

# DECISION ENGINE

Speed up and automatize your decisions!

**ApPello Decision Engine** is a segment and product-independent solution which can handle various business-related decisions in a centralised platform, even the complex ones like: loan scoring, monitoring, collection and workflow-automation.

With **ApPello Decision Engine** you can easily add and update business-specific logic for any decisions. This allows you to react fast to the challenges of turbulent banking environment with minimum risk and cost while your sensitive knowledge stays in-house.

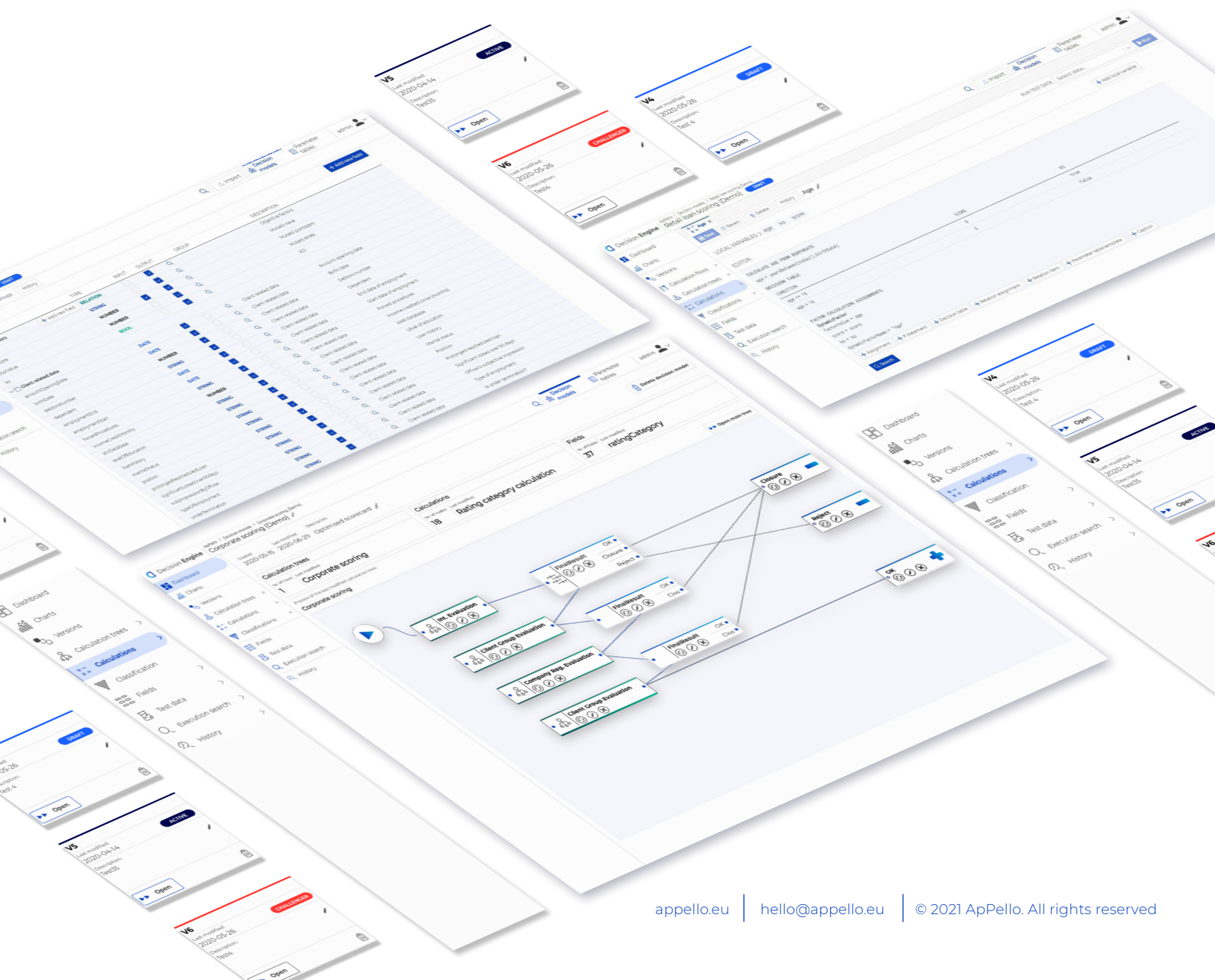
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The segment and product-independent **Decision Engine solution** can handle various business-related decisions in a centralised platform, even the complex ones. Our solution is enhanced by **user-friendly features** designed to **speed up** maintenance and **automate any business decisions** in any banking processes, like pre-screening, scoring, monitoring, collection and so on. **Business rules and decision logic with graphical visualisation** can be built and customised by the Bank's employees with relevant roles, even without deep IT knowledge.

The engine can work for **pre-screening, classical scoring** and any **additional decision points**. It is capable to handle an unlimited number of different or similar decision logics, which can differ by customer segment (including sub-segments), product, product variant, etc.

The models can be **different by product or client sub-segments**. They can be **versioned** and test-live models can be **compared (champion-challenger)**. All parameters within the system are base parameters therefore **mass upload of data components** are feasible through **excel files**. The **built-in decision tree** enables users to analyze results and gain more knowledge on approvals or rejections.

The system can work as **stand-alone Decision Engine** as well as it can be **integrated with ApPello Loan Origination and Debt Collection Systems** or other solutions. Furthermore, the decision engine is able to provide alternative loan offer combinations. Besides loan origination, **ApPello Decision Engine** can be fund of **monitoring and collection strategy-development**.



# CAPABILITIES

3



Decision Engine with Business Rules Management



Easy integration with all internal or external Systems via APIs



Mass upload of data components are feasible through Excel



Easy portfolio based testing and champion challenger modelling



Provides alternative loan offer combinations



Dynamic data model, Dynamic questionnaires

# BENEFITS



Configurable Decision Engine with Business Rules Management



Graphical visualisation of business logic



Supports financial functions and Basel II, III indicator calculations



Models can be versioned, test/live models can be compared



Monitoring and reporting tools ensure process efficiency for lower operational and credit risk



Quick implementation and configurable business logic without coding



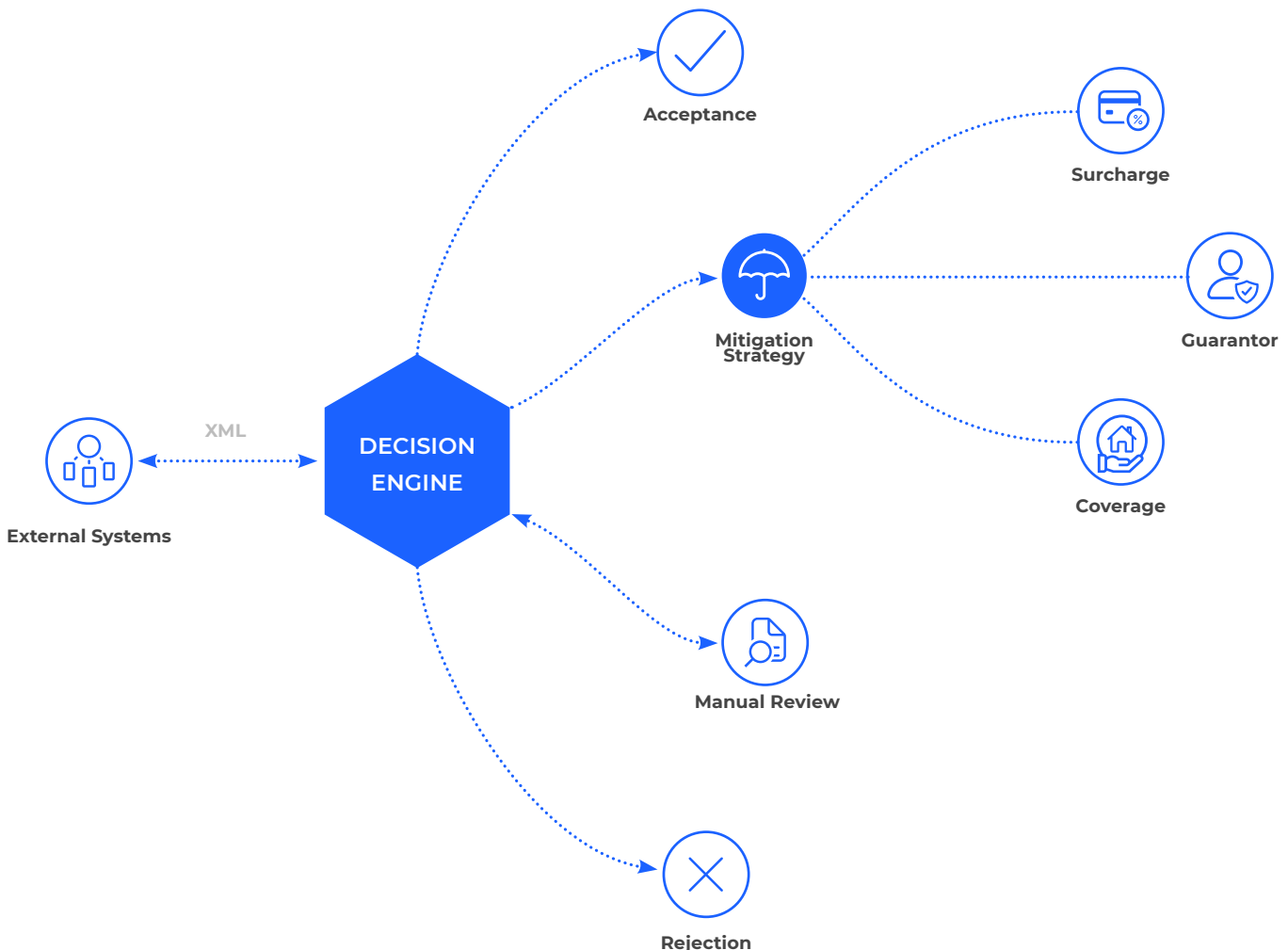
## DYNAMIC DATA PROCESSING

The strength of the Application lies in its **openness and flexibility**. The Solution is capable of taking the input data necessary for the rating and scoring process from any existing systems of the bank and also from external data sources, while the **final output** generated as a result of the rating or scoring workflow **can be used by any connected application**.

For example: the data from the loan origination solution or individual parameter tables are evaluated, scored, aggregated and assessed by **ApPello Decision Engine**. XMLs arriving from the **Loan Origination Solution** are managed by the Engine and the processed data is sent

back by the same manner. Having regard to the frequent regulatory and environmental changes, in case of the expansion of the **XML** the system is able to handle the assigning new tags to the new variables with the help of configurable interface.

**As a result of the evaluation** of the application, the Engineers are able to provide clear answers and information of further workflow steps (acceptance, rejection, manual review, mitigation strategy: surcharge, guarantor, cover) for the **Loan Origination System** thus **reducing operational risk** and **improving efficiency**.





## FLEXIBLE SCORECARD DEFINITION

The Decision Engine is responsible for **scorecards** and for their maintenance. **Questionnaires and scorecards** can be flexibly and periodically adjusted to reflect regulatory requirements or credit policy changes. Within the process, the users are able to parameterize all rules in parallel.

**Scorecards** can be defined for different client segments, for different loan products and also for different purpose for example pre-scoring, client scoring. Already existing scorecards can be copied and modified into different versions.



## DECISION TREE

The Decision Engine contains parameterized data models, processes and rules so for a new product or a client sub-segment further questionnaire and scoring models can be created by the Bank's experts. When it comes to modification of a logic or parameter board, it is possible to add new parameters, clone, inactivate/activate or archive the old one without vendor or IT intervention thanks to the easy-to-use system. It has never been so easy to orchestrate, test, evaluate the scorecard's rules with the help of decision tree that visualizes the whole decision process. The system's calculation/evaluation logic is highly formable and able to manage several logics at the same time based on the versioning function. For example, in a campaign for the same product different interest rates or conditions are applied.



## SUPPORTS WORKFLOW

Did you know that adding more additional input fields on a Loan application form you loose measurable number of new clients?

Our **Decision Engine** is integrated with a leading **Workflow engine (Camunda)** and with our **Customer Portal**. This 3 tools together makes a very flexible solution for digital decision making. For example users can design and even test new flows within hours. Input templates can be managed dynamically based on the previous behaviour of recently acquired clients.



## CHAMPION CHALLENGER

ApPello Decision engine is a powerful tool to challenge your practices and build up different models that can be versioned and test-live models can be compared.

To make testing easy, there is a possibility to mass import test data from an **XML** data structure. **XSD** schema is available to download to be able to generate the **XML** data structure. Test data can be run through calculation trees to verify the correctness of it or to fine tune it. Based on the mass test data import functionality portfolio based testing and champion challenger modelling are supported as well.



## FOR ALL SEGMENTS & COMPLEXITY LEVEL

The Decision engine serves both retail and non-retail segments. The risk conditions can be separated from each other, be associated with the given segment and work independently.

The Engine supports complex calculations for non-retail and retail segment using the advanced statistical and mathematical functions of the system. Logit transformation or PD calibration can be quickly implemented by the risk experts of the bank. The system also manages the different steps of the PD rating calculation (model PD, overruled PD, decided PD, etc.) and expected loss of calculations.

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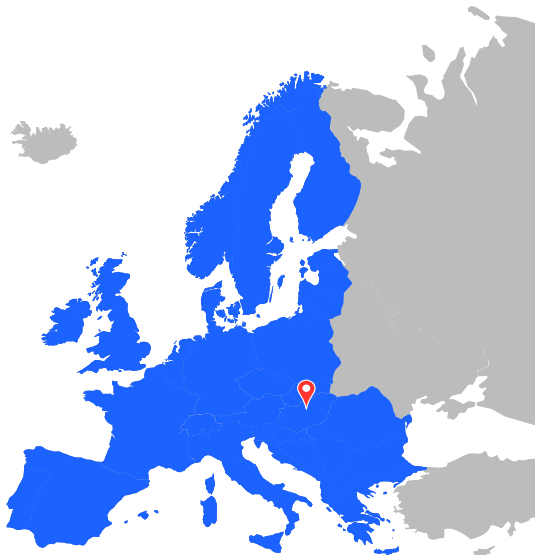
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## REFERENCES



 BUDAPEST BANK

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 KB

 ERSTE BANK

 CIB BANK

 UniCredit

 SBERBANK

 PBZ

 TATRA BANKA

 Raiffeisen  
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 ČESKÁ  
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