DATA-DRIVEN TRANSFORMATION
IDSA WINTERDAYS, 3 DECEMBRE 2019

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MALAKOFF MÉDÉRIC HUMANIS AT A GLANCE

1st French Health & Protection Group Insurance company

10M Individuals protected

~430k Group Insurance contracts

€6.2B revenue

1st French Pension Insurance company

8+M Individuals & 7+M Pensioners

~600k Group Pension contracts

>200% Solvency ratio
BUILDING BLOCKS OF OUR DATA-DRIVEN TRANSFORMATION

Use cases

- Data Governance
- Data Mgmt / Viz
- Technology/Infrastructure
- Steering & Enablement

Eco-system
DATA GOVERNANCE

Operating model
- Data Owners/Stewards
- DPO and Deputy DPO
- Data Council

Policies
- Data Quality policy
- Data & Metadata policy
- Ethical Guidelines

Tools
- Master Data management
- Data Quality management
- Lineage traceability
- Data Dictionary management
- GDPR record of processing activities
TRUSWORTHY AI BY DESIGN

DATA

01101100
01101111
01110110
01100101

ALGOS

PREDICTION

\( F(Y_1, \ldots, Y_n) \)

Biais and Distribution Analysis

Ethics Checklist

Performance and statistical deviations monitoring
MODEST AMOUNT OF DATA: 2.6 PB OF DATA SET

EXPECTED USAGE VALUE OF USE CASE AT START

BIG DATA CAPABILITIES

SECURITY OF DATA AS 1ST CRITERIA OF CHOICES

Availability through API¹ of model outputs for digital products

1. Application Programming Interface
WE HAVE STARTED TO BUILD ECOSYSTEMS

Companies providing talents
(e.g. developers, UI/UX, Data engineers)

Companies with whom clients could share, buy or create data

Start-ups or companies with a specific technology
(e.g. AI, Voice recognition)

Start-ups providing services to integrate in client processes
(e.g. RPS, Crowdsourcing)
MMH IS PART OF SEVERAL SHARING INITIATIVES IN FRANCE

Context
The Health French Minister has decided to set a unique data platform for sharing health data for R&D, health treatment quality, expenses monitoring, etc.
• Public data (SNDS) : SNIRAM (1.2 billion report/y, 500To), PMSI, CépiDC …
• Private data : R&D centers, Insurers, startup, etc.

Objective of the cooperation
• Data matching between public/MMH data
• Data analysis to better understand the existing financing model
• Data science for modelling new scenario of financing

Context
In France, there is a lack of knowledge of the excess payment to be paid by patient with cancer
• INCa has built a cancer cohort
• MMH has a deep knowledge of complimentary health expenses for 3 millions of people

Objective of the cooperation
• Data matching between the 2 databases
• Data Science to identify lack of coverage
• Recommendations

Context
The FNMR has launched the DRIM project in order to share radiology data with the health ecosystem. Radiology is about 100 millions of records per year in France

Project qualification in progress
DATA SHARING IS PART OF OUR STRATEGY BUT KEY QUESTIONS MUST BE ADDRESSED

1. How to keep ownership and control on our data?
2. How to ensure security of data sharing platforms?
3. How to control compliance with regulations (e.g. GDPR) and ethics?
4. How to optimize investment costs and reduce effort?
5. How to shorten the time frame of such projects (e.g. regulation, architecture, data analysis)?
6. How to develop new capabilities inside our organisation (e.g. federated learning)

*International standards on architecture, data interoperability and federated data science modelling could be part of the answer*