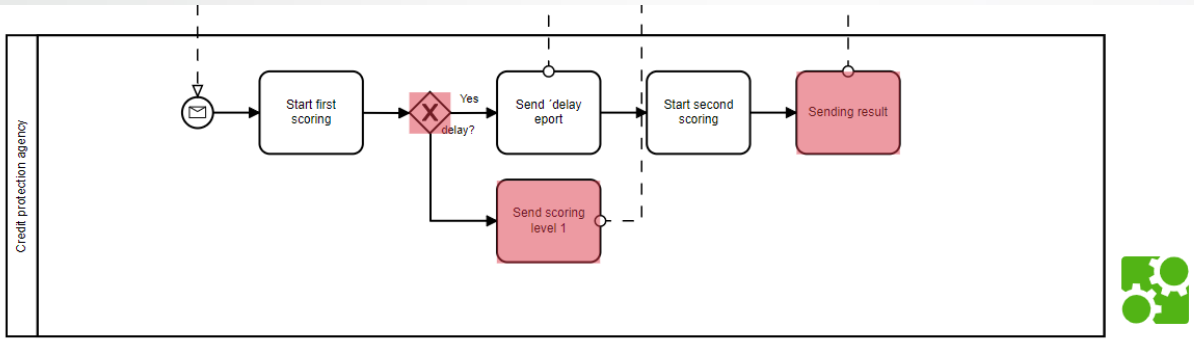
Prototype

- Highlighted weak spots can be hovered to get tooltips



Prototype

- Detected faults are explained in detail below canvas



Process **"Bank"**

- Event **"Report level 2 report returned"** does not have incoming flows
- Task **"forward delay"** does not have outgoing flows
- Gateways mismatch of **event based gateway** type
- Gateways mismatch of **exclusive gateway** type

Process **"Credit protection agency"**

- Task **"Sending result"** does not have outgoing flows
- Task **"Send scoring level 1"** does not have outgoing flows
- Gateways mismatch of **exclusive gateway** type
- Process does not have **end events**

Underlying Approach

- Our approach to business process model quality assessment is based on existing guidelines, rules, and best-practices
- But we have refined and formalized existing experience in business process modeling, and came up with rules, validation criteria, quality improvement and recommendations suggestion mathematical models, meta-models to store and treat business process data, and other research results
- Our rules of business process model clarity are based on 7PMG guidelines (by J. Mendling), however the proprietary version is supposed to be extendable with user-defined rules
- Relevant research study: http://ceur-ws.org/Vol-2791/2020200019.pdf

Expected Interest

We expect and wish that this product could be useful for almost any kind of organizations that are using BPMN 2.0 modeling and are aiming at continuous improvement of their activities and growth of their capabilities maturity

- Banking & Finance
- Insurance
- Wholesale & Retail
- Manufacturing
- Energy
- Agriculture
- Engineering & Construction
- Public Administration
- Healthcare & Pharmaceutical
- Information Technology
- Education

Thank you for your attention!
Contact us if you have any questions