

# Sustainable Value Chain Generative AI Toolkit

NTT DATA UK&I

タイトル: 持続可能なバリュー  
チェーン生成AIツールキット



We choose [to do] these things not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone.

John F. Kennedy, on choosing to go to the Moon

## Motivation

We decided to pursue the supply chain emissions problem because of its global significance and universal application. For non-data experts, the challenge can seem immense, but we have always been convinced that our expertise could crack this problem. What you see here is what we have done with our own tiny investment but is just a fraction of what we are capable of delivering.



# Two-part toolkit

## • Part 2: ESG Report Explorer

The Report Explorer allows for automated extraction of key information needed for supplier accountability from non-financial disclosure reports.

The screenshots here are for the interactive version of the tool where the user types the question they need (based on RAG architecture). The fully automated version of the tool is pre-tuned for the questions that the client specifically wants to answer and then the information is presented via a dashboard, minimising calls to the model and maximising accuracy. Again, specific implementations are client confidential.

The screenshot displays the 'ESG Report Explorer' interface. At the top, there's a header with the title and a magnifying glass icon. Below it, a file upload area prompts the user to 'Drag and drop file here' with a 'Limit 200MB per file • PDF' and a 'Browse files' button. A file named 'Schneider\_TCFD\_2022\_test.pdf' is shown. A question input field asks 'How much were their scope 1 emissions in 2022?'. A 'Submit' button is present. The 'Answer' section shows '789 tCO2e'. Below this, a detailed dashboard for 'Schneider Climate Report 2022' is visible, including a 'Summary' tab, a 'The TCFD framework continued' section, and a 'Key metrics' dashboard with various charts and data points like '22.9 MtCO2e' and '789 tCO2e'.

# Invoice Classifier: common concerns

There are three disadvantages of relying on the Invoice Classifier as a single long-term solution:

- Imperfection: the classifier is only about 90% accurate by itself – if the client needs more accuracy, we can manually tune the result
- Under-values emissions of firms with massive buying power, because it is driven by spend alone
- Does not take account of the actions of suppliers or procurement teams: because all measurement is done with generic factors, there are no quantitative incentives for emissions reduction.

Supplier-level factors, which is what C-Turtle uses, takes account of both suppliers and procurements teams but *to a limited extent*. If the procurement team still buys from the same suppliers but makes more low-carbon choices (a common approach), this will never be reflected. C-Turtle is also restricted to using CDP data - firms are free to not declare all their emissions properly (particularly their own supply chain). Although the world's largest firms use CDP, the overall supply chain coverage is 20-30% typically (in NTT DATA UK for example the CDP coverage over the top 30 suppliers is 29%). Therefore C-Turtle's CDP integration is not the single long-term solution either.

The final solution is emissions information from suppliers, although this can be hard to obtain.

The major advantage of the Invoice Classifier is near 100% coverage and a near instant result.

We believe C-Turtle, the Invoice Classifier and marketplaces for product and service emissions (such as Estanium) are the answer in combination.

## ESG Report Explorer: common concerns

When we started working on the ESG Report Explorer, it was new in the market, however there is now competition for using RAG to analyse these types of reports, particularly for investment purposes.

What we are doing uniquely is to apply this to supplier due diligence, combined with a corporate policy and integrated reporting.

The ESG Report Explorer of course extends the supplier-level factors because – rather than these needing to be in CDP – we can extract them from any non-financial report. This again extends the capability of what NTT can do together.

We seek not to compete with other initiatives around the world but to complement them. The urgency of the climate crisis demands collaboration.



Thank you