

CCP Ontology Workflow Project*

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1 Topic Discovery Workflow

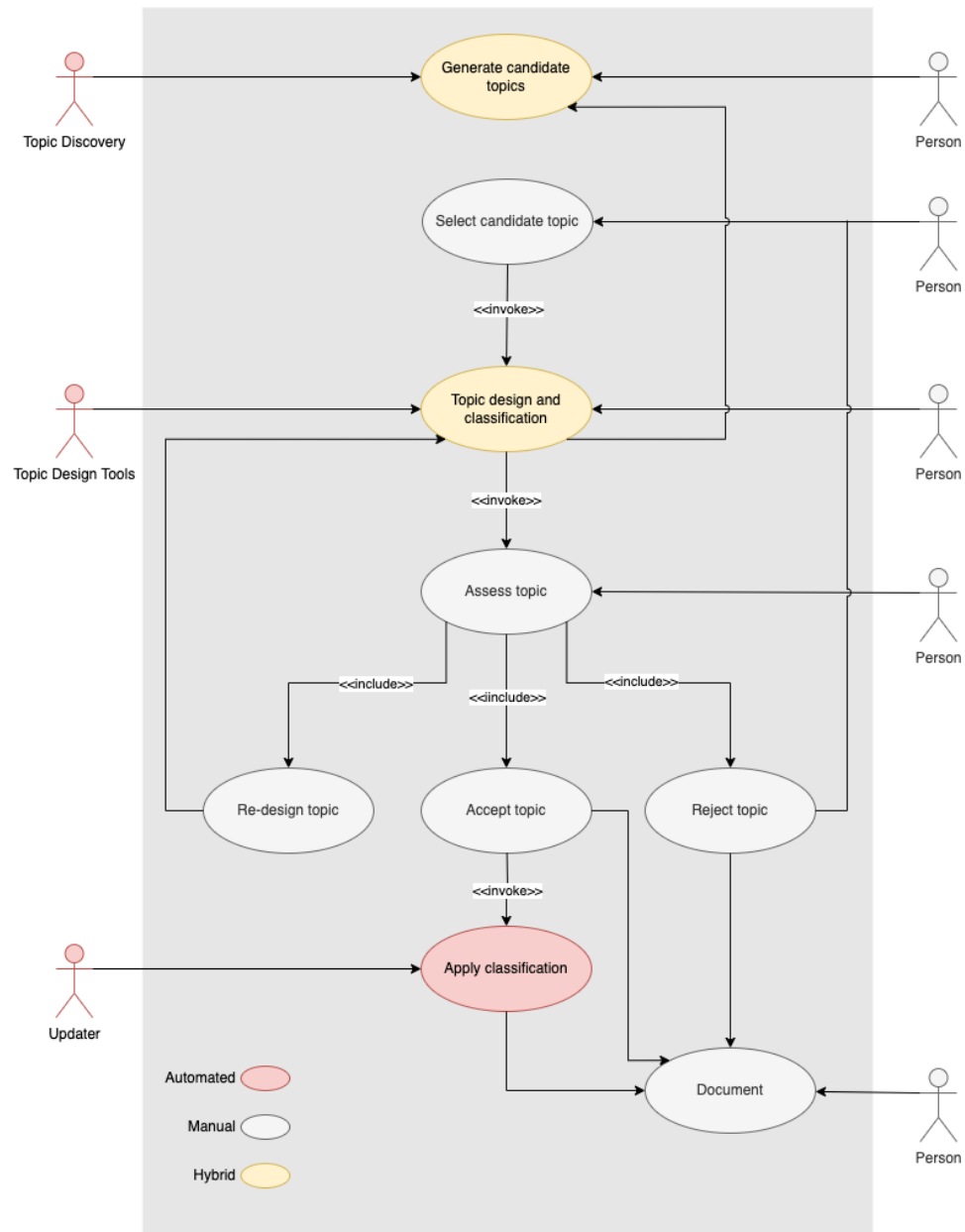


Figure 1: UML Use Case diagram

1.1 Generate candidate topics

Description	Topic discovery process.
Implementation	Precursor process external to the workflow.
Dependencies	None.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Inductive and deductive content analysis of constitutions.
Human actor inputs	Pre-qualification of candidate topics.
Human actor outputs	Candidate topic list.

Table 1: *Generate candidate topics* Use Case

1.2 Select candidate topic

Description	Selection of a candidate topic for processing from the set of generated topics.
Dependencies	<i>Generate candidate topics.</i>
Implementation	Manual process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Select a candidate topic for further processing.
Human actor inputs	Topic lists from <i>Generate candidate topics.</i>
Human actor outputs	A selected topic.

Table 2: *Select candidate topic* Use Case

1.3 Topic design and classification

Description	Iterative process of testing topic formulations, and generating the classification of sections.
Invoked by	<i>Select candidate topic</i>
Implementation	Hybrid process. Semantic tools hosted on Co-Calc provide support for: a) Measuring the performance of a topic by running topic search (with post-search cluster analysis) against constitution sections. b) Ensuring that a topic formulation is conceptually distinct from the CCP ontology by running topic search against the CCP ontology. c) Accepting clusters and individual sections to determine section classification by the topic.
Automated actor activities	Semantic search and clustering.
Automated actor inputs	Topic search parameters.
Automated actor outputs	A CSV file containing: a) Topic text. b) Search and cluster settings and data. c) Notes section for describing decision-making processes. d) Search result sections organised into clusters. Whole clusters and/or sections can be marked for exclusion.
Human actor activities	Test and refine formulations of a topic, and selection of section clusters and sections.
Human actor inputs	Select topic search parameters: a) User name. b) Search and cluster thresholds. c) Topic text. d) Select option to export results to CSV. e) Export file name.
Human actor outputs	Annotation of CSV file.

Table 3: *Topic design and classification* Use Case

1.4 Assess topic

A topic appears before the ontological court with the topic designer presenting the evidence for the acceptance of the topic. There are three mutually exclusive outcomes.

1.4.1 Accept topic

Description	A topic is accepted and continues downstream.
Invoked by	<i>Topic design</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is worthy of further consideration.
Human actor inputs	Annotated CSV file from the <i>Topic design and classification</i> stage.
Human actor outputs	Recommend acceptance and generate content for the <i>Document</i> stage.

Table 4: *Assess topic* Use Case

1.4.2 Re-design topic

Description	A topic requires re-formulation.
Invoked by	<i>Topic design and classification.</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is worthy of further consideration.
Human actor inputs	Annotated CSV file from the <i>Topic design and classification</i> stage.
Human actor outputs	Recommend re-formulation.

Table 5: *Re-design topic* Use Case

1.4.3 Reject topic

Description	A topic is rejected.
Invoked by	<i>Topic design and classification.</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is worthy of further consideration.
Human actor inputs	Annotated CSV file from the <i>Topic design and classification</i> stage.
Human actor outputs	Recommend rejection and generate content for the <i>Document</i> stage.

Table 6: *Reject topic* Use Case

1.5 Apply classification

Description	Apply accepted topic classification to XML, and update ontology.
Invoked by	<i>Accept topic.</i>
Implementation	Automated process hosted on CoCalc.
Automated actor activities	Update of constitution XML files, and ontology OWL and JSON files.
Automated actor inputs	CSV file containing section clusters.
Automated actor outputs	Generate content for the <i>Document</i> stage.
Human actor activities	NA
Human actor inputs	NA
Human actor outputs	NA

Table 7: *Apply classification* Use Case

1.6 Document

Description	Record decisions and topic data.
Invoked by	<i>Accept topic</i> <i>Accept topic</i> <i>Reject topic</i> <i>Apply classification</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	Results of <i>Apply classification</i> stage.
Automated actor outputs	NA
Human actor activities	Update ontology catalogue and record of activities.
Human actor inputs	Deliberations and decisions. Annotated CSV file from the <i>Topic design and classification</i> stage.
Human actor outputs	Documentation.

Table 8: *Document* Use Case

2 Topic Assessment Workflow

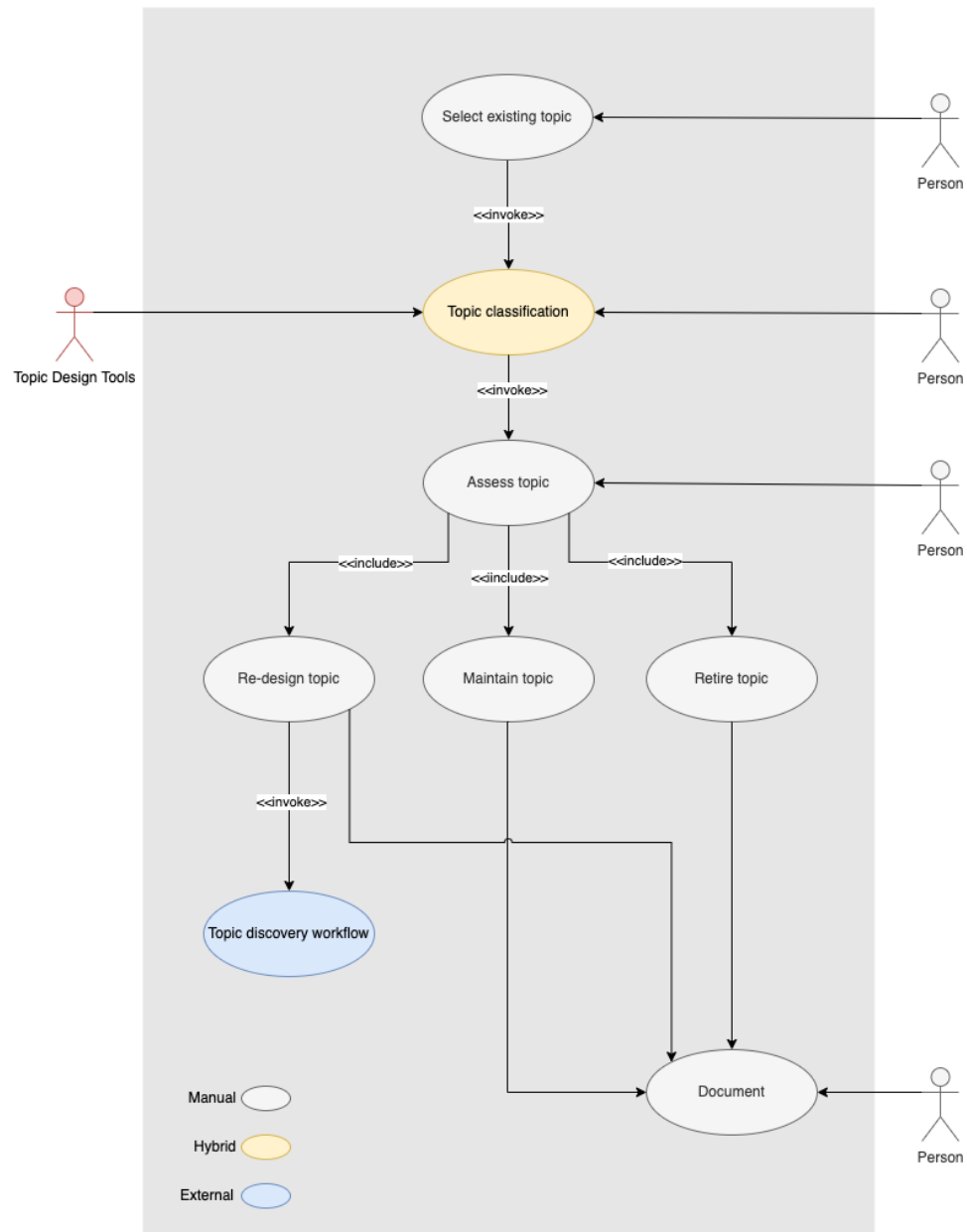


Figure 2: UML Use Case diagram

2.1 Select existing topic

Description	Selection of an existing topic for assessment.
Dependencies	None
Implementation	Manual process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Select an existing topic for assessment and enter the <i>Topic design and classification</i> stage.
Human actor inputs	NA
Human actor outputs	An existing topic selected for analysis.

Table 9: *Select existing topic* Use Case

2.2 Topic classification

Description	Use an existing topic to search for constitution sections.
Invoked by	<i>Select candidate topic</i>
Implementation	Hybrid process. Semantic tools hosted on Co-Calc provide support for: a) Searching for sections using the topic. b) Clustering found sections. c) Accepting clusters and individual sections to determine section classification by the topic.
Automated actor activities	Semantic clustering of sections.
Automated actor inputs	Topic search parameters.
Automated actor outputs	Topic performance metrics and clustering.
Human actor activities	Selection of section clusters and sections.
Human actor inputs	Select topic search parameters: a) User name. b) Search and cluster thresholds. c) Topic text. d) Select option to export results to CSV. e) Export file name.
Human actor outputs	Annotation of CSV file.

Table 10: *Topic classification* Use Case

2.3 Assess topic

A topic appears before the ontological court. There are three mutually exclusive outcomes.

2.3.1 Maintain topic

Description	A topic is still relevant.
Invoked by	<i>Topic classification.</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is still relevant.
Human actor inputs	Annotated CSV file.
Human actor outputs	Recommend maintenance and generate content for the <i>Document</i> stage.

Table 11: *Assess topic* Use Case

2.3.2 Re-design topic

Description	A topic requires re-formulation and enters the <i>Topic Discovery Workflow.</i>
Invoked by	<i>Topic classification.</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is still relevant.
Human actor inputs	Annotated CSV file.
Human actor outputs	Recommend maintenance and generate content for the <i>Document</i> stage.

Table 12: *Re-design topic* Use Case

2.3.3 Retire topic

Description	A topic is retired.
Invoked by	<i>Topic classification.</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	NA
Automated actor outputs	NA
Human actor activities	Decide whether a topic is still relevant.
Human actor inputs	Annotated CSV file.
Human actor outputs	Recommend maintenance and generate content for the <i>Document</i> stage.

Table 13: *Reject topic* Use Case

2.4 Document

Description	Record decisions and topic data.
Invoked by	<i>Accept topic</i> <i>Maintain topic</i> <i>Retire topic</i> <i>Re-design topic</i>
Implementation	Manual multi-actor process.
Automated actor activities	NA
Automated actor inputs	Outputs of manual processes.
Automated actor outputs	NA
Human actor activities	Update ontology catalogue, and record of activities.
Human actor inputs	Deliberations and decisions. Annotated CSV from the <i>Topic classification</i> stage.
Human actor outputs	Documentation.

Table 14: *Document* Use Case