

**Company:** Cathay Financial Holding Co., Ltd.  
**Company Description:** Cathay FHC offers customers friendly, convenient, and efficient financial services, providing them with a seamless experience through our digital platforms and services, which are built upon innovation in digital, data, and technology. We have established a strong presence in Taiwan while maintaining a global perspective.  
**Nomination Category:** Sustainability Categories  
**Nomination Sub Category:** Sustainability Product of the Year - in Asia (China, Japan and Korea)  
**Nomination Title:** Cathay's Individual Carbon Footprint Calculator Engine for Everyday Sustainability Innovation



1. Which will you submit for your nomination in this category, a video of up to five (5) minutes in length about the achievements of the nominated organization since 1 January 2023, OR written answers to the questions for this category? (Choose one):

Written answers to the questions

2. If you are submitting a video of up to five (5) minutes in length, provide the URL of the nominated video here, OR attach it to your entry via the "Add Attachments, Videos, or Links to This Entry" link above, through which you may also upload a copy of your video.

[Video Link](#)

3. If you are providing written answers for your submission, you must provide an answer to this first question: Briefly describe the nominated organization: its history and past performance (up to 200 words):

**Total 146 words used.**

Cathay Financial Holdings, founded in 2001 and based in Taiwan, is a leading financial group with subsidiaries including Cathay Life, Cathay P&C, Cathay Bank, Cathay Securities, and others.

As a leading financial institution in Taiwan, Cathay Financial Holdings is committed to fostering a sustainable business environment. By integrating responsible practices into its operations, the group aims to contribute to social stability and generate a positive environmental impact. Its dedication to sustainability reflects its vision to drive progress and create long-term value for stakeholders while supporting economic growth and environmental preservation in the communities it serves.

Cathay Financial Holdings combines regional expertise with a strong foundation of financial innovation to address the evolving needs of clients and partners. With a forward-thinking approach and a steadfast commitment to corporate social responsibility, the group continues to play a pivotal role in shaping the future of financial services in Asia.

4. If you are providing written answers for your submission, you must provide an answer to this second question: Outline the organization's achievements since the beginning of 2023 that you wish to bring to the judges' attention (up to 250 words):

**Total 249 words used.**

The Cathay Individual Carbon Footprint Calculator Engine was launched in March 2025.

Cathay Financial Holdings is a leading financial group in Taiwan and an early mover in climate action. To support the shift toward a carbon-conscious economy, Cathay created the Individual Carbon Footprint Engine. This tool helps customers reduce emissions by tracking the carbon footprint of each purchase in their daily lives.

Aligned with SDG 12: Responsible Consumption and Production, specifically Target 12.8, this tool enhances awareness by calculating carbon emissions across different consumption categories. Customers can better understand their daily activity carbon footprint, fostering more sustainable choices.

**Core functions:**

- AI-Powered E-Invoice Parsing: Leverages AI to automatically extract and classify transaction data from electronic invoices. Each transaction is mapped to specific lifestyle categories—such as food, clothing, housing, and transportation—based on item descriptions and context. This structured categorization enables high-resolution carbon impact assessments and supports longitudinal analysis of consumer behavior across time and sectors.
- Precision CO<sub>2</sub>e Calculations: Once transactions are categorized, the system applies refined carbon intensity factors specific to each consumption type. Unlike traditional methods that rely solely on Merchant Category Codes (MCC), this engine enables item-level granularity, reflecting real-world purchasing patterns and carbon costs more accurately. The system supports dynamic updates of emission factors and enables scenario-based analysis and variability adjustments, thereby ensuring that individual carbon footprint assessments are both scalable and contextually accurate.

The engine analyzes and records carbon footprints, providing insights into consumption-based emissions to increase awareness, encourage reduction, and contribute to a greener future.

5. If you are providing written answers for your submission, you must provide an answer to this third question: Explain why the achievements you have highlighted are unique or significant. If possible compare the achievements to the performance of other players in your industry and/or to the organization's past performance (up to 250 words):

**Total 246 words used.**

Most current individual carbon calculators, such as MasterCard's Doconomy, estimate carbon footprints by categorizing credit card transactions using merchant category codes (MCCs). While convenient, this approach is often imprecise. For instance, whether a customer has a vegetarian meal or a steak dinner at a restaurant in a department store, the calculated carbon footprint remains identical because both transactions fall under the same merchant category. Such methods fail to capture the true carbon emissions of specific consumption items.

Cathay's innovative individual carbon footprint calculator overcomes these limitations by leveraging AI models to identify consumer goods and categorize transactions based on data from transaction context extracted from customer e-invoices. This approach ensures precise carbon footprint values, surpassing traditional MCC-based methods. Unlike many online carbon calculators that require users to manually input detailed activity data, such as emission sources and quantities, Cathay's solution offers an automated, user-friendly alternative, significantly improving adoption rates.

The system uses automated data collection and intelligent modeling to accurately identify consumption items and match them with corresponding carbon coefficients. This fully automated process eliminates the need for manual input, providing effortless yet highly accurate carbon footprint calculations.

By offering precise insights, this innovation empowers users to understand their environmental impact and take actionable steps to reduce their carbon emissions. It encourages responsible consumption habits and supports the transition to a low-carbon lifestyle. Combining convenience, precision, and sustainability, Cathay's calculator is a groundbreaking tool for promoting environmentally conscious behavior and contributing to global carbon reduction efforts.

6. You have the option to answer this final question: Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words):

**Total 212 words used.**

[Demo video link](#)

According to the Google x Kantar 2022 Taiwan Consumer Behavior Research, 47% of consumers consider a brand's sustainability focus when selecting financial products, highlighting growing demand for ESG-integrated digital services. This directly validates the market relevance of the Cathay Individual Carbon Footprint Calculator Engine.

The solution is strategically embedded within the bank App. This well-established user base provides an ideal launchpad for large-scale adoption.

In the initial launch phase, Cathay Individual Carbon Footprint Calculator Engine aims to reach 5,000 users, leveraging the bank App's strong user engagement and trusted brand reputation. This strategic integration is designed to enhance user retention, promote green behavioral change, and actively support Cathay's broader ESG objectives.

Internally, Cathay has positioned the solution as a cornerstone of its ESG digital transformation strategy—enabling data-driven customer engagement, climate-conscious fintech innovation, and further reinforcing Cathay's leadership in sustainable finance.

Cathay Financial Holdings:

- Ranked among the Top 500 Global Brands
- Largest number of service locations in Taiwan
- Serving over 14 million customers across the group
- Included in the DJSI Emerging Markets Index for 8 consecutive years
- Achieved full marks and global first in Sustainable Finance and Financial Inclusion in DJSI
- Awarded Level A in CDP Carbon Disclosure and Climate Change
- MSCI ESG Rating: AA for 3 consecutive years

**Attachments/Videos/Links:**

[Cathay's Individual Carbon Footprint Calculator Engine for Everyday Sustainability Innovation](#)

[REDACTED FOR PUBLICATION]