

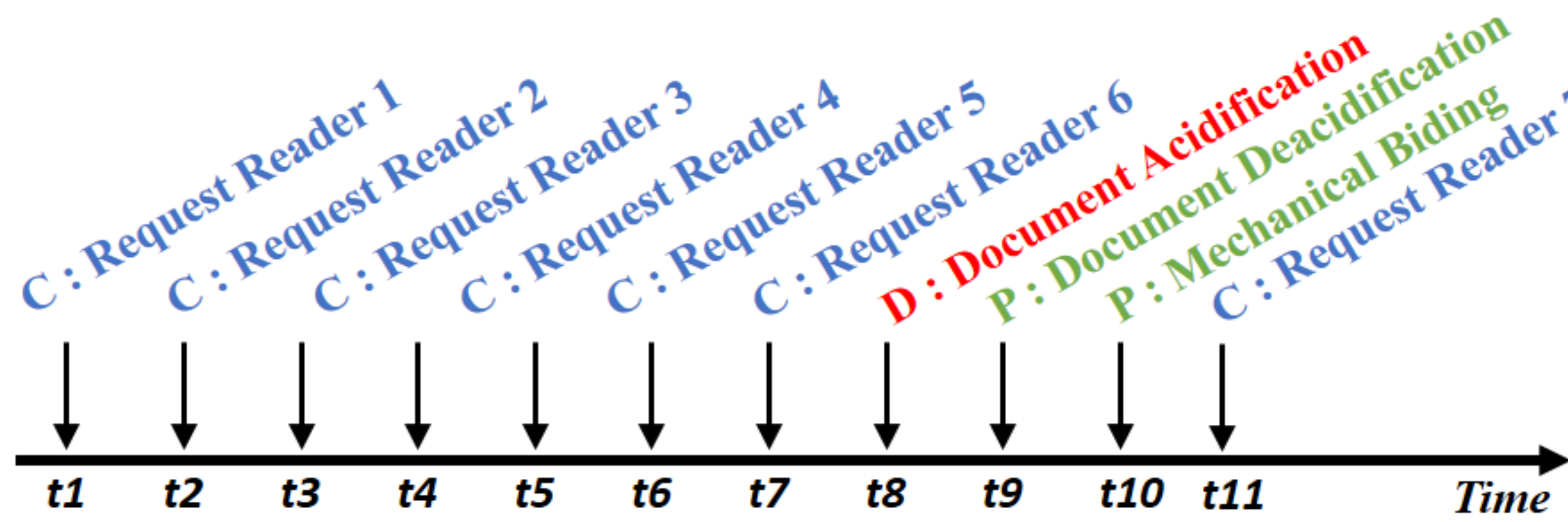
AI and Data to Improve Conservation Management

1 - DALGOCOL

- Analysing the data at the BnF
- Representation of the documents conservation history
- Predicting the documents' physical state
 - Proposing an ontology to represent the conservation events
 - Proposing a new similarity measure
 - Clustering of the similar conservation histories

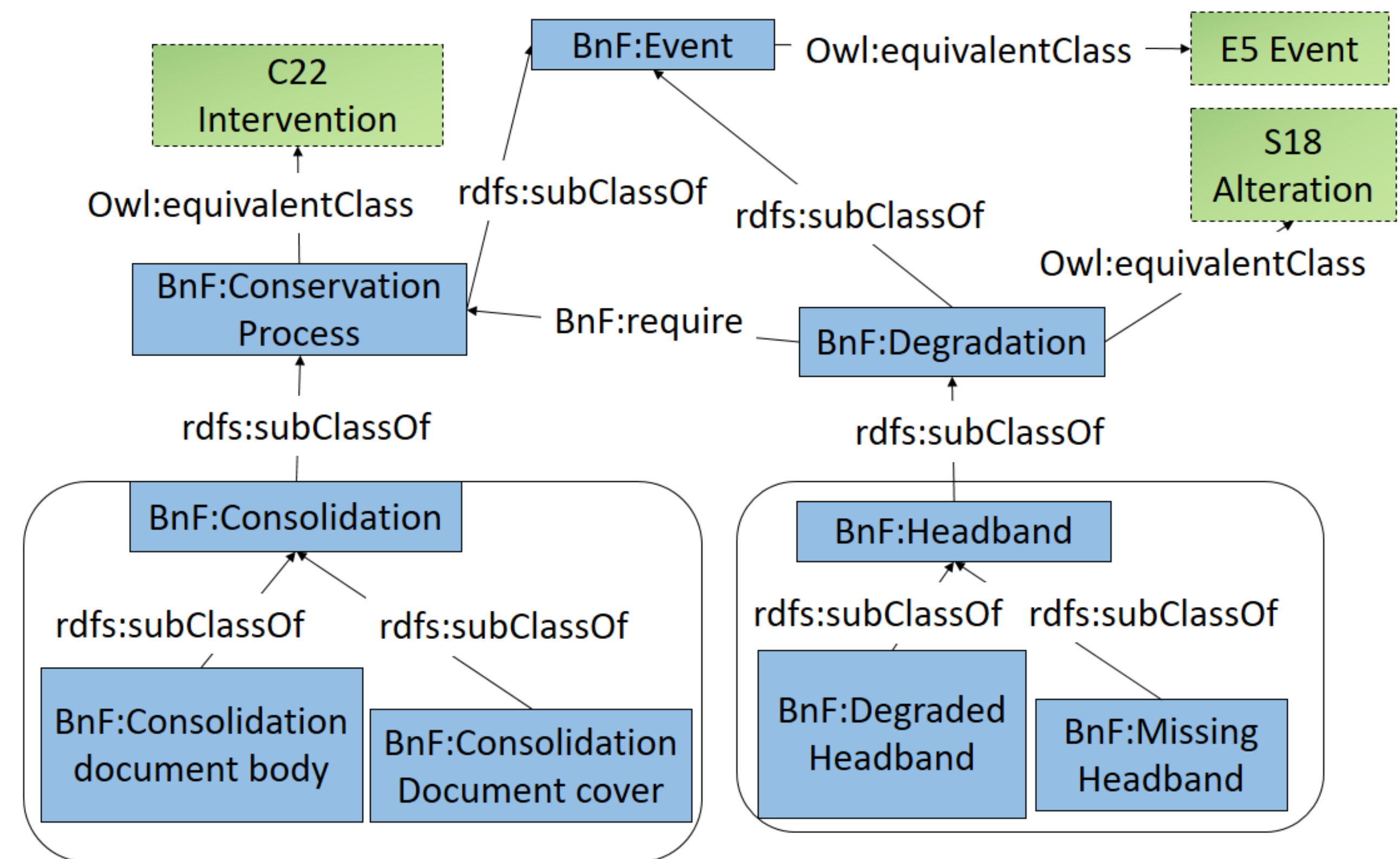
2 - Conservation History

- Relevant events to characterize the history :
 - Detected degradations
 - Conservation-restoration processes
 - Communication to the readers
- Represented by a semantic trajectory (sequence of events).



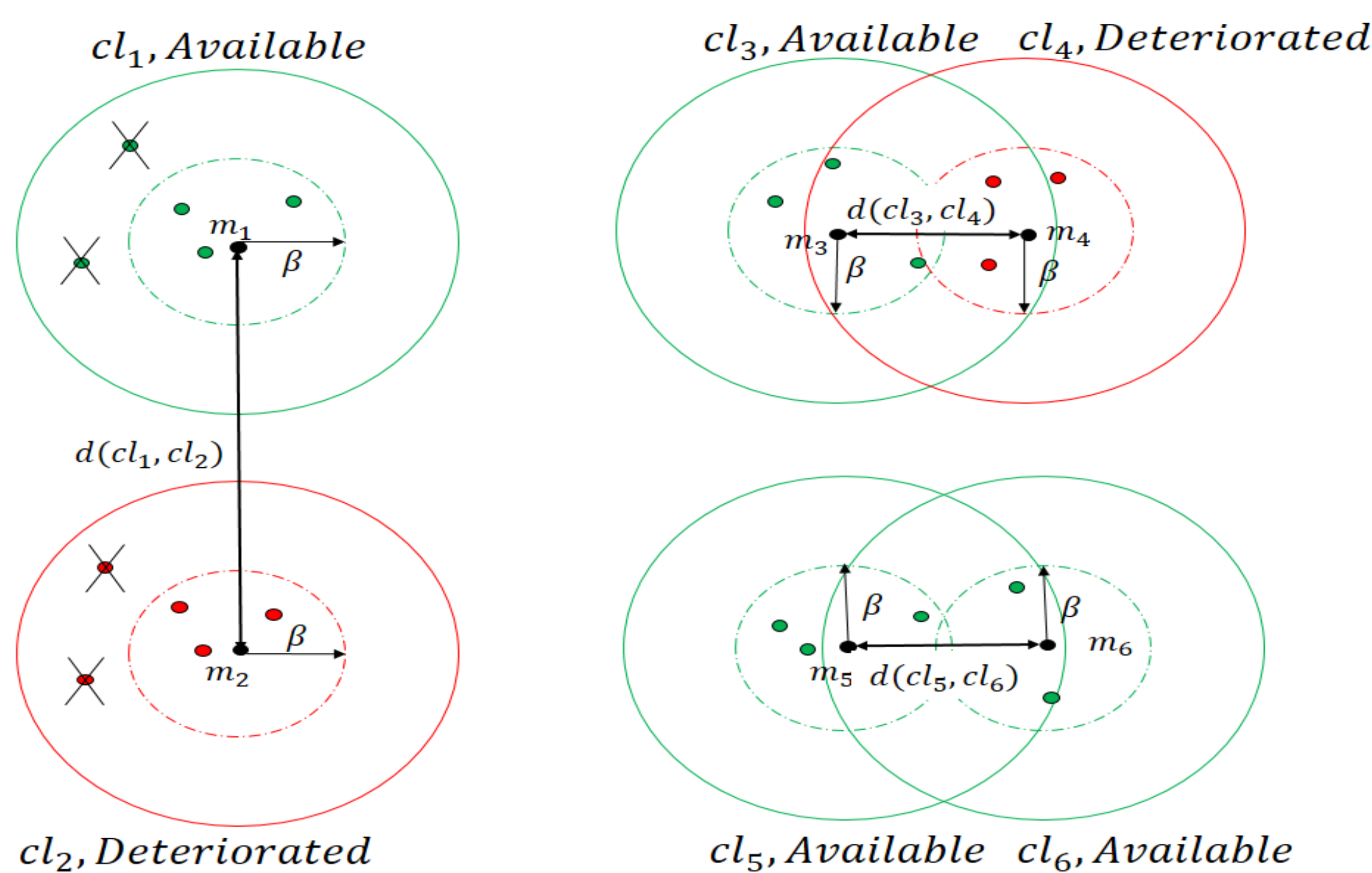
3 - "CRM BNF" Ontology

- Describe the concepts used in the BnF databases to describe the conservation history
- Used to resolve the terminological heterogeneity of different databases

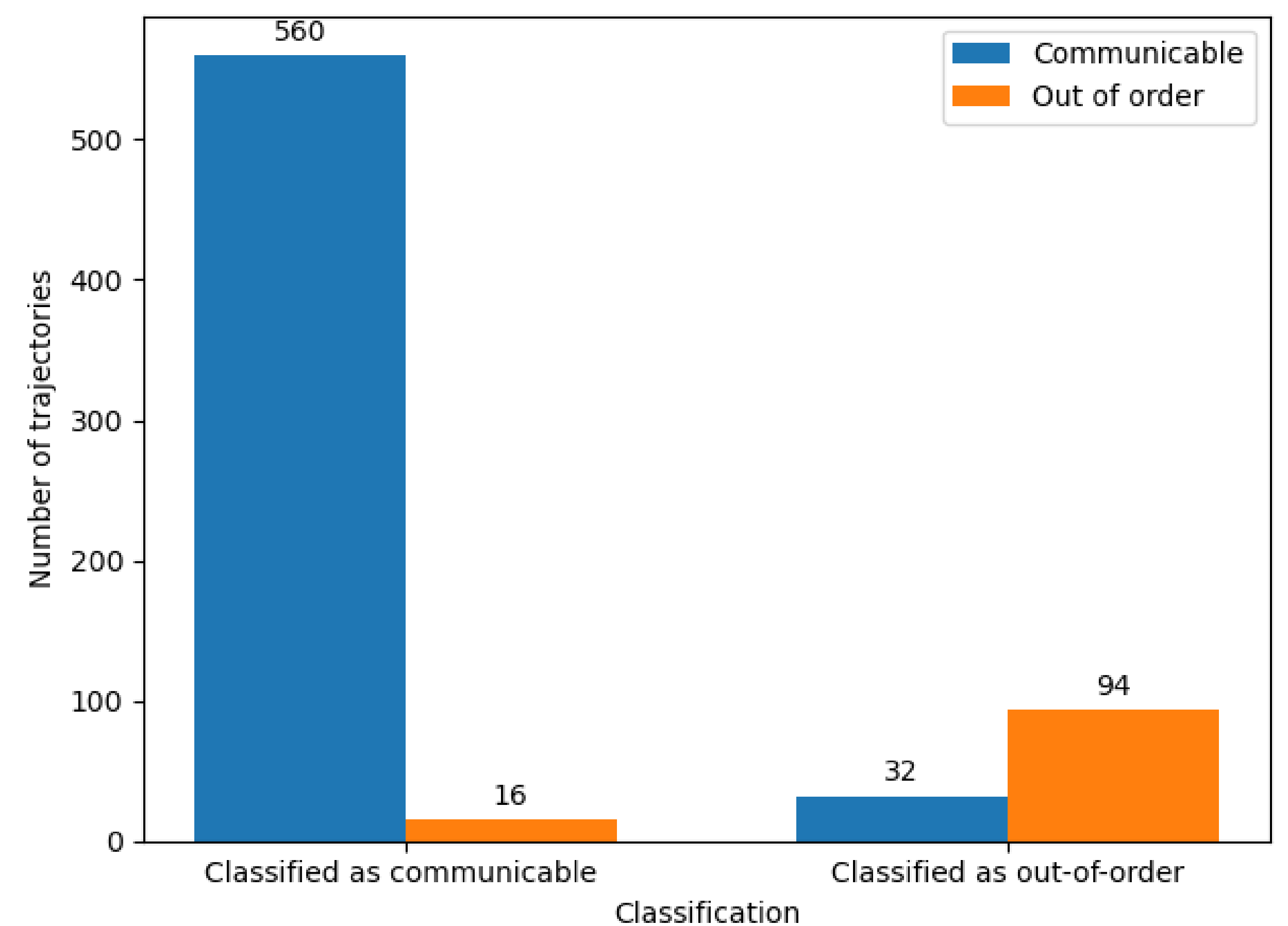


4 - Machine Learning to Predict the Physical State

- Trajectory clustering
- Identifying trajectory patterns
- Defining prediction rules based on the patterns



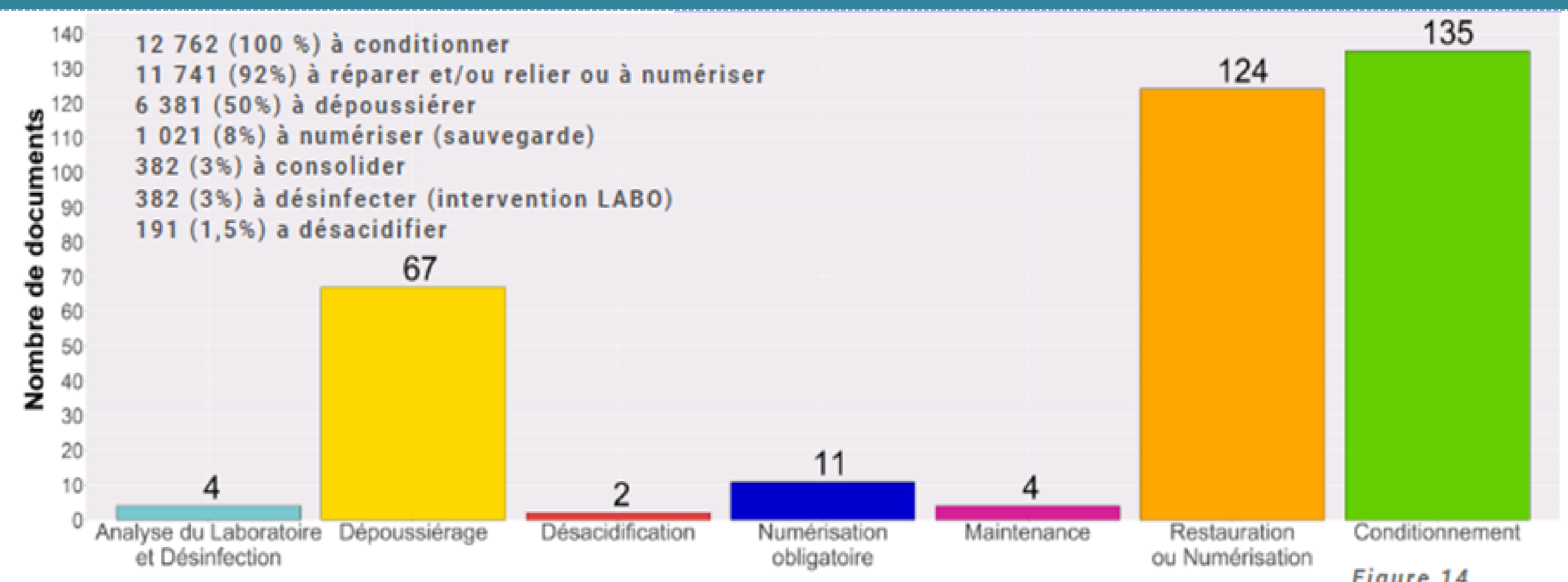
5 - Prediction Results



6 - The BnF assessment test of an heritage collection of books

- What ?
 - Test to find a method to quickly improve the knowledge of the condition of BnF heritage collections
- Why ?
 - To adjust methods and resources of the conservation policy of the library, and identify the priority treatments
- How ?
 - Accurate description of a sample of 400 documents randomly selected in the storage room
 - Standardized vocabulary to describe & logical correspondences between kinds of damages and condition levels and kinds of treatment
 - Extrapolation of the results of the whole collection chosen for the test (circa 40 000 items)
 - Re-using the data to enrich catalog

TRAITEMENTS A REALISER SUR LES DOCUMENTS EN MAUVAIS ETAT



Un nombre élevé de documents nécessitant un traitement : les orientations

Objectif global de traitement sur 3 ans maximum :

- Environ 300 documents ciblant les dégradations les plus avancées
- Principes de sélection : les refus de communication (hors d'usage) dont les dégradations sont avancées seront retenus systématiquement et un balayage des cotes pour compléter

Main result → A short, standardized and visual report with proposals for an action plan

Références

- Zreik, A., Kedad, Z.: Matching conservation-restoration trajectories: An ontology-based approach. In: RCIS. pp. 230–246 (2021)

