



東海大學
TUNG HAI UNIVERSITY

企業永續影響力中心-Corporate Sustainability Impact Center

氣候與 ESG 評比相關之產學研究 對於企業永續作為與學術發表之幫助

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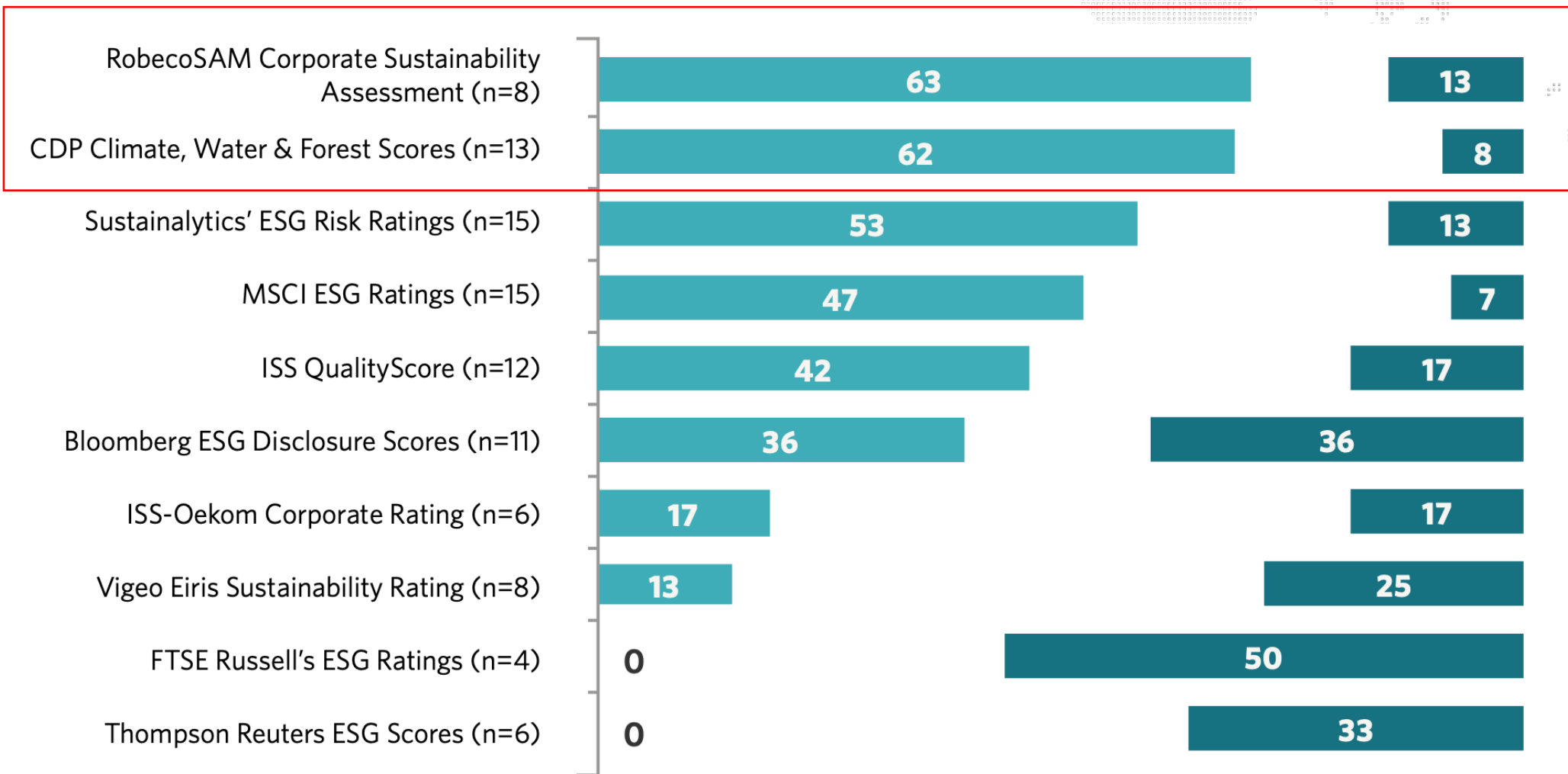
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研究：道瓊永續指數(DJSI)、企業永續策略、碳管理、影響力評價

ESG主要評比

Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA



■ High quality (4+5) ■ Low quality (1+2)

References: [Rate the Raters 2020](#)



集保IR平台 – ESG分數

證券代號/公司名稱 ▾	Sustainalytics ESG 風險評分 ▾ (100-0, 0分最佳) (?)	MSCI ESG評級 ▾ (AAA-CCC, AAA最佳) (?)	FTSE Russell ESG 評級 ▾ (0-5, 5級最佳) (?)	ISS ESG評級 ▾ (A-D, A級最佳) (?)	S&P Global ESG評分 ▾ (0-100, 100分最佳) (?)	台灣公司治理評鑑 (前5%最佳) (?)
1101 台泥	21.41	BBB	3.3	D+	74	6%~20%
1102 亞泥	27.48	CCC	3.5	D+	66	6%~20%
1103 嘉泥	38.46	-	2	-	29	6%~20%
1104 環泥	30.92	-	-	-	12	36%~50%
1108 幸福	-	-	-	-	-	6%~20%
1109 信大	-	-	-	-	-	51%~65%
1110 東泥	-	-	-	-	-	66%~80%
1201 味全	36.43	-	2.1	-	14	51%~65%
1203 味王	-	-	-	-	-	66%~80%
1210 大成	37.17	-	1.8	-	17	51%~65%



道瓊永續指數(DJSI)



Dow Jones Sustainability Indexes

The DJSI was launched in **1999** as the first global sustainability index and tracks the **stock performance** of the world's leading companies in terms of **economic, environmental and social criteria**.

S&P Global CSA

ESG performance

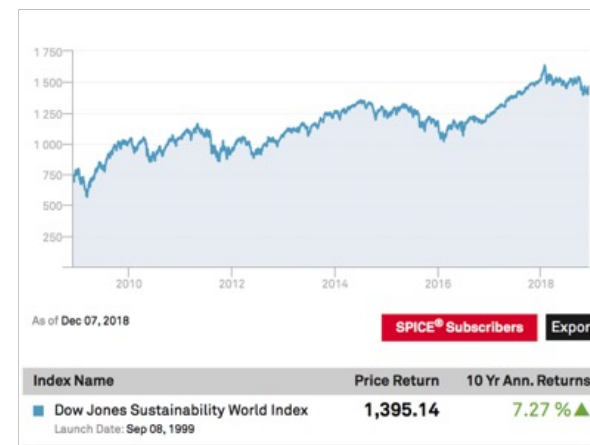


Leading companies

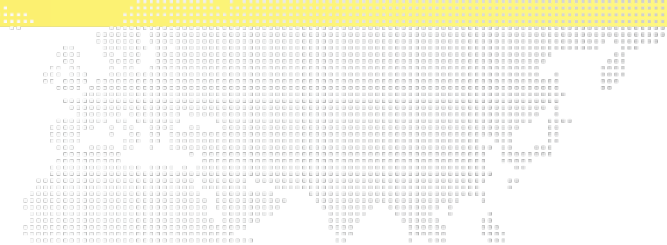
Constituent	Symbol	Sector*
Microsoft Corp	MSFT	Information Technology
Unitedhealth Group Inc	UNH	Health Care
Bank of America Corp	BAC	Financials
Nestle SA Reg	NESN	Consumer Staples
Novartis AG Reg	NOVN	Health Care
Cisco Systems Inc	CSCO	Information Technology
Roche Hldgs AG Ptg Genus	ROG	Health Care
Citigroup Inc	C	Financials
AbbVie Inc.	ABBV	Health Care
TOTAL SA	FP	Energy

DJSI

Stock performance



DJSI ESG評選準則



SEM Semiconductors

	Weight in % of total Score	Change from 2021
Governance & Economic Dimension	39	-4
Corporate Governance	7	0
Materiality	2	0
Risk & Crisis Management	4	0
Business Ethics	5	0
Policy Influence	2	0
Supply Chain Management	6	0
Tax Strategy	2	0
Information Security/ Cybersecurity & System Availability	2	0
Innovation Management	6	0
Product Quality & Recall Management	3	0
Environmental Dimension	34	0
Environmental Reporting	3	-2
Environmental Policy & Management Systems	7	0
Operational Eco-Efficiency	9	0
Product Stewardship	6	0
Climate Strategy	7	0
Biodiversity	2	New
Social Dimension	27	4
Social Reporting	3	-1
Labor Practice Indicators	4	1
Human Rights	3	0
Human Capital Development	4	0
Talent Attraction & Retention	6	0
Corporate Citizenship & Philanthropy	3	0
Customer Relationship Management	2	0
Privacy Protection	2	0

BNK Banks

	Weight in % of total Score	Change from 2021
Governance & Economic Dimension	49	-6
Corporate Governance	9	-1
Materiality	3	0
Risk & Crisis Management	6	0
Business Ethics	7	-1
Policy Influence	3	0
Tax Strategy	3	0
Information Security/ Cybersecurity & System Availability	3	0
Sustainable Finance	9	0
Anti-Crime Policy & Measures	4	0
Financial Stability & Systemic Risk	2	0
Environmental Dimension	18	5
Environmental Reporting	2	-1
Operational Eco-Efficiency	3	0
Decarbonization Strategy	6	New
Climate Strategy	7	0
Social Dimension	33	1
Social Reporting	2	-1
Labor Practice Indicators	4	0
Human Rights	3	0
Human Capital Development	6	0
Talent Attraction & Retention	6	0
Corporate Citizenship & Philanthropy	2	-1
Occupational Health & Safety	3	0
Financial Inclusion	3	-1
Customer Relationship Management	2	0
Privacy Protection	2	0

Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index

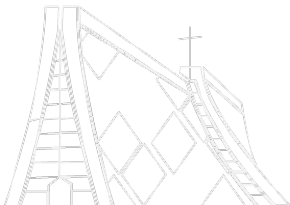
*M. Victoria López
Arminda Garcia
Lazaro Rodriguez*

ABSTRACT. The goal of this paper is to examine whether business performance is affected by the adoption of practices included under the term Corporate Social Responsibility (CSR). To achieve this goal, we analyse the relation between CSR and certain accounting indicators and examine whether there exist significant differences in performance indicators between European firms that have adopted CSR and others that have not. The effects of compliance with the requirements of CSR were determined on the basis of firms included in the Dow Jones Sustainability Index (DJSI), and specific accounting indicators were applied to measure performance. For the purposes of this study, we selected one group of firms belonging to the DJSI and another comprised of firms quoted on the Dow Jones Global Index

(DJGI) but not on the DJSI. The sample was made up of two groups of 55 firms, studied for the period 1998–2004. Empirical analysis supports the conclusion that differences in performance exist between firms that belong to the DJSI and to the DJGI and that these differences are related to CSR practices. We find that a short-term negative impact on performance is produced.

KEY WORDS: competitive advantage, value creating, sustainable development, performance, Dow Jones Sustainability Index

Introduction



Do investors actually value sustainability? New evidence from investor reactions to the Dow Jones Sustainability Index (DJSI)

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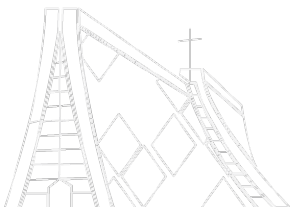
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Research Summary: Research exploring investor reactions to sustainability has substantial empirical limitations, which we address with a large-scale longitudinal financial event study of the first global sustainability index, DJSI World. We examine investor reactions to firms from 27 countries over 17 years that are added, deleted, or continue on the index. We find that once relevant controls and comparisons to observationally equivalent firms beyond the index are included, DJSI events have only limited significance and/or materiality. Nonetheless, investors' valuation of sustainability around the world has evolved over time, involving diminishing reactions to U.S. firms and increasing benefits, particularly of continuation on the index, over time. The study highlights the importance of careful analysis and longitudinal global samples in making inferences about the financial effects of social performance.



2021入選DJSI國內企業



公司	電子產業
台積電	半導體及設備
聯電	
日月光投控	
南亞科	
穩懋半導體	
世界先進	
友達	電子設備、儀器與零組件
台達電	
群創	
光寶	電腦、周邊與辦公電子設備
宏碁	

公司	金融產業
玉山金控	銀行
中信金控	
第一金控	
台新金控	
永豐金控	
國泰金控	保險
富邦金控	
開發金控	
新光金控	
元大金控	多元金融
中租控股	

公司	傳產服務產業
中鋼	鋼鐵
中鼎	營建工程
中華航空	航空
中華電信	電信
台灣大哥大	
遠傳電信	
統一超商	食品用品
東元電機	電機零件

備註：此表為2022年入選DJSI企業，總共30家



ORIGINAL ARTICLE

WILEY

Business Ethics
A EUROPEAN REVIEW

Investigating critical organizational factors toward sustainability index: Insights from the Taiwanese electronics industry

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To improve sustainable practices and attract investors, companies in emerging markets have increasingly embraced strategies for inclusion in rapidly expanding sustainability indices. However, most early studies on socially responsible investment or sustainability investment have only focused on exploring the relationship between corporate sustainability and firm value. Moreover, little has been done to explore the practices of emerging market companies for engaging with a sustainability index. To address this research gap, we employed the decision-making trial and evaluation laboratory (DEMATEL) method to identify critical factors that influence the inclusion of emerging market companies in the Dow Jones Sustainability Index (DJSI). Five critical factors and best practices were identified based on the analysis of seven Taiwanese electronics companies that have been listed in the DJSI for several consecutive years. Our results provide insights on the critical factors and best practices that reinforce the sustainable practices of emerging market companies for inclusion in the DJSI. This study also contributes to the literature by investigating the engagement of emerging market companies with the DJSI.



優秀年輕學者

計畫名稱：運用社會生命週期評估(SLCA)與資料包絡分析(DEA)發展電子產業之勞工衝擊模式

執行起迄：2015/08/01~2017/10/31 (兩年期)



DJSI要求企業必須進行人權風險評估



- ▶ 3.1 Social Reporting
- ▶ 3.2 Labor Practice Indicators
- ▼ 3.3 Human Rights
 - 3.3.1 Human Rights Commitment
 - 3.3.2 Human Rights Due Diligence Process
 - 3.3.3 Human Rights Assessment
 - 3.3.4 Human Rights Mitigation & Remediation
 - 3.3.5 MSA Human Rights
- ▶ 3.4 Human Capital Development
- ▶ 3.5 Talent Attraction & Retention
- ▶ 3.6 Corporate Citizenship & Philanthropy

Human Rights Assessment

Has your company conducted an assessment of potential human rights issues across your business activities in the past three years?

- Yes. We have proactively conducted an assessment of potential human rights issues in the last 3 years.

Please complete the table below related to the portion of activities assessed, the portion of activities where risks have been identified, and the portion of activities with mitigation actions taken. If any of the business categories are not material to your company, select "Not relevant" and provide an explanation.

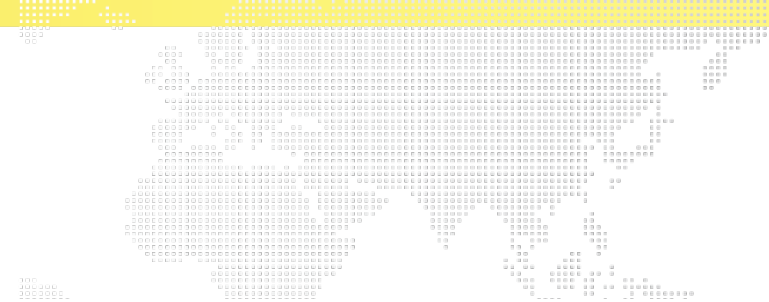
If an entity has been assessed multiple times in the last three years, it should only be counted once.

Supporting evidence:

Category	A. % of total assessed in last three years	B. % of total assessed (column A) where risks have been identified	C. % of risk (column B) with mitigation actions taken
<input type="radio"/> Own Operations (including Joint Ventures where the company has management control) Please select the basis for reporting (denominator): as a % of			



UNEP Social Life Cycle Assessment



UNEP

SETAC

Life Cycle Initiative

GUIDELINES FOR SOCIAL LIFE CYCLE ASSESSMENT OF PRODUCTS

UNITED NATIONS ENVIRONMENT PROGRAMME

CIRAIG

Belgian Federal Public Planning Service Sustainable Development

Stakeholder categories	Impact categories	Subcategories	Inv. indicators	Inventory data
Workers	Human rights	■	_____	_____
Local community	Working conditions	■	_____	_____
Society	Health and safety	■	_____	_____
Consumers	Cultural heritage	■	_____	_____
Value chain actors	Governance	■	_____	_____
	Socio-economic repercussions	■	_____	_____

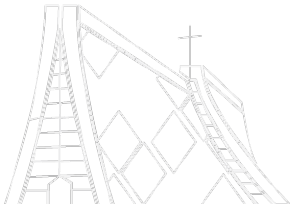
Figure 5 – Assessment system from categories to unit of measurement. Adapted from Benoit et al., 2007



Social Life Cycle Assessment Methodology (I)

Table 2 Stakeholders, subcategories, and indicators for social life cycle assessment

Stakeholder	Subcategory	Indicator	Characteristic	Social impact
Worker	Freedom of association and collective bargaining (S ₁)	Rate of labor dispute involvement (C ₁) [(number of workers involved in dispute / number of paid employees) × 1000]	Quantitative	Negative
		Rate of labor union organization (C ₂) [(number of trade union members / number of paid employees) × 100]	Quantitative	Positive
		Rate of dispatching workers (C ₃) [(number of part-time workers / number of paid employees) × 100]	Quantitative	Negative
		Promoting freedom of association (C ₄)	Semi-quantitative	Positive
		Right to collective bargaining (C ₅)	Semi-quantitative	Positive
	Child labor (S ₂)	Protecting children from having to work (C ₆)	Semi-quantitative	Negative
		Cooperative education program workers (C ₇)	Semi-quantitative	Negative
	Forced labor (S ₃)	Preventing forced work practices (C ₈)	Semi-quantitative	Negative
	Fair salary (S ₄)	Minimum and fair wages for worker (C ₉)	Semi-quantitative	Positive
		Social benefits provided to workers (C ₁₀)	Semi-quantitative	Positive
	Working hours (S ₅)	Per month average working hours (male) (C ₁₁)	Quantitative	Negative
		Per month average working hours (female) (C ₁₂)	Quantitative	Negative
		Management of overtime hours (C ₁₃)	Semi-quantitative	Positive
	Equal opportunities/discrimination (S ₆)	Rate of disability employment (C ₁₄) [(disability employments / paid employees) × 100]	Quantitative	Positive
		Protecting worker against discrimination during both the recruitment process and the term of your employment (C ₁₅)	Semi-quantitative	Negative
	Health and safety (S ₇)	Disabling injury frequency rate (C ₁₆) [(number of cases of disabling injury / total hours worked) × 1,000,000]	Quantitative	Negative
		Disabling injury severity rate (C ₁₇) [(total number of lost workdays / total hours worked) × 1,000,000]	Quantitative	Negative



Social Life Cycle Assessment Methodology (II)

Table 5 A scores of semi-quantitative indicators for SLCA

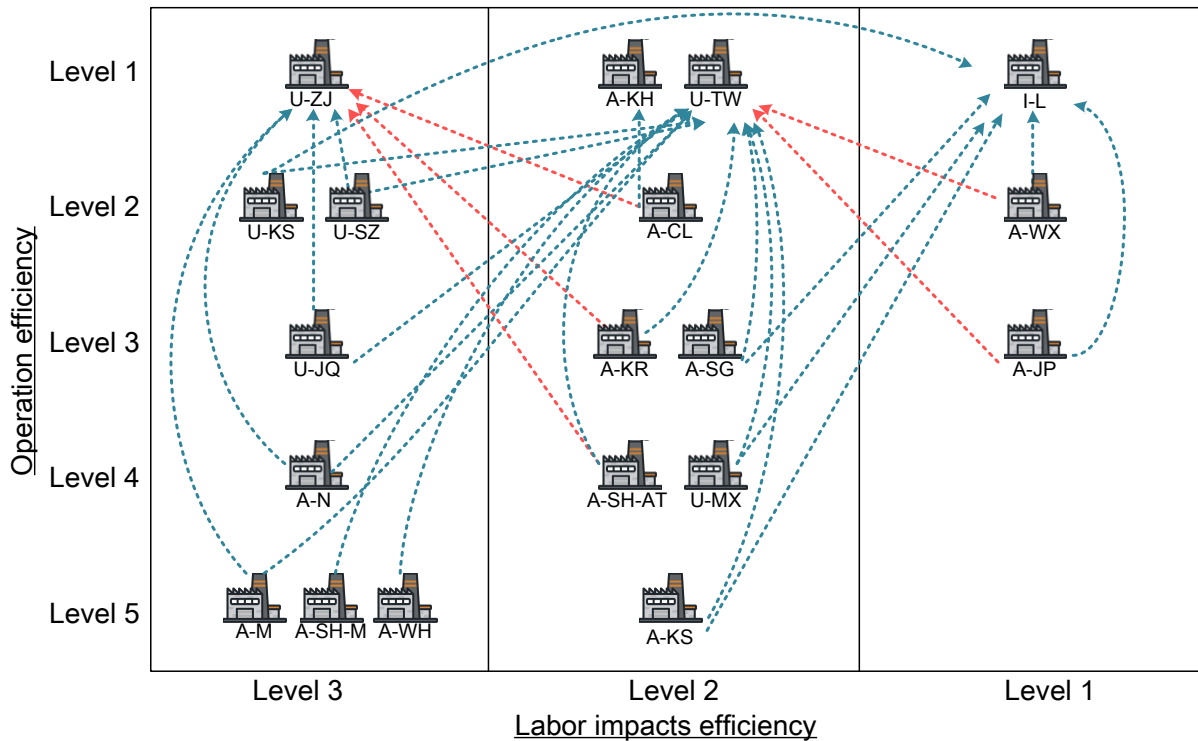
Elements	Efforts on social performance	Degree	Score
Policy	Establishment of policies that support integration of the measure into daily work	Fully implemented	0
		Partially implemented	0.5
		Not implemented	1
Communication	Communication of commitment for the integration of the measure into daily work	Fully implemented	0
		Partially implemented	0.5
		Not implemented	1
Measure	Performance of systematic active control of the integration of the measure into daily work	Fully implemented	0
		Partially implemented	0.5
		Not implemented	1
Record	All active communication and responses are recorded	Fully implemented	0
		Partially implemented	0.5
		Not implemented	1
Response	A system for handling complaints and suggestions has been established to ensure response	Fully implemented	0
		Partially implemented	0.5
		Not implemented	1



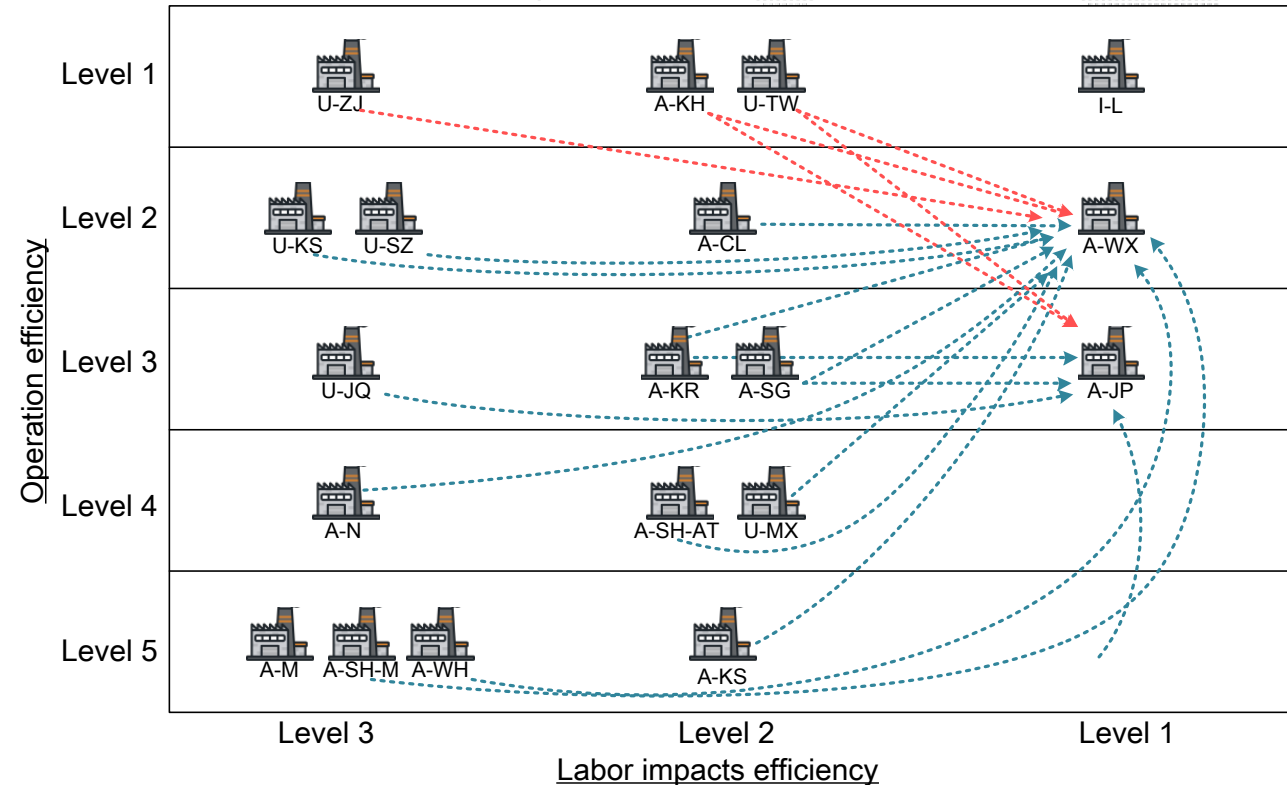
Case Study - (I)

SLCA			Factory A		Factory B		Factory C	
Subcategory	Indicator	Weights (w)	Score (a)	w*a	Score (b)	w*b	Score (c)	w*c
Freedom of association and collective bargaining	Rate of labor dispute involvement	0.014	2.5	0.034	4	0.0544	5	0.068
	Rate of labor Union organization	0.009	3	0.028	0	0	0	0.000
	Rate of dispatching workers	0.008	2	0.016	5	0.041	4	0.033
	Promoting freedom of association	0.013	5	0.066	2.5	0.033	2.5	0.033
	Right to collective bargaining	0.014	5	0.070	5	0.07	5	0.070
Child labor	Protecting children from having to work	0.112	5	0.562	5	0.562	5	0.562
	Cooperative education program workers	0.034	3	0.103	5	0.171	5	0.171
Forced labor	Preventing forced work practices	0.169	5	0.844	4	0.6752	4	0.675
Fair salary	Minimum and fair wages for worker	0.105	5	0.523	5	0.5225	5	0.523
	Social benefits provided to workers	0.069	5	0.347	5	0.347	5	0.347
Working hours	Per month average working hours-Male	0.047	3.5	0.164	2.5	0.1172	3.5	0.164
	Per month average working hours-Female	0.051	3.5	0.180	2.5	0.1282	3.5	0.180
	Management of overtime hours	0.061	5	0.307	4.5	0.2763	4.5	0.276
Equal opportunities	Rate of disability employment	0.060	0	0.000	0	0	5	0.299
	Protecting worker against discrimination during both the recruitment process and the term of your employment	0.070	3	0.211	4	0.2812	5	0.352
Health and safety	Disabling injury frequency rate	0.040	3.5	0.138	4.5	0.1777	5	0.198
	Disabling injury severity rate	0.049	2	0.097	4.5	0.2191	5	0.244
	Proposed penalty case rate	0.048	2	0.095	5	0.238	5	0.238
	LOHAS workplace	0.027	3	0.082	3.5	0.0952	4	0.109
Total score		66	3.866	71.5	4.009	81	4.540	
Ranking			3		2		1	

Case Study - (II)



改善作業營運效率的學習標竿



改善勞工衝擊效率的學習標竿



An analytic framework for social life cycle impact assessment—part 1: methodology

Sheng-Wen Wang^{1,2} · Chia-Wei Hsu^{3,4} · Allen H. Hu⁵

5.257 (2021)

Impact factor

6.803 (2021)

Five year impact factor

An analytic framework for social life cycle impact assessment—part 1: methodology

Sheng-Wen Wang^{1,2} · Chia-Wei Hsu^{3,4} · Allen H. Hu⁵

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Abstract

Purpose This study aims to develop a new framework of social life cycle impact assessment (SLCIA) method based on the United Nations Environment Program/Society of Environmental Toxicology and Chemistry (UNEP/SETAC) Guidelines for analyzing the social impact in Taiwan, particularly in the electronics industry.

Methods After reviewing the literature on social life cycle assessment (SLCA), we analyzed existing case studies and developed SLCIA methods based on the UNEP/SETAC Guidelines. We thereafter identified stakeholders, subcategories, and indicators in accordance with the current status of SLCA case studies and opinions from ten experts in the Taiwanese electronics industry. Both quantitative and semi-

quantitative indicators were subsequently proposed to assess the social impact of workers in the Taiwanese electronics sector. Each indicator was given the score of 1 to 5 by classifying the social impact percentage of nine scales. To formulate an analytic framework for SLCIA, the weighting values of each subcategory and indicator were determined using the consistent fuzzy preference relations (CFPR) method.

Results and discussion Seven subcategories and 19 qualitative and quantitative indicators of worker stakeholders for the electronics sector were identified based on the UNEP/SETAC Guidelines. A score of 1 to 5 is assigned to each quantitative indicator by classifying the social impact percentage of nine scales. The data obtained from companies for each quantitative indicator were subsequently transformed into social impact percentage in terms of the statistical data on social situations at the country or industry level. With regard to semi-quantitative indicators, three implementation levels of management efforts on social performance within five elements were identified. The CFPR method was then employed to determine the weights of each indicator by ten experts. Results indicated that preventing forced work practices, protecting children from having to work, and providing minimum and fair wages for workers are the three most important indicators for assessing social impact.

Conclusions A new SLCIA method that incorporates both quantitative and semi-quantitative indicators was proposed for assessing social impact in the electronics sector in Taiwan. Nine quantitative indicators can be easily organized using available social data from government statistics as performance reference points (PRPs) to determine the social impact exerted by companies. The relative weights were determined to allow for an impact assessment and thus solve the limitation of their currently assumed equal weights. The proposed framework is examined to analyze the social impact of three production sites for semiconductor packaging and manufacturing in Taiwan.

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Electronic supplementary material The online version of this article (doi:10.1007/s11367-016-1114-9) contains supplementary material, which is available to authorized users.

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An analytical framework for social life cycle impact assessment—part 2: case study of labor impacts in an IC packaging company

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5.257 (2021)
Impact factor

6.803 (2021)
Five year impact
factor

An analytical framework for social life cycle impact assessment—part 2: case study of labor impacts in an IC packaging company

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Abstract

Purpose The pressure on brand firms in the electronics industry to improve the labor conditions of their workers in their global production networks is increasing. Given the significance of mitigating the impacts of production on labor, this study used the new development method of social life cycle impact assessment (SLCIA) for conducting labor impact assessment. An illustrative example in an integrated circuit (IC) packaging company is presented to demonstrate the assessment of the impacts and the identification of the potential for improvement of labor practices among three factories.

Methods SLCIA method was proposed based on the UNEP/SETAC Guidelines that were reviewed in our previous work, Part 1 (in a previous article): Methodology. The proposed method was used to assess the impacts of operations on labor in the three factories of an IC packaging company. Nineteen indicators of labor–stakeholders were used to collect data from factories

and organizations in 2012. The obtained values from these three factories were translated into social impact scores that ranged from 1 to 5. The score of each indicator was multiplied by the weights of each indicator, and a final score of labor situations was generated to identify the hotspots of labor impacts and to identify the factory with better labor performance.

Results and discussion The main goal of this study is to demonstrate the effectiveness of our proposed SLCIA method in assessing the labor impacts in the electronics industry. Among three factories of IC packaging, factory C was ranked as having the lowest social impact on labor with a higher performance, followed by factories B and A. In addition, the results show that four indicators, “lacking labor union,” “did not hire a sufficient number of disabled employees,” “overtime work that exceeded the legal limit,” and “excessive number of dispatched workers,” were recognized as the main social impacts on labor in IC packaging production.

Conclusions The SLCA technique was used to assess the impacts of the production processes of three IC packaging factories on the labor conditions of their factory workers. The proposed method shed light on the significant impacts of such processes. The proposed model demonstrated its potential advantage by systematically and effectively identifying the labor impact hotspots, which could assist managers in devising strategies that could improve the labor situations within their organizations.

Responsible editor: Marzia Traverso.

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³ Department of Tourism, Tungshan University, New Taipei City, Taiwan

⁴ Department of Business Administration, National Central University, Taoyuan City, Taiwan

⁵ Institute of Environmental Engineering and Management, National Taipei University of Technology, Taipei, Taiwan

Keywords IC packaging · Labor impact · SLCA

1 Introduction

With the increased wave of globalization, multinational organizations have gone beyond geographical borders and established their manufacturing and assembly operations in developing countries such as China, India, the Philippines,



優秀年輕學者

計畫名稱：永續影響力評價研究

執行起迄：2019/08/01~2022/10/31 (三年期)



DJSI自2017年起鼓勵企業揭露「影響力評價」

Member of
**Dow Jones
Sustainability Indices**

Powered by the S&P Global CSA

Impact Valuation

Does your company value the positive/negative social or environmental externalized impacts of its business operations, products and services?

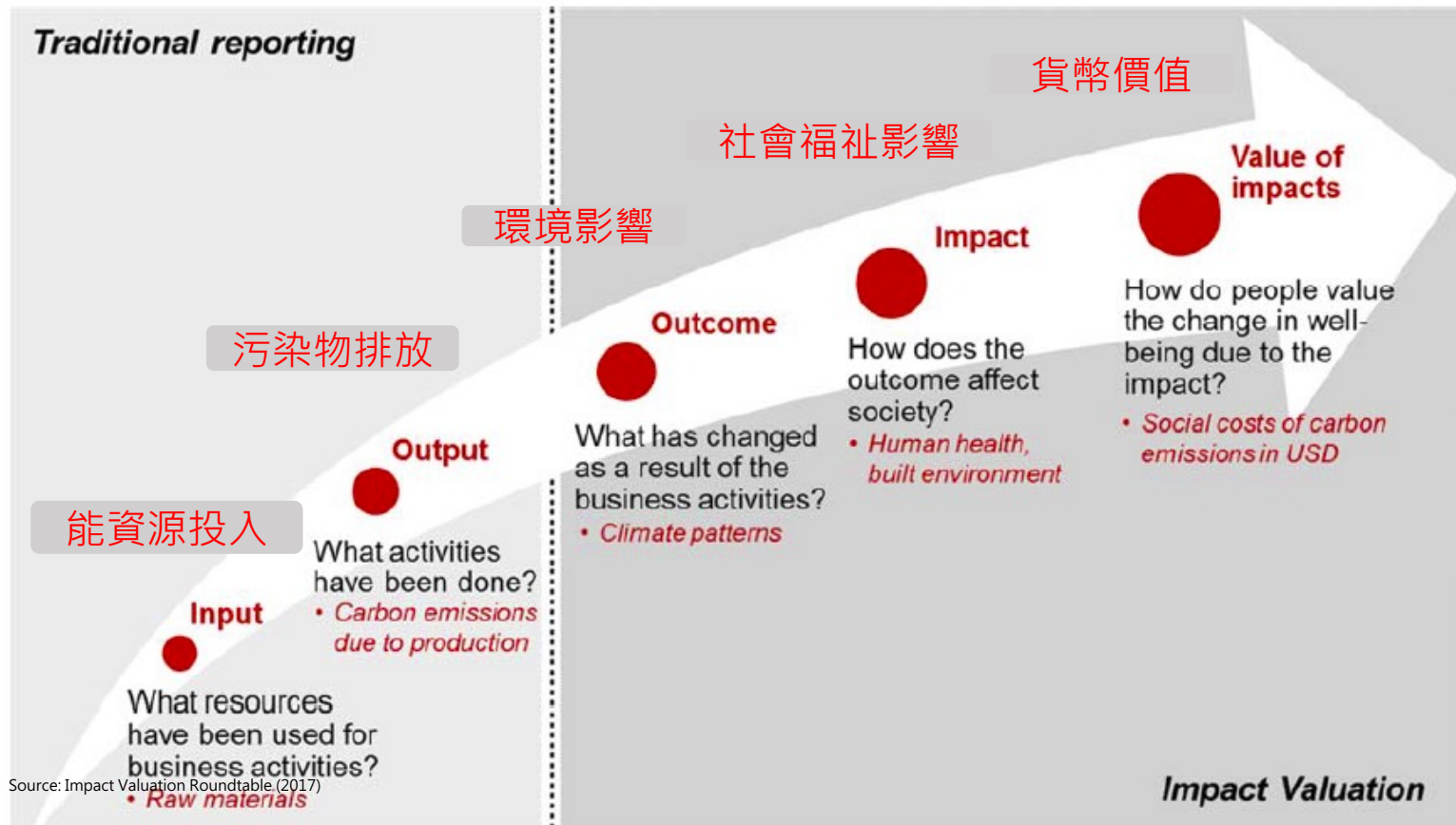
Please provide supporting evidence and note that community investments and philanthropic initiatives are not accepted in this question.

- Yes, we value our environmental/social external impacts quantitatively or we convert them into monetary values.

Impact	Input metric or description of business activity	Output	External Impact	Documentation
	What resources have been used for your business activities? Which of your company's business activities have a social or environmental result?	What is the environmental and/or social direct result of your business activity?	What is the impact of your business activity on society and on the environment?	Please provide the following documentation and indicate if this information is available in your public reporting or corporate website.
	<ol style="list-style-type: none"> Please select 'Operations' or 'Products / services' from the dropdown menu. Please describe the input metric or provide description of the business activity. 	<ol style="list-style-type: none"> Please select 'Environmental', 'Social' or 'Environmental & Social' from the dropdown menu. Please describe the direct environmental and/or social results of the business activity and the metric used to measure these outputs. Please specify the quantitative value of the metric being used. 	<ol style="list-style-type: none"> Please select the corresponding impact valuation technique. Please provide a description of the impact of the business activity on the lives of targeted individuals / populations or on society at large, or on the environment and the metric / approach used to measure these impacts. Please specify the quantitative value of the metric being used. 	<ol style="list-style-type: none"> Evidence that the impact valuation assessment has been conducted. Evidence of the methodology adopted for the calculation of your environmental or social external impact.



超越財務損益的新思維 (I)



透過單一貨幣語言呈現 ESG 實質價值

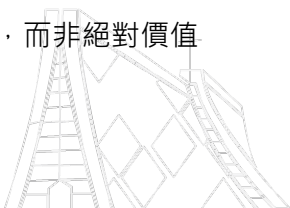


強調營運活動
間接外部性影響

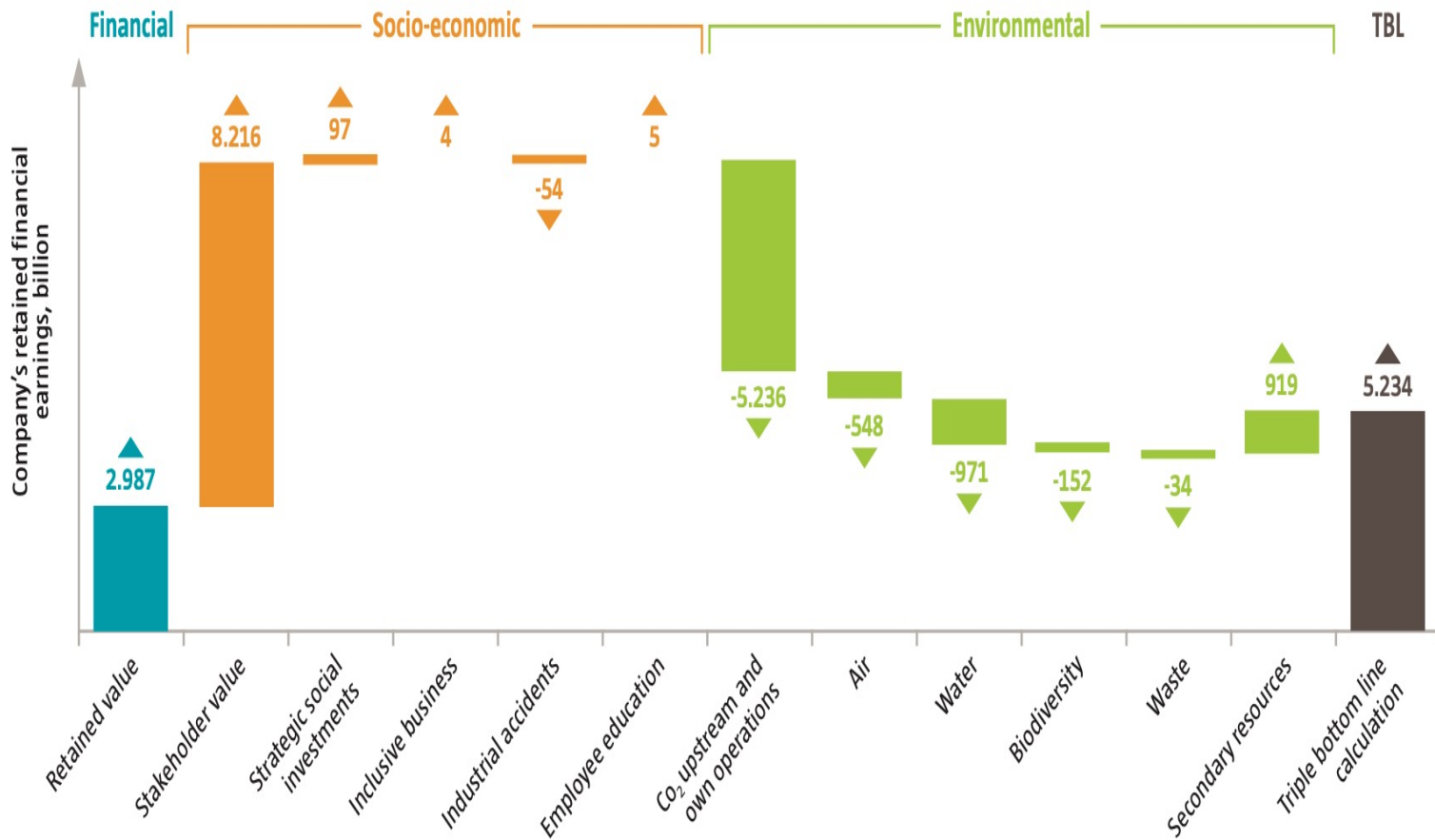


強調營運活動
直接投入/產出

註：環境及社會影響力是由公式推導及情境模擬產生的相對價值，而非絕對價值



超越財務損益的新思維 (II)



溫室氣體



社會成本(虧損)

傳統報導(CSR Reporting)僅考量溫室氣體排放量，而影響力評價則延伸考量因溫室氣體排放造成的社會成本(如經濟生產力損失)

稅務/薪資



社會效益(利潤)

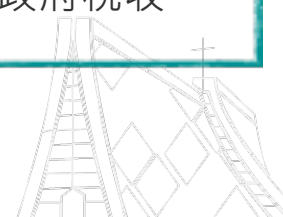
傳統(CSR Reporting)認為稅務及員工薪資為公司成本，而透過影響力評價則可重新思考其對社會帶來的效益。

採購金額



價值鏈效益(利潤)

BASF在2014年因銷售量增加導致採購量增加，而間接影響供應商提高工資及政府稅收



- **影響力評價 (Impact Measurement and Valuation, IMV) - ESG**

企業衡量其營運過程間接對利害關係人施加的正負面影響，亦稱為外部性，也是企業對環境及社會影響的價值(或成本)更全面且具體理解的一種方式

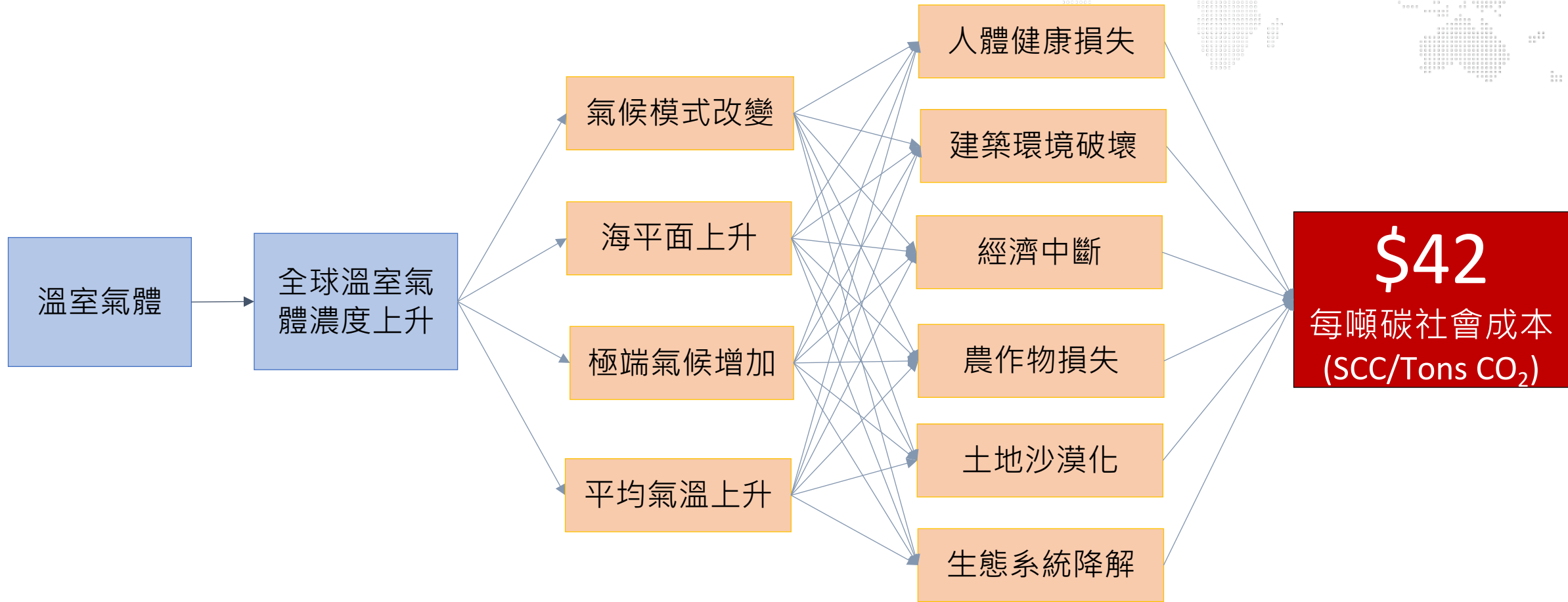
S&P Global and RobecoSAM (2020)

- **環境損益 (Environmental Profit & Loss, EP&L) - E**

企業衡量其營運過程/價值鏈對環境變化與人類福祉的影響，所產生的社會成本。

PwC UK, 2015

氣候變遷 - 「Impact Pathway」



價值平衡聯盟 (VBA)



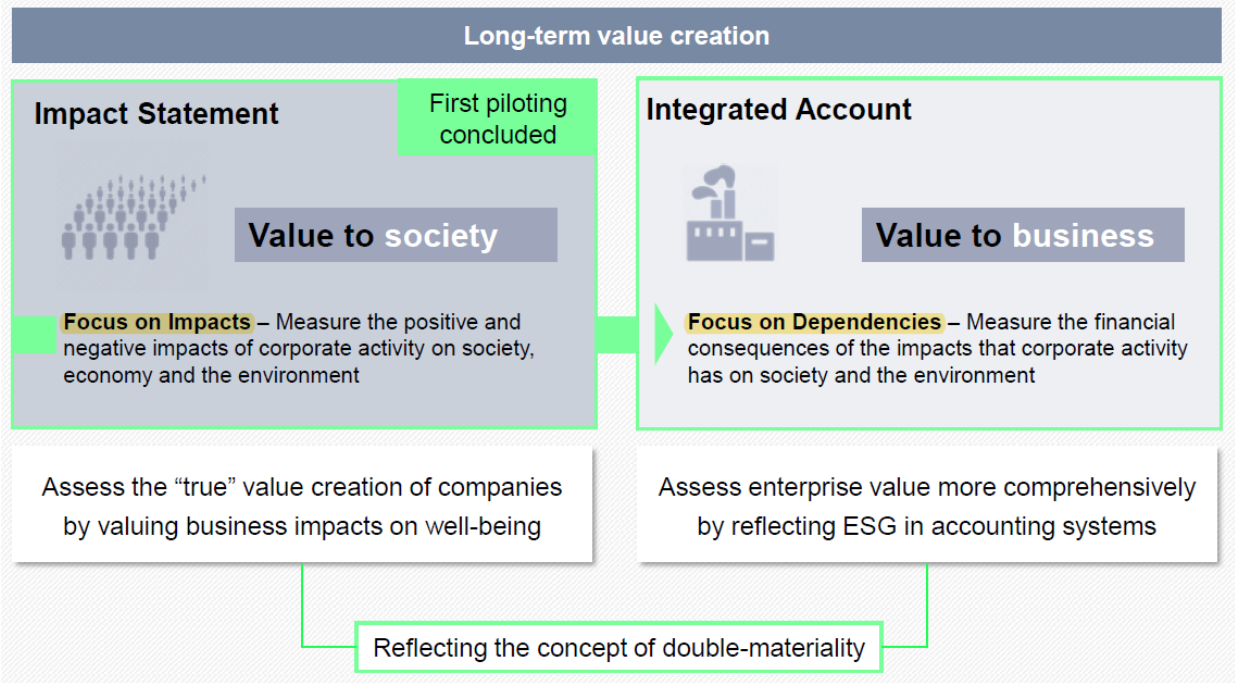
Member companies*



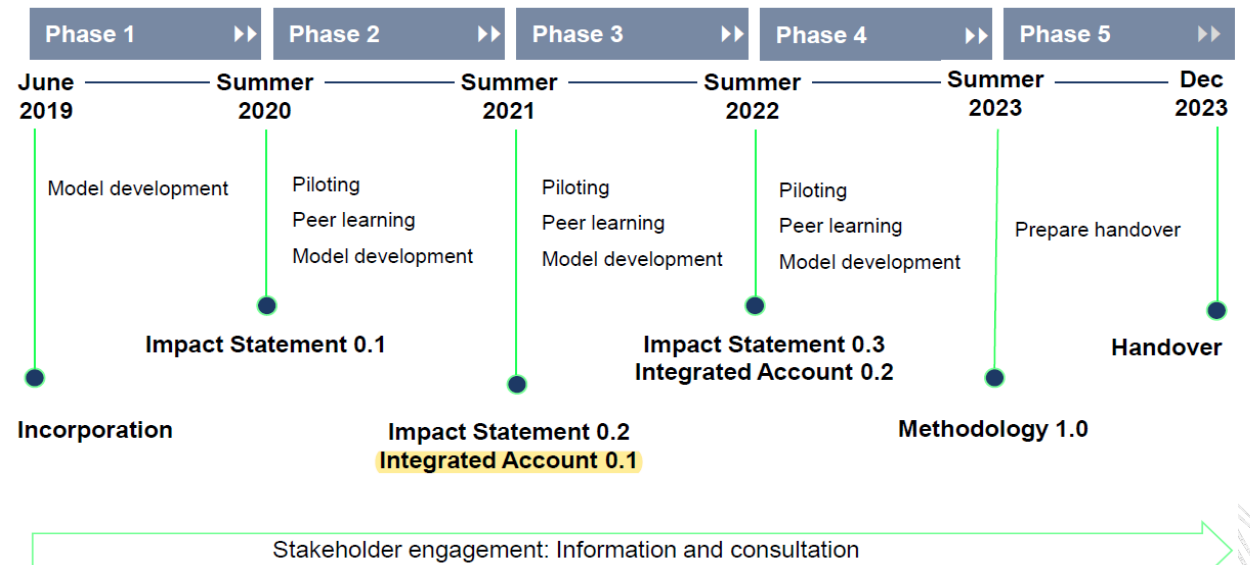
Pro-bono consultants



方法架構



時程



案例：Kering

KERING



>20萬筆
EP&L 資料庫

依原物料、製程、所
在地區分析

長期目標
(2025年供應鏈EP&L強度
較2015年減少40%)

224,567 RECORDS

No active filters

FILTERS

Search records...

RAW MATERIAL GROUP

Product Manufacture	61,319
Leather	34,269
Synthetic Fibers	26,295
Metal	17,646
Plastic	15,903
Animal Fibers	13,422
> More	

TIER

3	114,738
4	61,572
1	16,026
2	13,614
0	10,278
Use phase	4,825
> More	

EKPI

GHGs	40,526
Air emissions	39,716
Waste	38,231
Water pollution	37,289
Water consumption	34,543
Land use	34,262

EP&L VALUED RESULTS 2020

Information Table Analyze Export API

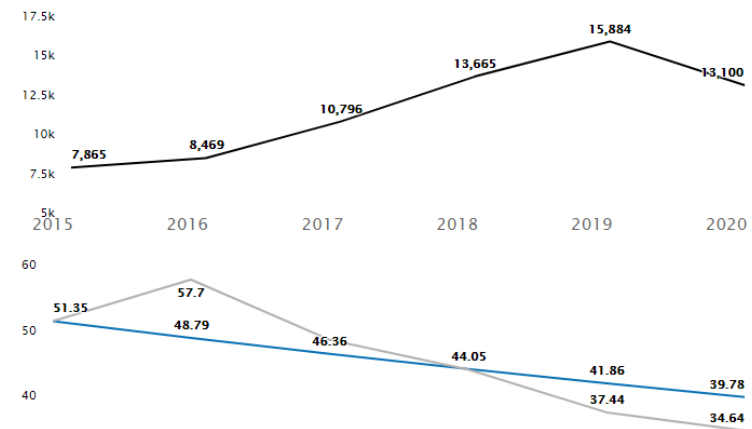
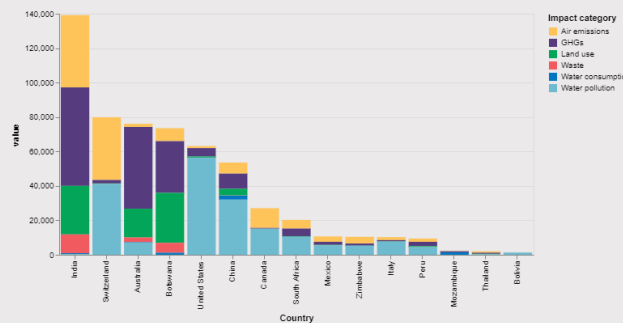
Business Unit	Raw material	Impact country
1 Operations	Product manufacture	Algeria
2 Operations	Product manufacture	Algeria
3 Operations	Product manufacture	Algeria
4 Operations	Product manufacture	American Samoa
5 Operations	Product manufacture	American Samoa
6 Operations	Product manufacture	American Samoa
7 Operations	Product manufacture	American Samoa
8 Operations	Product manufacture	American Samoa
9 Operations	Product manufacture	American Samoa
10 Operations	Product manufacture	American Samoa
11 Operations	Product manufacture	American Samoa
12 Operations	Product manufacture	Argentina
13 Operations	Product manufacture	Argentina
14 Operations	Product manufacture	Argentina
15 Operations	Product manufacture	Argentina
16 Operations	Product manufacture	Argentina
17 Operations	Product manufacture	Argentina
18 Operations	Product manufacture	Armenia
19 Operations	Product manufacture	Armenia
20 Operations	Product manufacture	Armenia
21 Operations	Product manufacture	Australia
22 Operations	Product manufacture	Australia
23 Operations	Product manufacture	Australia
24 Operations	Product manufacture	Australia
25 Operations	Product manufacture	Australia
26 Operations	Product manufacture	Australia

EP&L INDEX 2020

MATERIAL INTENSITIES IN € EP&L PER KG OF MATERIAL

Please select a single material and process step before using the material Intensities graph. Otherwise, the graph shows the intensities summed across multiple materials within a country. The valued intensities represent a blend of Kering specific processes and locations and contain averages for each environmental impact group. It is therefore not appropriate to apply the results shown here to different situations without seeking the advice of PwC.

IMPACT COUNTRIES
BY SUM OF VALUED INTENSITIES



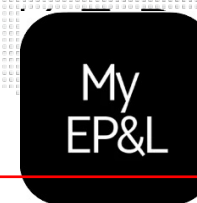
■ Revenue (M€)
■ E&L intensity (€EP&L/k€)
■ Intensity target (€EP&L/k€)

Figure 1 : EVOLUTION OF THE EP&L IMPACTS RELATIVE TO REVENUE (Link to data)

案例：Kering

計算產品環境損益 (EP&L)

提供最佳採購方案

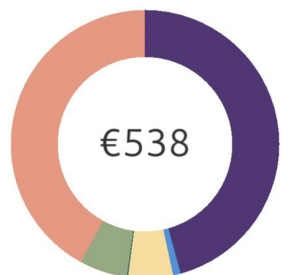


ING

RESULTS

IMPACT BY ENVIRONMENTAL INDICATOR

product	materials	sourcing countries	manufacturing place
		MN CN CN	AS

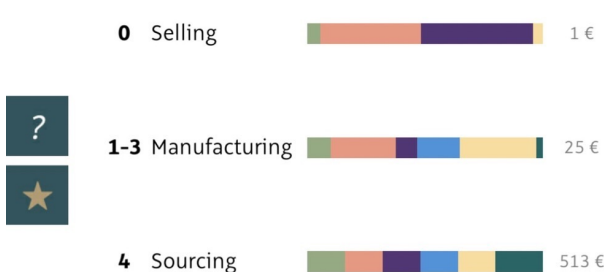


Air pollution : €31	Waste : €5
Carbon emissions : €226	Water consumption : €29
Land use : €246	Water pollution : €1

RESULTS

TIER IMPACT DETAIL

product	materials	sourcing countries	manufacturing place
		MN CN CN	AS



Air pollution : €31	Waste : €5
Carbon emissions : €226	Water consumption : €29
Land use : €246	Water pollution : €1

LOWEST IMPACT OPTIONS

IMPACT BY ENVIRONMENTAL INDICATOR

product	materials	sourcing countries	manufacturing place
		MN TR CN	EU

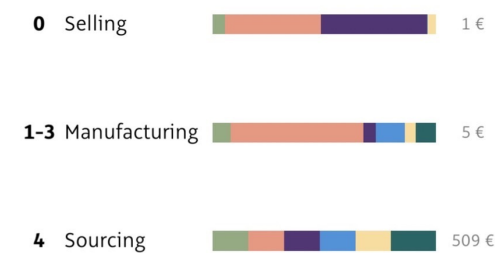


Air pollution : €29	Waste : €1
Carbon emissions : €222	Water consumption : €19
Land use : €244	Water pollution : €1

LOWEST IMPACT OPTIONS

TIER IMPACT DETAIL

product	materials	sourcing countries	manufacturing place
		MN TR CN	EU



Air pollution : €29	Waste : €1
Carbon emissions : €222	Water consumption : €19
Land use : €244	Water pollution : €1

案例：Kering

2018年制定供應鏈永續規範

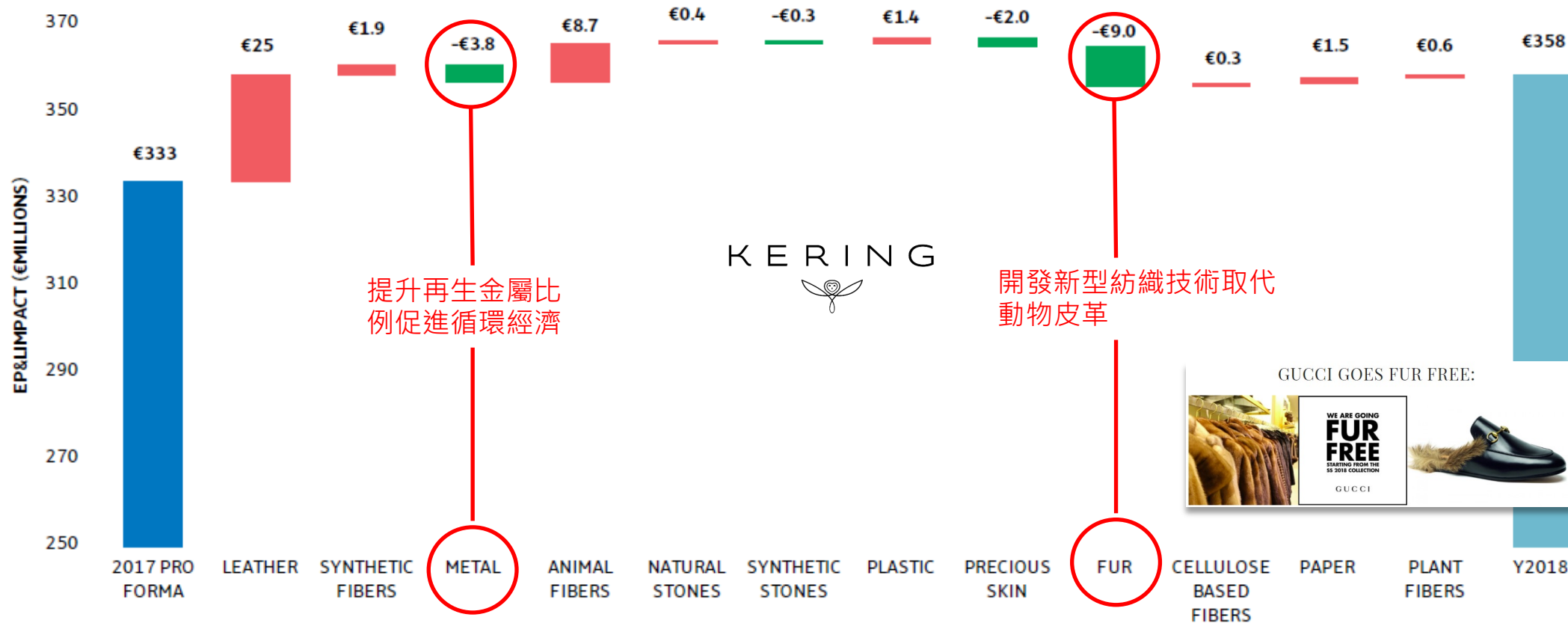
建立負責任的黃金採購機制

透過供應鏈轉型
擴大社會影響力

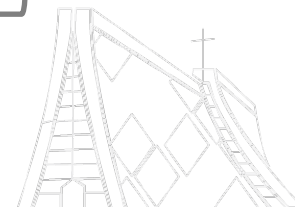
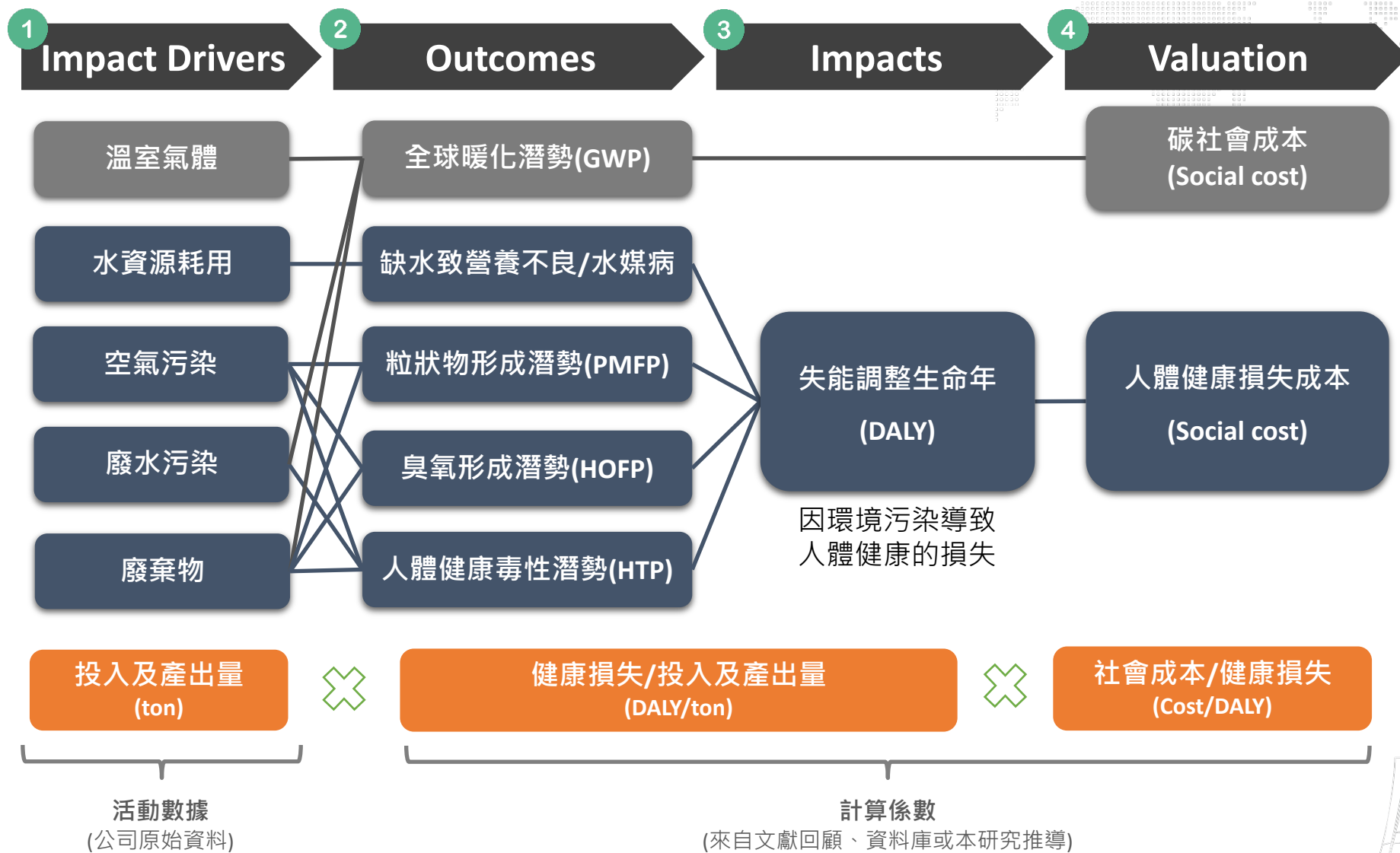
開發永續供應商指數

2019年發佈動物福利標準

FIGURE 6: A CLOSER LOOK AT CHANGES IN RAW MATERIAL IMPACTS IN THE SUPPLY CHAIN SINCE 2017 PRO FORMA RESULT



Environmental Impact Pathway

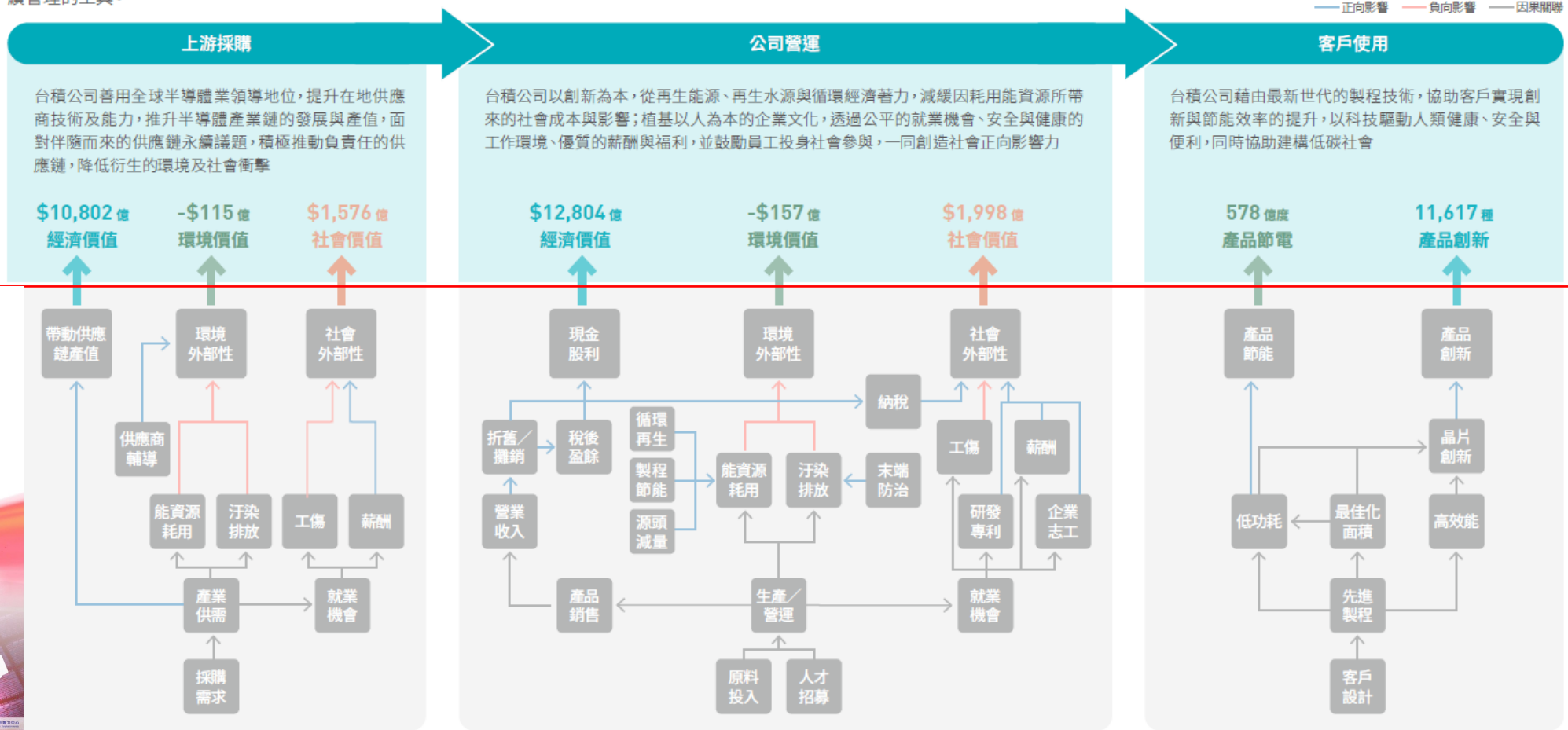


案例：TSMC



永續影響力策略地圖

從上游採購、公司營運到客戶使用，台積公司描繪價值鏈的策略地圖，藉由線線相連的因果關係，全面檢視企業各項行動，以貨幣化衡量自身對經濟、環境及社會可能衍生的外部成本 (-) 與價值 (+)，成為永續管理的工具。



台積公司民國110年度 | 環境損益分析報告 | Environmental Profit and Loss (EP&L)

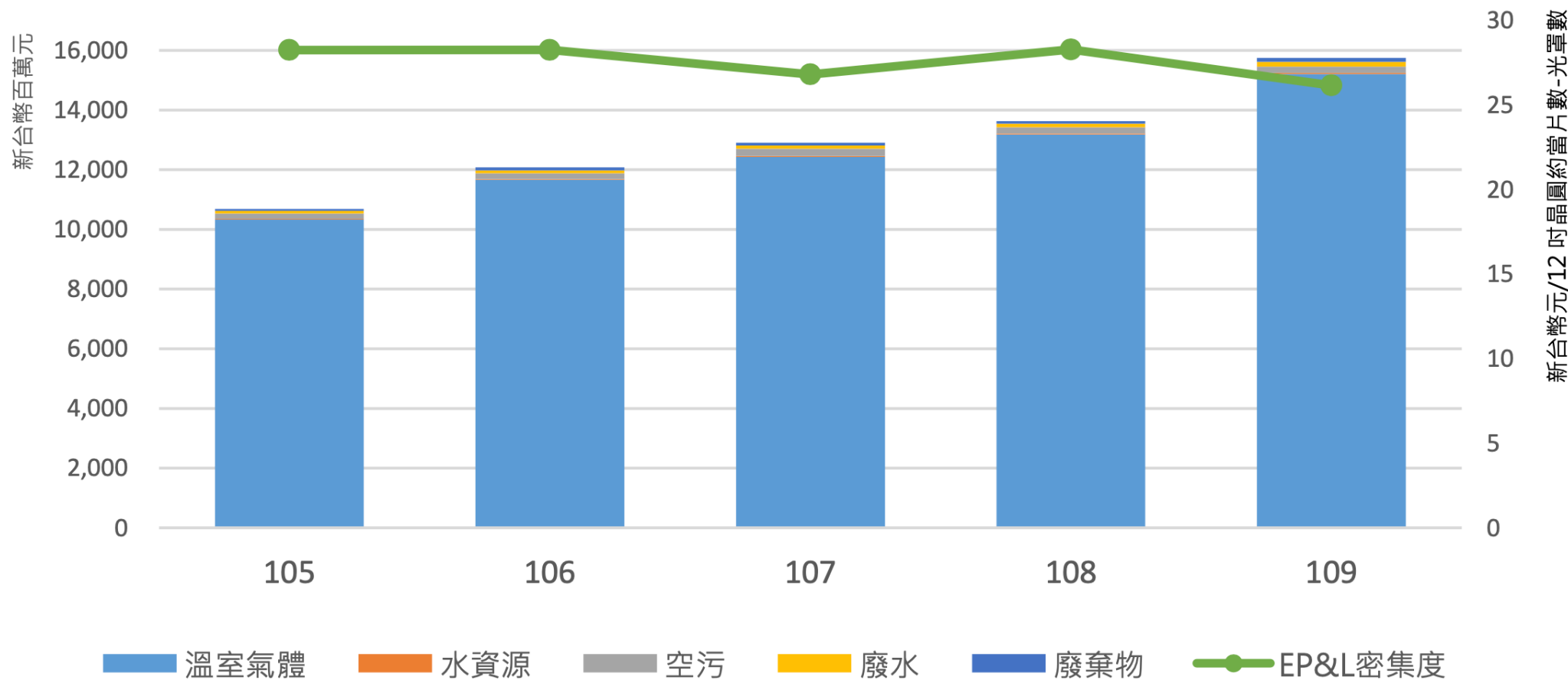
辨識營運活動產生的直/間接影響，及其環環相扣的因果關係

案例：TSMC

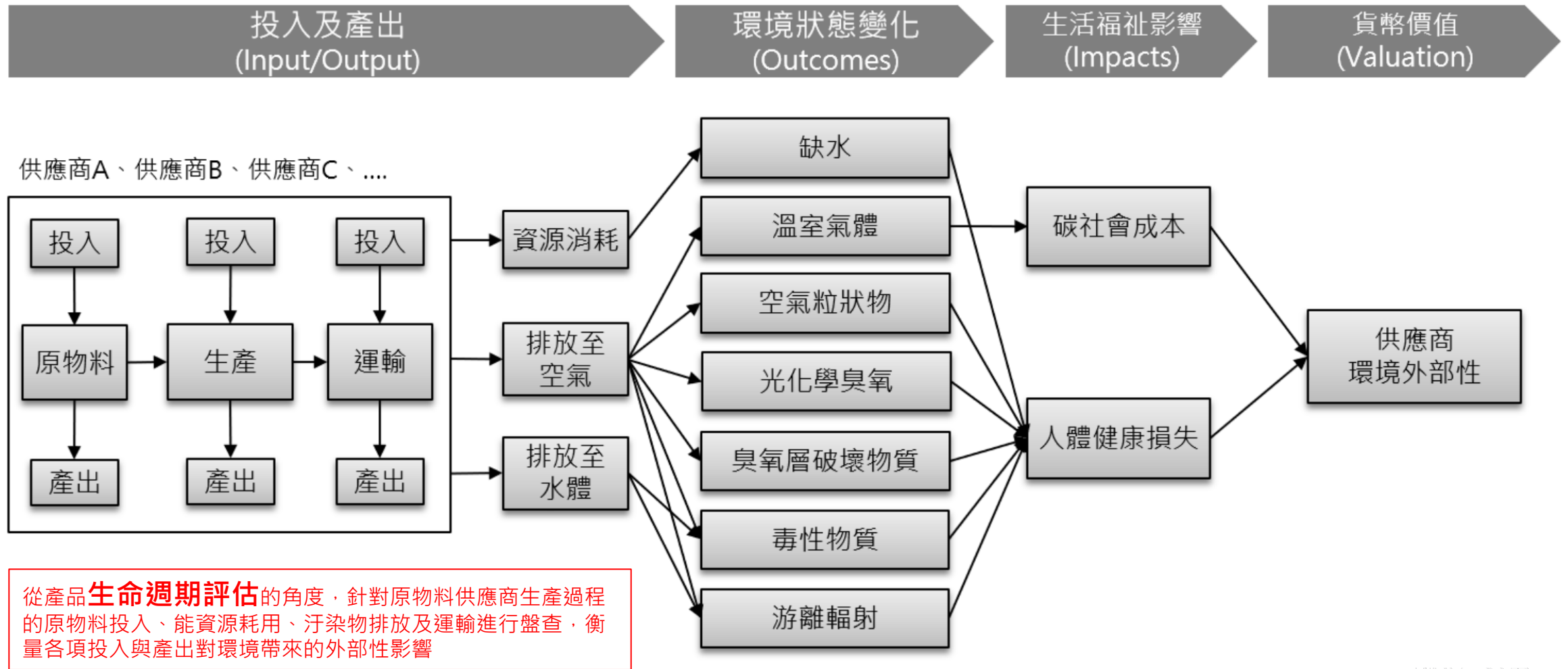
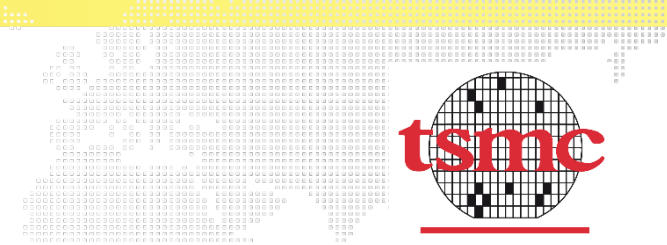


2030年目標：單位產品環境外部性較2010年減少 30%

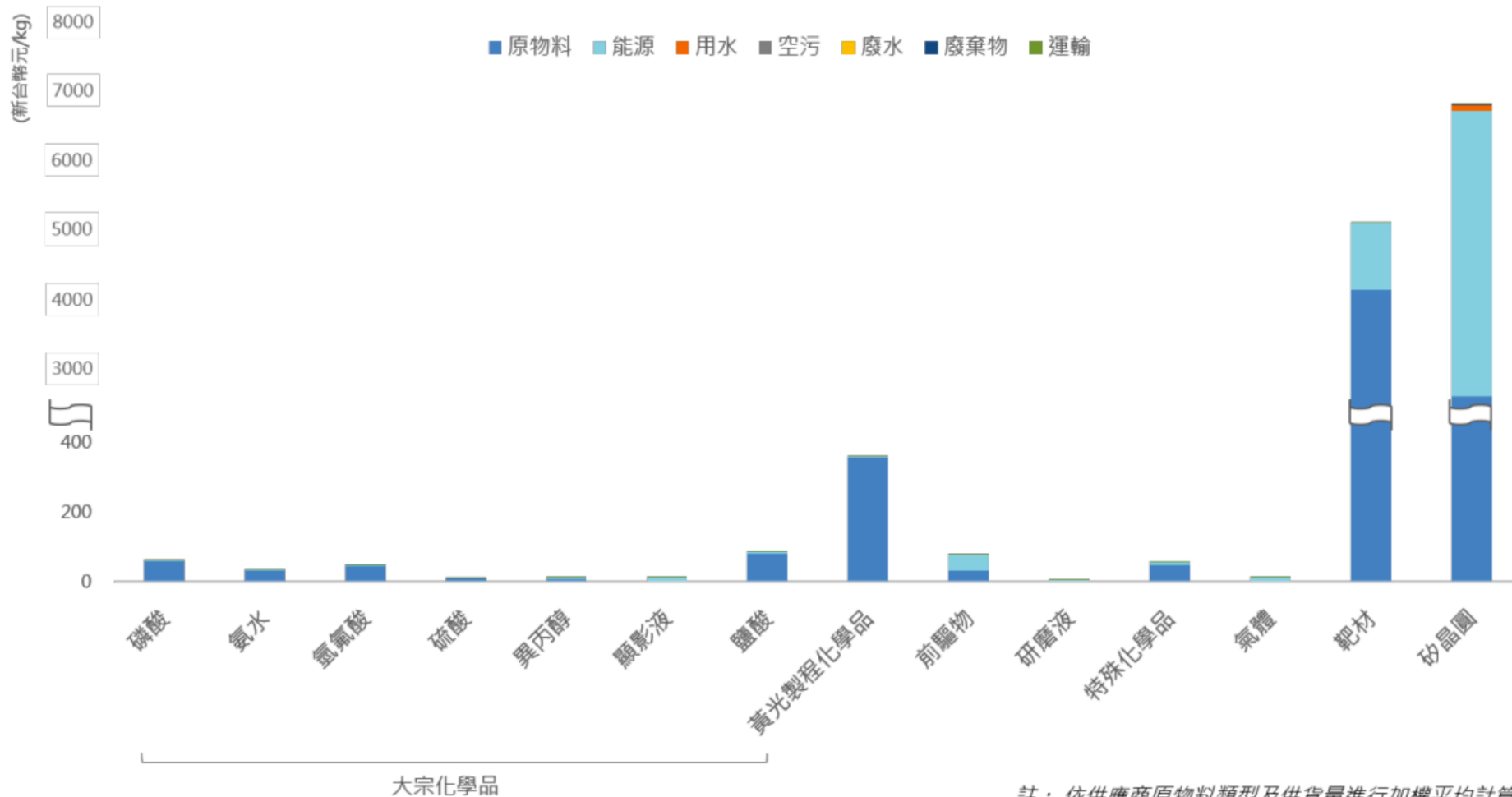
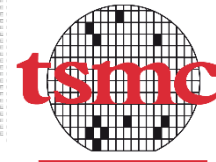
台積公司生產營運階段之環境外部性



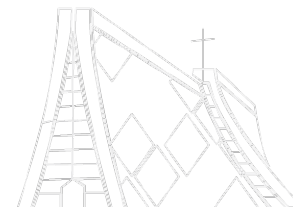
案例：TSMC 供應鏈



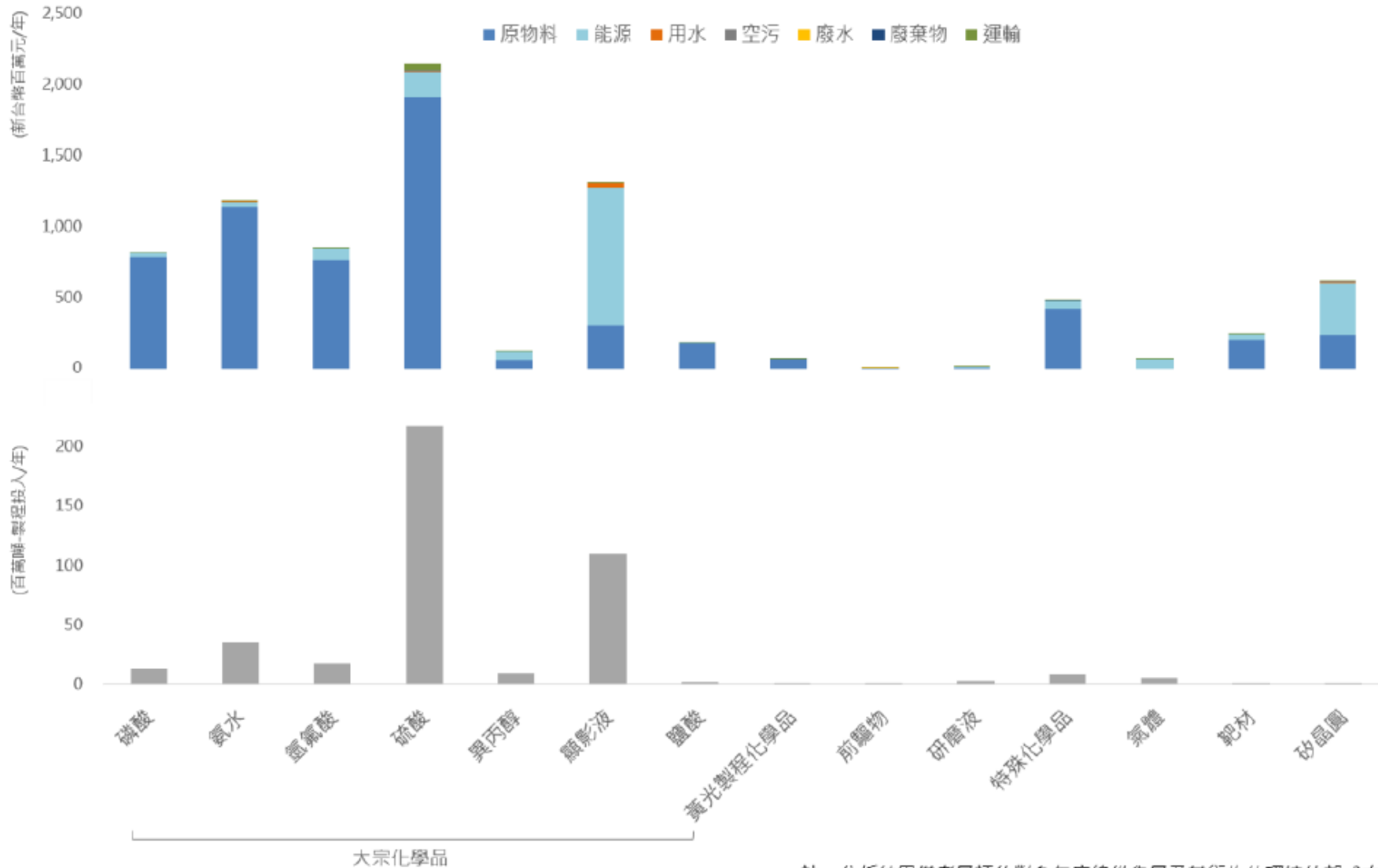
案例：TSMC 供應鏈 – 依單位產品



註：依供應商原物料類型及供貨量進行加權平均計算



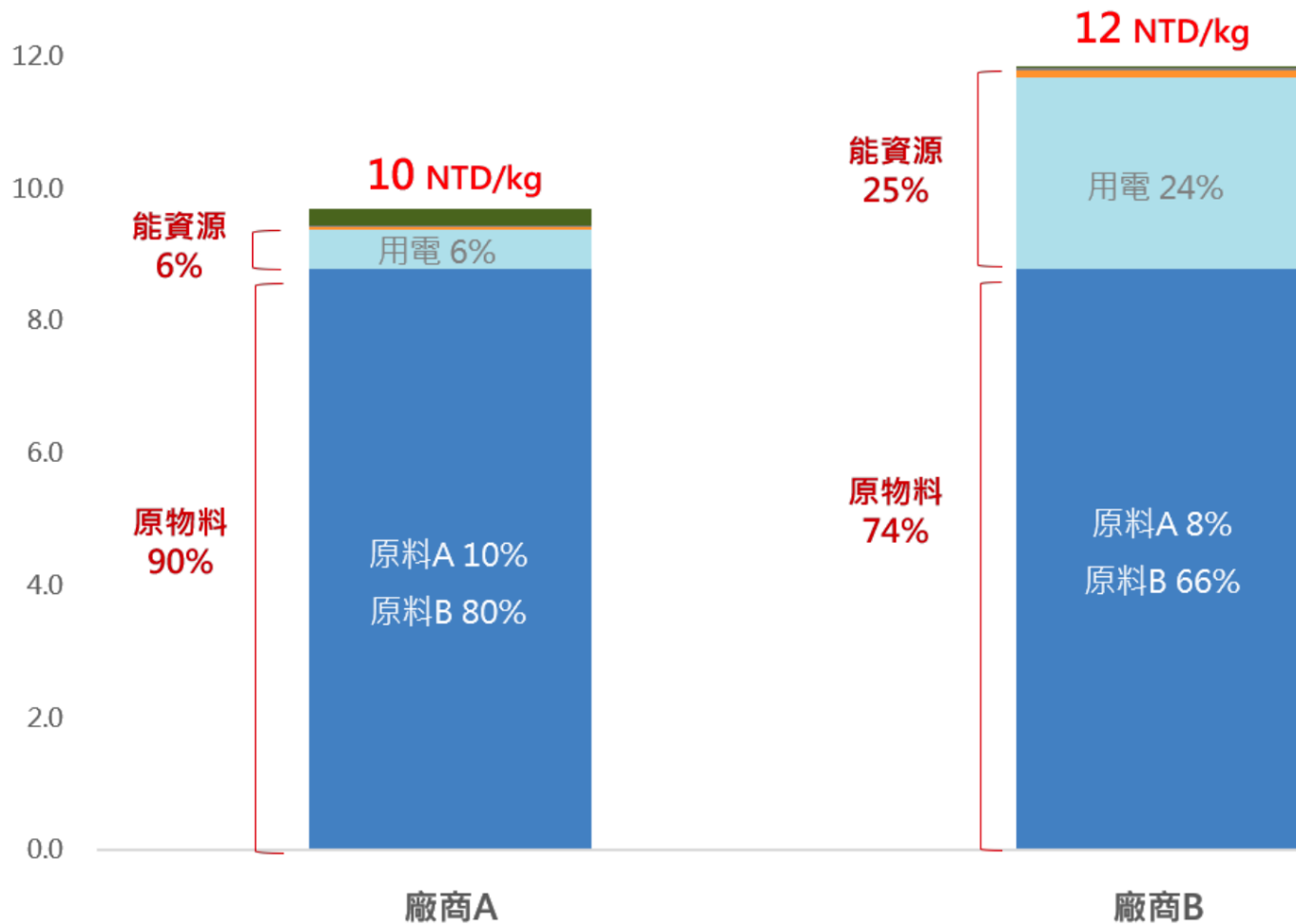
案例：TSMC 供應鏈 – 依出貨量



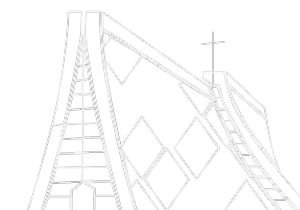
註：分析結果僅考量評估對象年度總供貨量及其衍生的環境外部成本



案例：TSMC 供應鏈 – 同儕差異分析



■ 原物料
 ■ 能源
 ■ 用水
 ■ 空污
 ■ 廢水
 ■ 廢棄物
 ■ 運輸



Banking for Impact : 跨國銀行聯手組成永續影響力投資聯盟



We need to measure what matters

Our global economy remains stalled at a critical juncture. Well-known social and environmental threats have been ignored in favor of a short-sighted economic system. The negative side effects are piling up – runaway climate change, natural resource depletion, increasing inequality, diminishing social safety nets and a widening gap between rich and poor.

The remedy is a more inclusive market economy, one that serves people and the planet, not just shareholders. To help get there the Banking for Impact Working group aims to create a common impact measurement and valuation approach tailored to banks. We are working on a robust, scalable and cost-effective method for the quantification, valuation, attribution and aggregation of impacts for the sector. With support from the financial industry, the goal is to scale up and standardize these efforts over time.

[Read our vision paper](#)



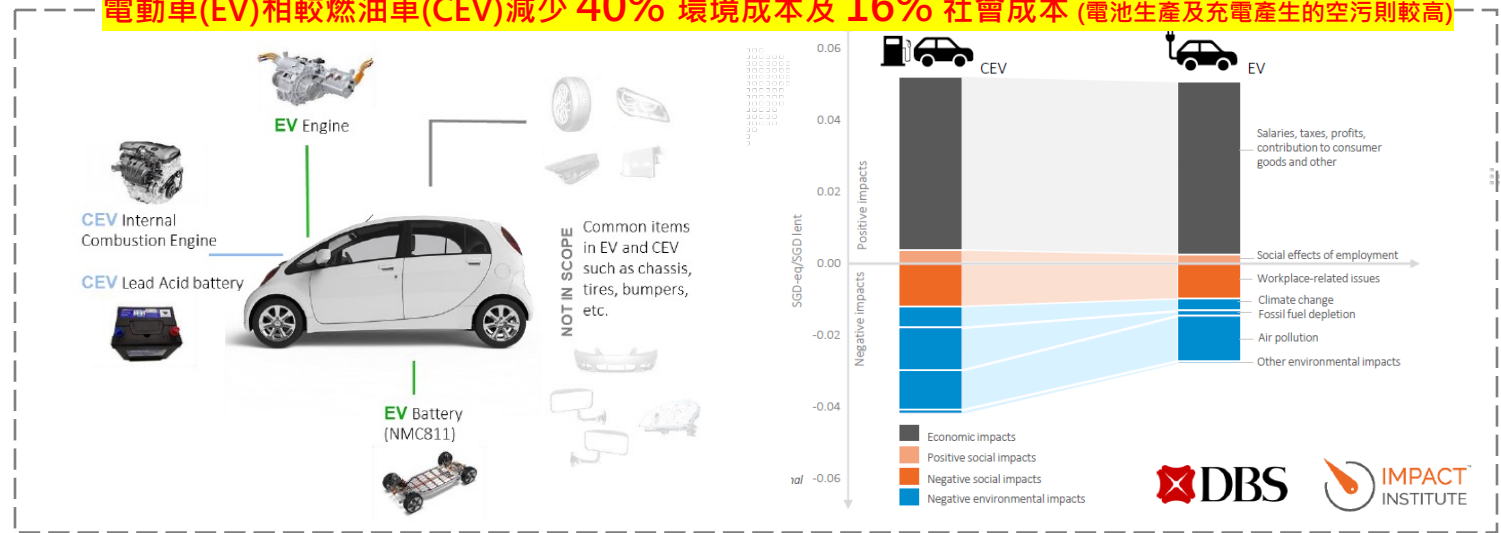
星展銀行 – 對貸款對象進行影響力評價



Impacts of lending to the automotive sector



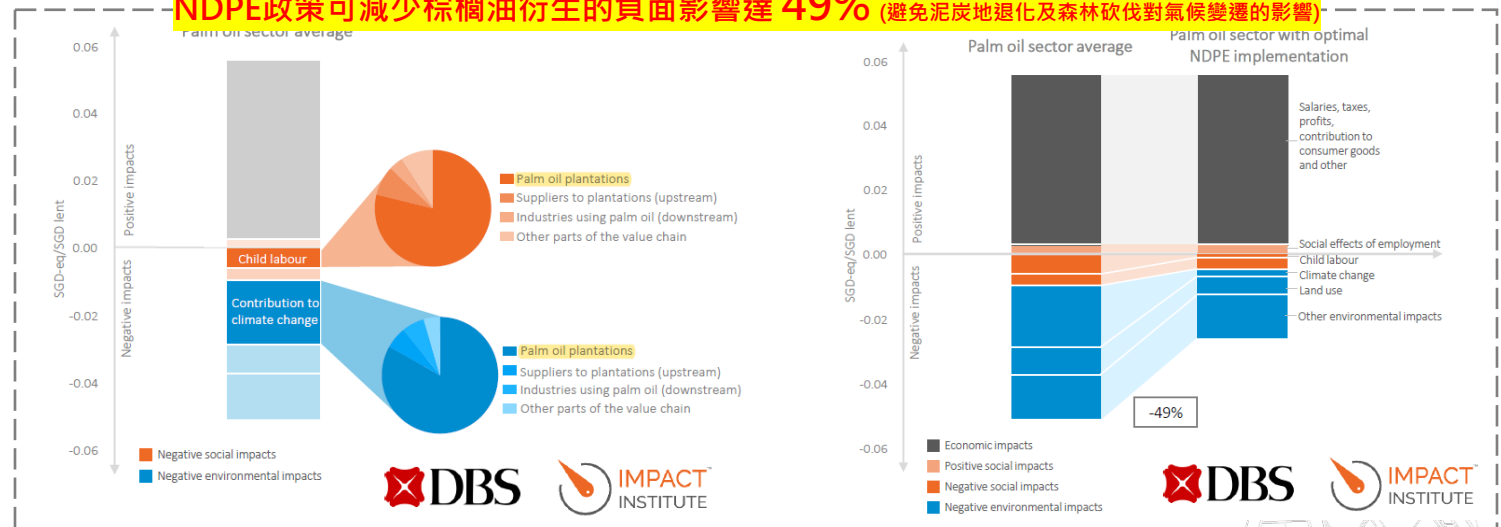
電動車(EV)相較燃油車(CEV)減少 40% 環境成本及 16% 社會成本 (電池生產及充電產生的空污則較高)



Impact assessment of lending to the palm oil industry



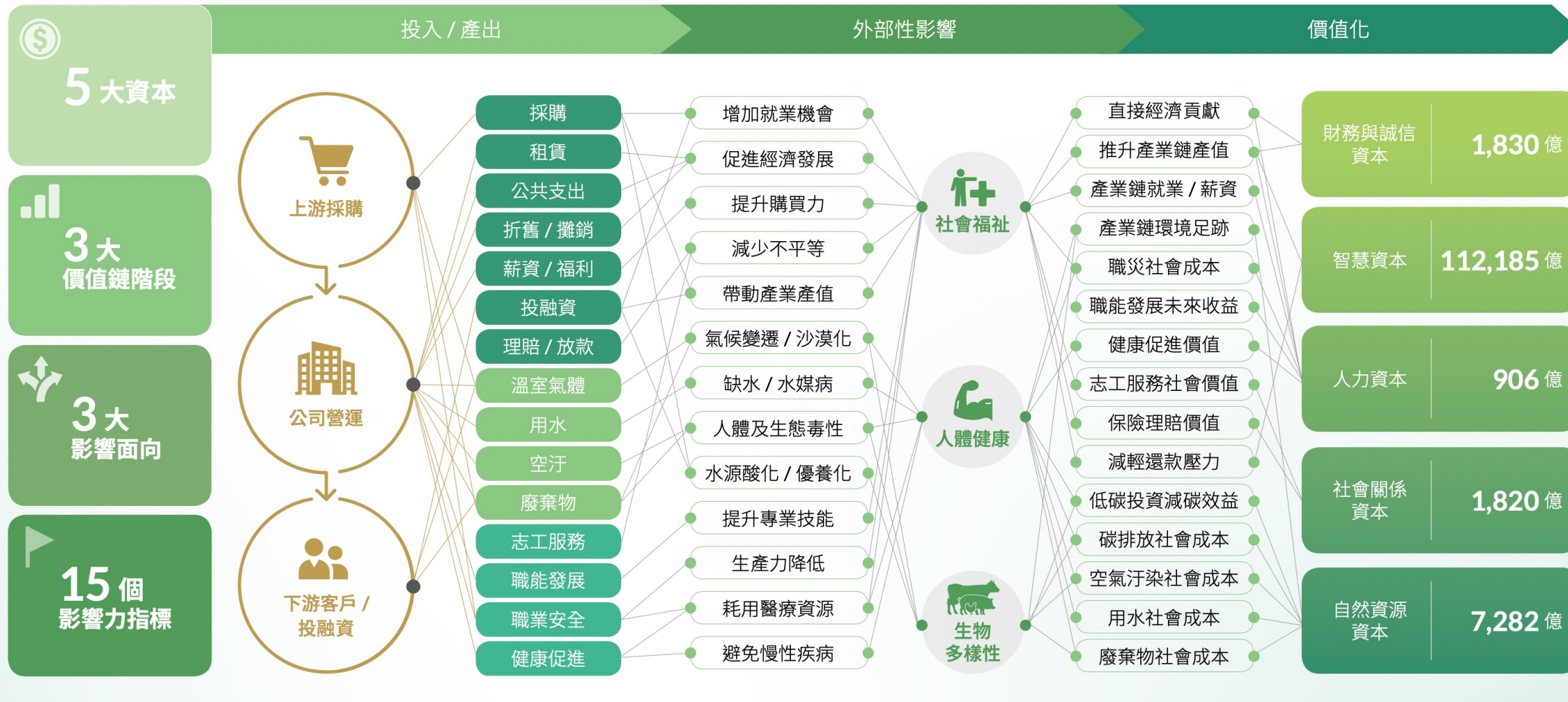
NDPE政策可減少棕櫚油衍生的負面影響達 49% (避免泥炭地退化及森林砍伐對氣候變遷的影響)



註：不毀林、不開墾泥炭地、不侵害人權 (No Deforestation, No Peat and No Exploitation, NDPE)

案例：國泰金控

• 從 ESG 到 5 大資本，了解國泰價值鏈活動的外部性影響路徑



案例：國泰金控

● 國泰 5 大資本損益 (單位：億元新台幣)

11兆
淨正向影響

>20%
淨正向影響成長 (相較 2019 年)

>95%
影響力來自產業投融資

上游採購 (<1%)

公司營運 (2%)

下游 (97%)

5 大資本	評估指標	影響力評價			利害關係人
		2017	2019	2021	
財務與誠信資本	採購推升供應鍊產值	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	供應商
財務與誠信資本	資產折舊與攤銷	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	供應商
財務與誠信資本	租賃費用支出	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	供應商
人力資本	供應鏈員工薪資收入	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	供應商
自然資本	採購活動衍生之溫室氣體	●●●●○○ ○○	●●●●○○ ○○	●●●●○○ ○○	社區
自然資本	採購活動衍生之空氣污染	●●●●○○ ○○	●●●●○○ ○○	●●●●○○ ○○	社區
自然資本	採購活動衍生之水汙染	●●●●○○ ○○	●●●●○○ ○○	●●●●○○ ○○	社區
自然資本	採購活動衍生之廢棄物	●●●●○○ ○○	●●●●○○ ○○	●●●●○○ ○○	社區

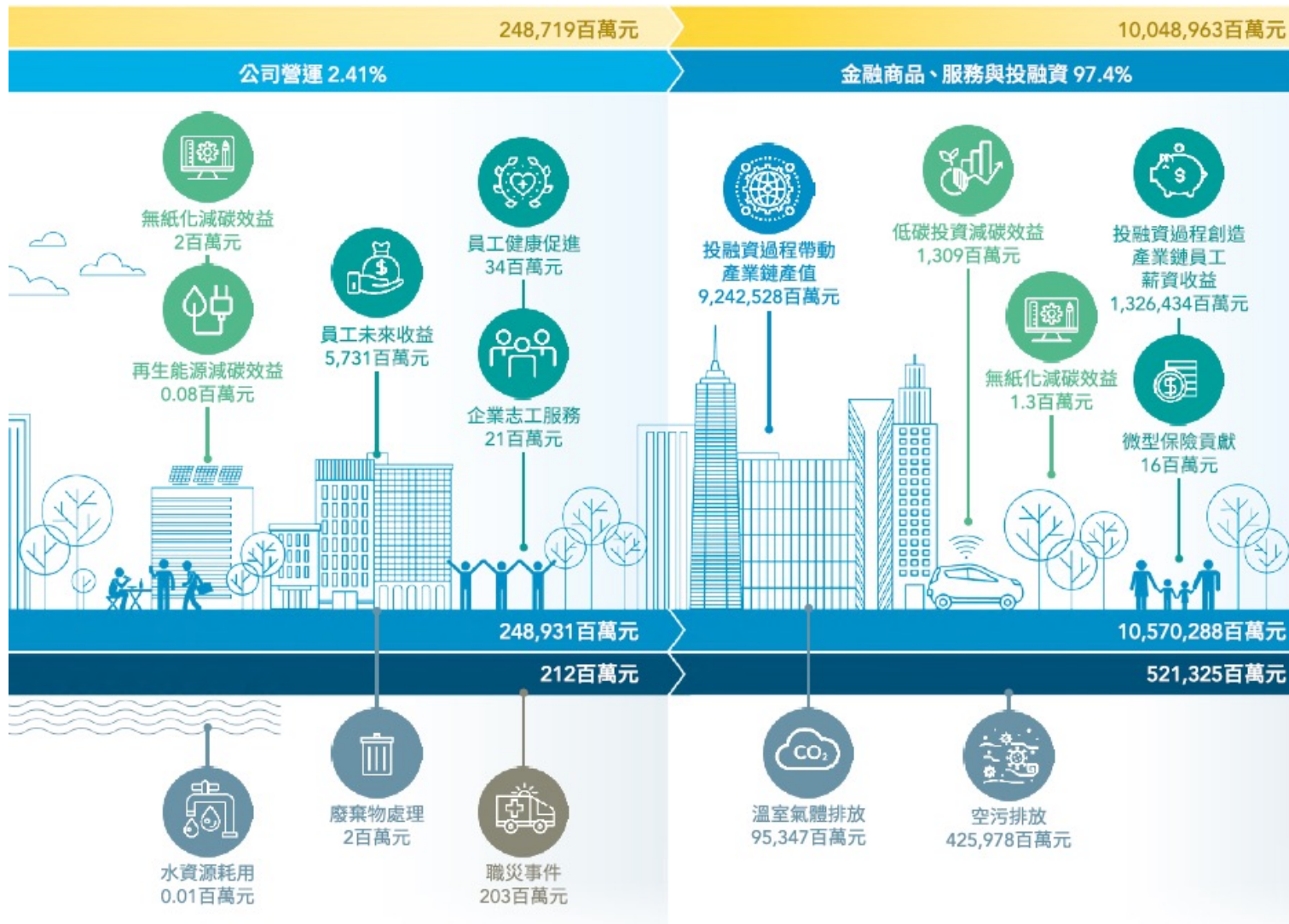
5 大資本	評估指標	影響力評價			利害關係人
		2017	2019	2021	
財務與誠信資本	稅後淨利	●●●●●○ ○○	●●●●●● ○○	●●●●●● ○○	投資人
財務與誠信資本	公共支出	●●●●●○ ○○	●●●●●● ○○	●●●●●● ○○	政府
人力資本	員工薪資與福利	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	員工
人力資本	員工職能發展	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	員工
人力資本	員工健康檢查	●●○○○○ ○○	●●○○○○ ○○	●●○○○○ ○○	員工
人力資本	員工減重活動	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	員工
人力資本	員工職業安全	●●○○○○ ○○	●●○○○○ ○○	●●○○○○ ○○	員工
社會關係資本	志工服務社會價值	●●○○○○ ○○	●●○○○○ ○○	●●○○○○ ○○	社區
自然資本	自產或認購之綠電	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	社區
自然資本	推動無紙化節省用紙	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	社區
自然資本	公司營運產生之溫室氣體	●●○○○○ ○○	●●○○○○ ○○	●●○○○○ ○○	社區
自然資本	公司營運之水資源使用	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	社區
自然資本	公司營運產生之空氣污染	●●○○○○ ○○	●●○○○○ ○○	●●○○○○ ○○	社區
自然資本	公司營運產生之廢棄物	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	社區

價值鏈	5 大資本	評估指標	影響力評價			利害關係人
			2017	2019	2021	
客戶 (2%)	智慧資本	優惠貸款減輕還款壓力	●○○○○○ ○○	●○○○○○ ○○	●○○○○○ ○○	客戶
	社會關係資本	保險理賠經濟價值	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	客戶
投融資 (95%)	智慧資本	投資推升產業鏈產值	●●●●●● ●●	●●●●●● ●●	●●●●●● ●●	客戶
	自然資本	低碳產業投資避免碳排放	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	社區
	自然資本	投融資衍生之汙染物排放	●●●●●● ○○	●●●●●● ○○	●●●●●● ○○	社區

正向影響		負向影響	
貨幣價值 (百萬 NTD)	影響力級別	貨幣價值 (百萬 NTD)	影響力級別
>1,000,000	●●●●●●	<-1,000,000	●●●●●●
100,000~1,000,000	●●●●●○	-100,000~-1,000,000	●●●●●○
10,000~100,000	●●●●○○	-10,000~-100,000	●●●●○○
1,000~10,000	●●●○○○	-1,000~-10,000	●●●○○○
100~1,000	●●●○○○	-100~-1,000	●●○○○○
10~100	●●○○○○	-10~-100	●○○○○○
1~10	●○○○○○	-1~-10	●○○○○○
0~1	●○○○○○	0~-1	○○○○○○



案例：富邦金控



單位：新台幣百萬元

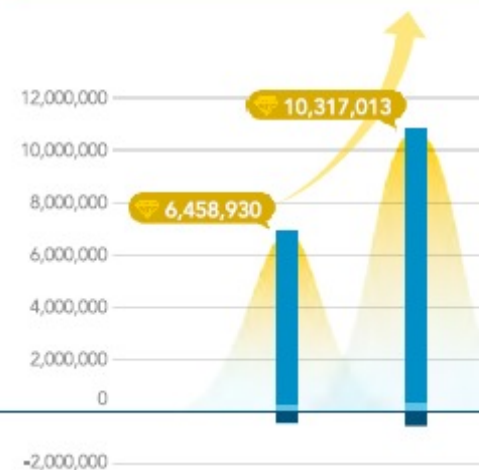
2020 2021

淨正向影響 (正向影響 - 負向影響)

▲ 淨正向影響 6,458,930 10,317,013

+ 正向影響

■ 上游供應鏈	18,680	19,611
■ 公司營運	184,251	248,931
■ 金融商品、服務與投融資	6,685,687	10,570,288



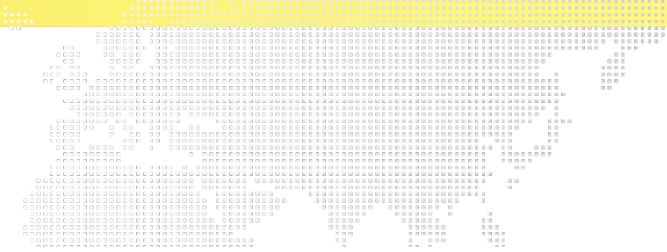
- 負向影響

■ 上游供應鏈	298	280
■ 公司營運	57	212
■ 金融商品、服務與投融資	429,333	521,325

ESG趨勢



DJSI ESG評選準則



SEM Semiconductors

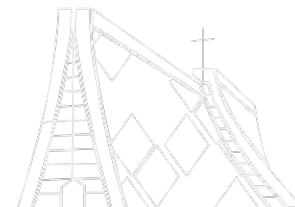
	Weight in % of total Score	Change from 2021
Governance & Economic Dimension	39	-4
Corporate Governance	7	0
Materiality	2	0
Risk & Crisis Management	4	0
Business Ethics	5	0
Policy Influence	2	0
Supply Chain Management	6	0
Tax Strategy	2	0
Information Security/ Cybersecurity & System Availability	2	0
Innovation Management	6	0
Product Quality & Recall Management	3	0
Environmental Dimension	34	0
Environmental Reporting	3	-2
Environmental Policy & Management Systems	7	0
Operational Eco-Efficiency	9	0
Product Stewardship	6	0
Climate Strategy	7	0
Biodiversity	2	New
Social Dimension	27	4
Social Reporting	3	-1
Labor Practice Indicators	4	1
Human Rights	3	0
Human Capital Development	4	0
Talent Attraction & Retention	6	0
Corporate Citizenship & Philanthropy	3	0
Customer Relationship Management	2	0
Privacy Protection	2	0

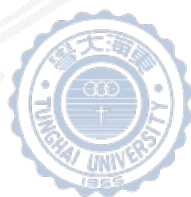
BNK Banks

	Weight in % of total Score	Change from 2021
Governance & Economic Dimension	49	-6
Corporate Governance	9	-1
Materiality	3	0
Risk & Crisis Management	6	0
Business Ethics	7	-1
Policy Influence	3	0
Tax Strategy	3	0
Information Security/ Cybersecurity & System Availability	3	0
Sustainable Finance	9	0
Anti-Crime Policy & Measures	4	0
Financial Stability & Systemic Risk	2	0
Environmental Dimension	18	5
Environmental Reporting	2	-1
Operational Eco-Efficiency	3	0
Decarbonization Strategy	6	New
Climate Strategy	7	0
Social Dimension	33	1
Social Reporting	2	-1
Labor Practice Indicators	4	0
Human Rights	3	0
Human Capital Development	6	0
Talent Attraction & Retention	6	0
Corporate Citizenship & Philanthropy	2	-1
Occupational Health & Safety	3	0
Financial Inclusion	3	-1
Customer Relationship Management	2	0
Privacy Protection	2	0

ESG研究議題

- 淨零路徑的最佳化
- 氣候風險與機會-TCFD Task Force on Climate-related Financial Disclosures
- 生物多樣性-TNFD Taskforce on Nature-related Financial Disclosures
- 金融業永續金融/脫碳策略
- 人權減緩與補救(Remedy) - 氣候賠償
- 人力數位轉型
- ESG/永續資訊系統





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