Exploring What If Modelling and Policy Tracking through Digitalized UNFC
Legislations and policy formulation are essential toward the green transition and sustainable resource development.

Accessing and analyze data on existing resource projects, policies and laws are challenging.

The existing data and classifications are scattered across deprecated repositories and inconsistent standards.

This fragmented landscape impedes the development of ambitious strategies for the future.
Robust standards, coupled with robust digitalization support, offer the following benefits:

- Data harmonization
- Distributed information repositories
- Digitalized policy tracking
- What if modelling
- The use of Machine Learning and AI

Collectively, these contribute to **Informed Policy Formulation**.
Comprehensive digitalization, coupled with cutting edge technology, can play a pivotal role in enhancing the harmonization and adherence to UNFC rules and principles, encompassing both general and specific disclosure regulations as well as competency and credibility standards.

**Guided reporting system** ensures adherence to UNFC rules, tailored to various commodities.

**Control Framework** technology offers customizable automated validation of reports.
Data harmonization

Control Framework

<table>
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<tr>
<th>Regulatory Approval</th>
<th>Name</th>
<th>Value</th>
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<tbody>
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System message

There is a new Control Factor added to the system since last save. Please find all fields marked as "New Control Factor" and select value before save.
The case study

We have set up a case study:

• 19 real life case studies from around the globe
• 20 real life UNFC report from these case studies
• 5 real life CRIRSCO reports bridged to UNFC
• 84 generated report to increase the resolution of the modelling
UNFC Data Bridging

Automated conversion of the 5 CRIRSCO reports to UNFC following the rules of the official UNECE Bridging documents

Re-classification to UNFC sub-categories and sub-classes to classify projects more in-depth increasing the resolution of the project maturity model.

Extracting Control Factors from disclosure and supporting documents.
Policy tracking:

Through our Supported Decision Making (SDM) module, stakeholders can access crucial information regarding the viability and maturity of projects.

The SDM module highlights exact factors hindering project viability and maturity, such as:

- regulatory hurdles
- approval delays
- financial constraints
By harmonizing and structuring data, we empower the machine to identify the precise factors impeding our projects.

Thus, we tasked the system to pinpoint the top three major factors, yielding precise answers:

• Regulatory approval process
• Environmental and Social Impact Assessment (ESIA) approval
• Taxation issues
What if modelling:

In anticipation of government policy changes aimed at supporting the industry, the Control Framework system allows for the incorporation of planned modifications into advanced assessments. This entails updating the system with the proposed policy adjustments.

After we get our answers we have updated the system and Control Framework with the proposed policy adjustments.

Following this update, the SDM module facilitated What-If modeling scenarios to forecast potential outcomes.
The results

UNFC Change Matrix
Commodity
Minerals

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What's next?

Classification systems like UNFC, AMREC/PARC, CRIRSCO, and others include extensive data in their supporting documents.

However, this data is mostly stored in unstructured, large-text formats within these documents.

Extract data with Machine Learning - we are leveraging and building Machine Learning models for extracting information from these data sources.

Natural language search – With the help of the AI the supporting documents and data can be searched without exact keywords.

Data Classification and Structuring - Our focus lies in training models designed to extract and organize data from extensive textual sources.

Increasing the scope of the study – We are working to gather and process more real life scenarios and sources to analyze as much global hindering factors as possible.
A magic mirror

To increase the scope of our study and data we have built a National Aggregates module, providing a unique tool for overseeing country resource profiles.

It functions as a "magic mirror," allowing countries to easily visualize their resource portfolio and compare various scenarios.

This functionality enables high-level oversight at an accelerated pace, particularly in regions where national project level UNFC reports are not yet established.
Introducing the UNFC Education Report Wizard – our latest module boasts an advanced wizard and tailored instructions to streamline the submission of standard UNFC and national aggregate reports.

- Experience intuitive guided reporting
- Navigate decision trees effortlessly with our superb UI
- Access in-depth guidance and UNFC expertise at your fingertips
Thank You!

Milan PO CZIK, CEO, CO-FOUNDER
milan.poczik@sinegon.com

References and citations:

• UNECE 2022. UNFC GUIDANCE EUROPE - Guidance for the Application of the United Nations Framework Classification for Resources (UNFC) for Mineral and Anthropogenic Resources in Europe

• Guidance for the classification and comparison of national resource estimates – Jeremy Webb, Milan Poczik

• Sinegon RP Cloud https://sinegon.com/sinegon-rp-cloud-2/

• Sinegon UNFC Bridging https://sinegon.com/unfc-bridging/