



ICDI國際氣候發展智庫

International Climate Development Institute

COP24後企業在因應氣候變遷調適的 創新與挑戰

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2019. 2. 26

關於我

- 現職：
 - 國際氣候發展智庫 (ICDI) 執行長, 自2016年2月起~
 - 國際氣象學會聯合會論壇組織 (IFMS) 財務長, 自2018年9月起~
 - 台北智慧城市展顧問暨籌備委員會共同召集人, 自2016年起~
 - 東吳大學兼任講師及CSR學術社群成員, 自2017年8月起~
- 資歷：
 - 國際氣象學會聯合會論壇組織 (IFMS) 秘書長, 自2016年1月起~至2018年9月
 - 未來地球組織--未來實驗室邀請專家自2018年6月~
 - 歐洲復興開發銀行(EBRD)董事會公民社會代表, 自2017年5月起~
 - 聯合國開發計劃署再生能源網絡計畫報告審核專家, 自2016起~
 - 中華民國氣象學會國際處處長, 自2009年7月~至2017年7月
 - APEC颱風與社會研究中心副主任, 自2010年10月~至2014年7月
- 認證：聯合國減災署UNISDR韌性城市講師資格; 韌性企業講師資格



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氣候變遷的衝擊是個殊化的

你的企業過去經驗是甚麼？

COP24的重點

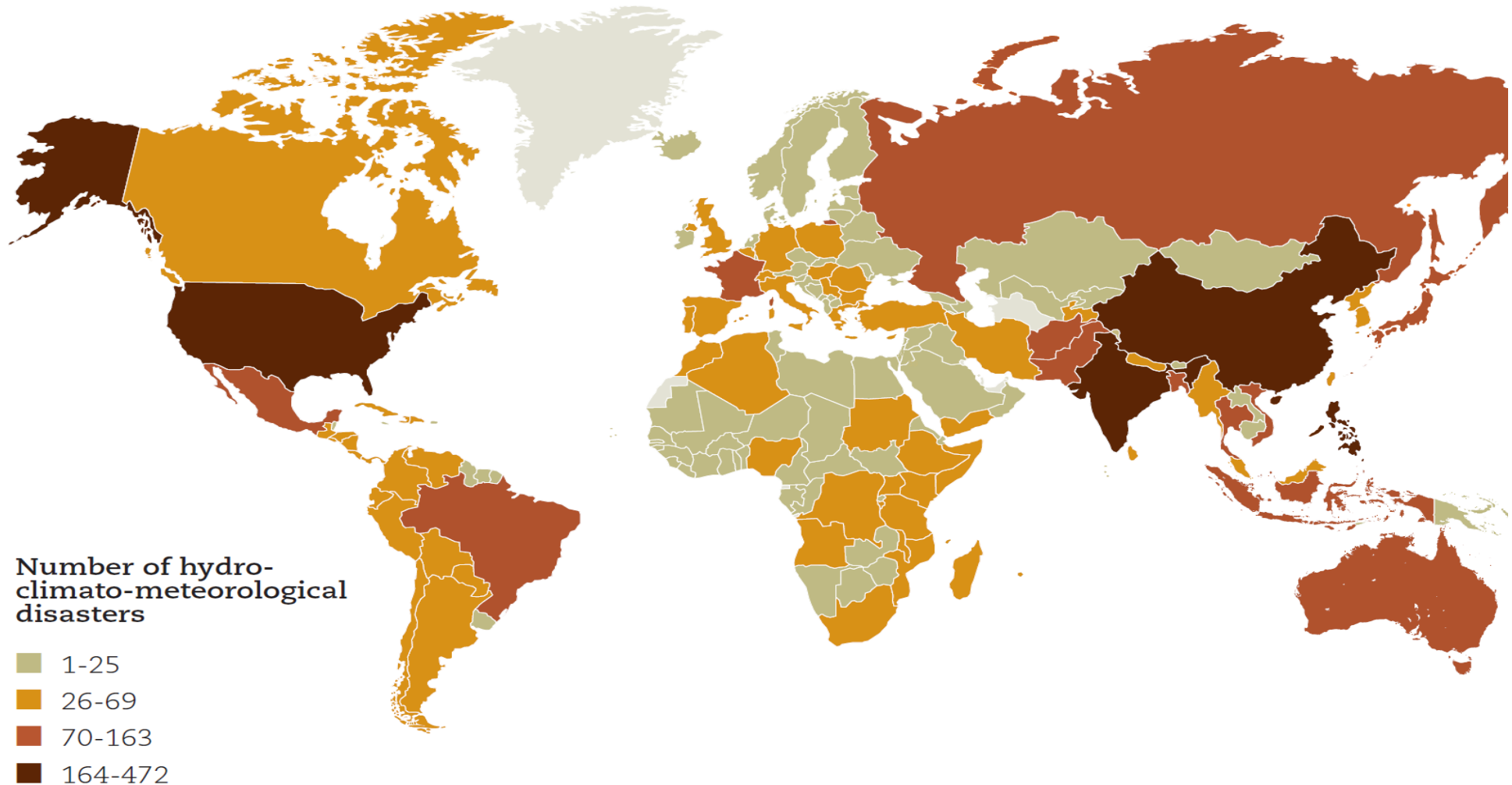
- IPCC SR15成為場中焦點
- 巴黎協定工作計畫產出
- 各國是否修訂NDC
- 城市角色加重
- 減量同時須兼顧社會公平正義
- 增加私部門投資



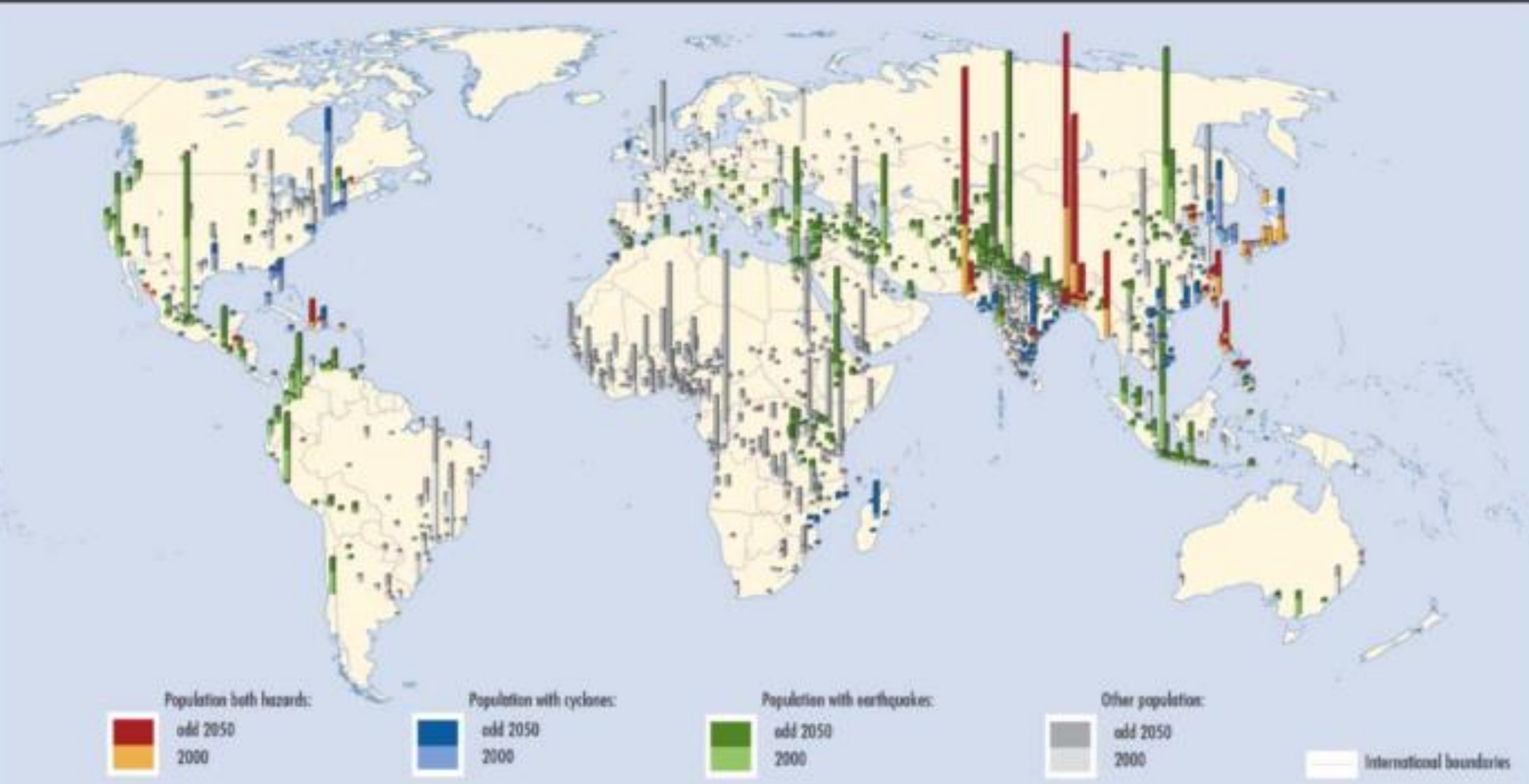
了解風險 vs 面對趨勢



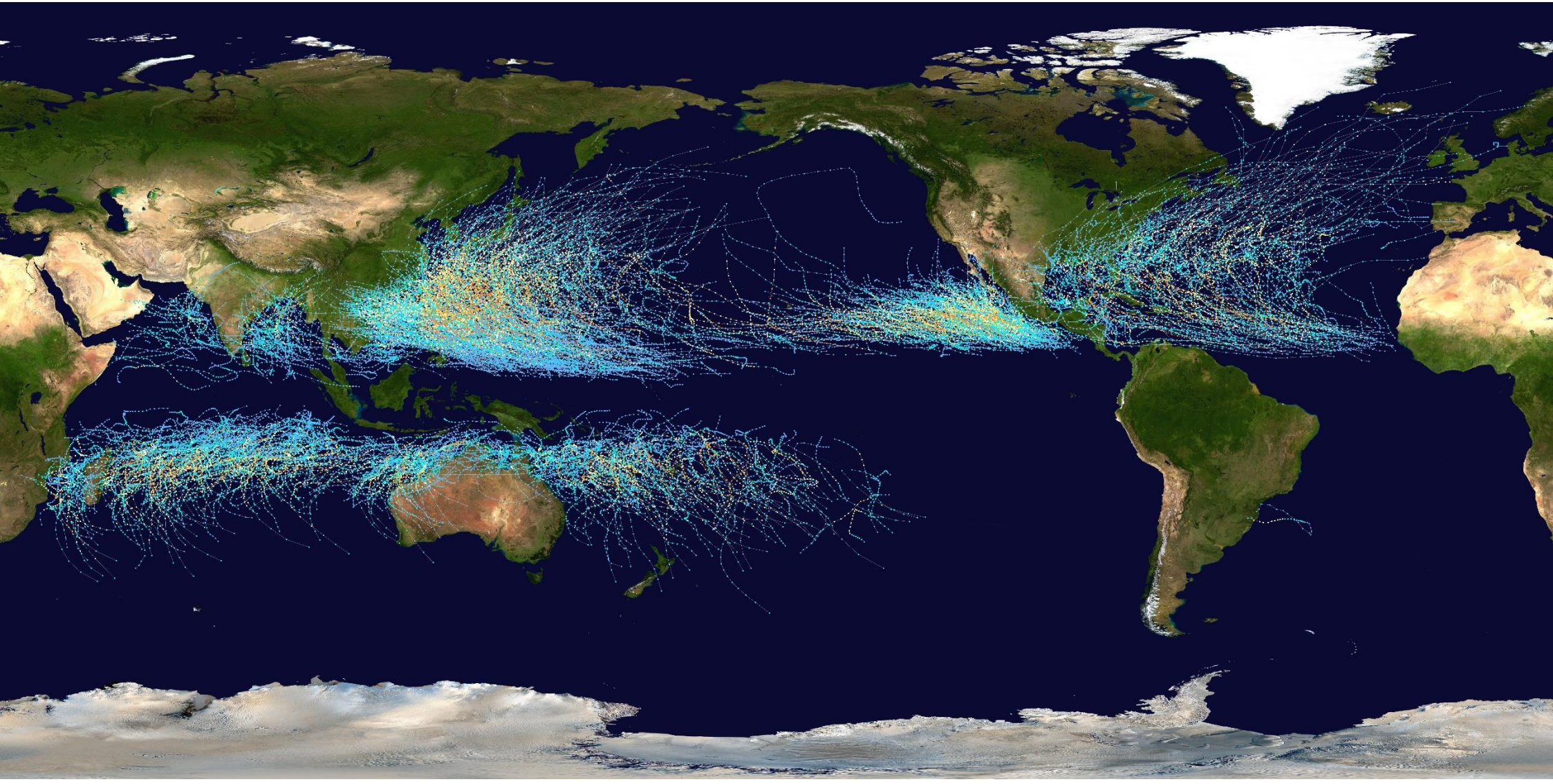
Number of weather-related disasters reported per country (1995-2015)



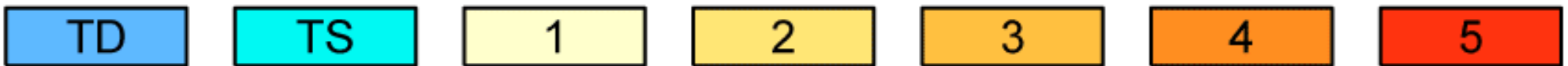
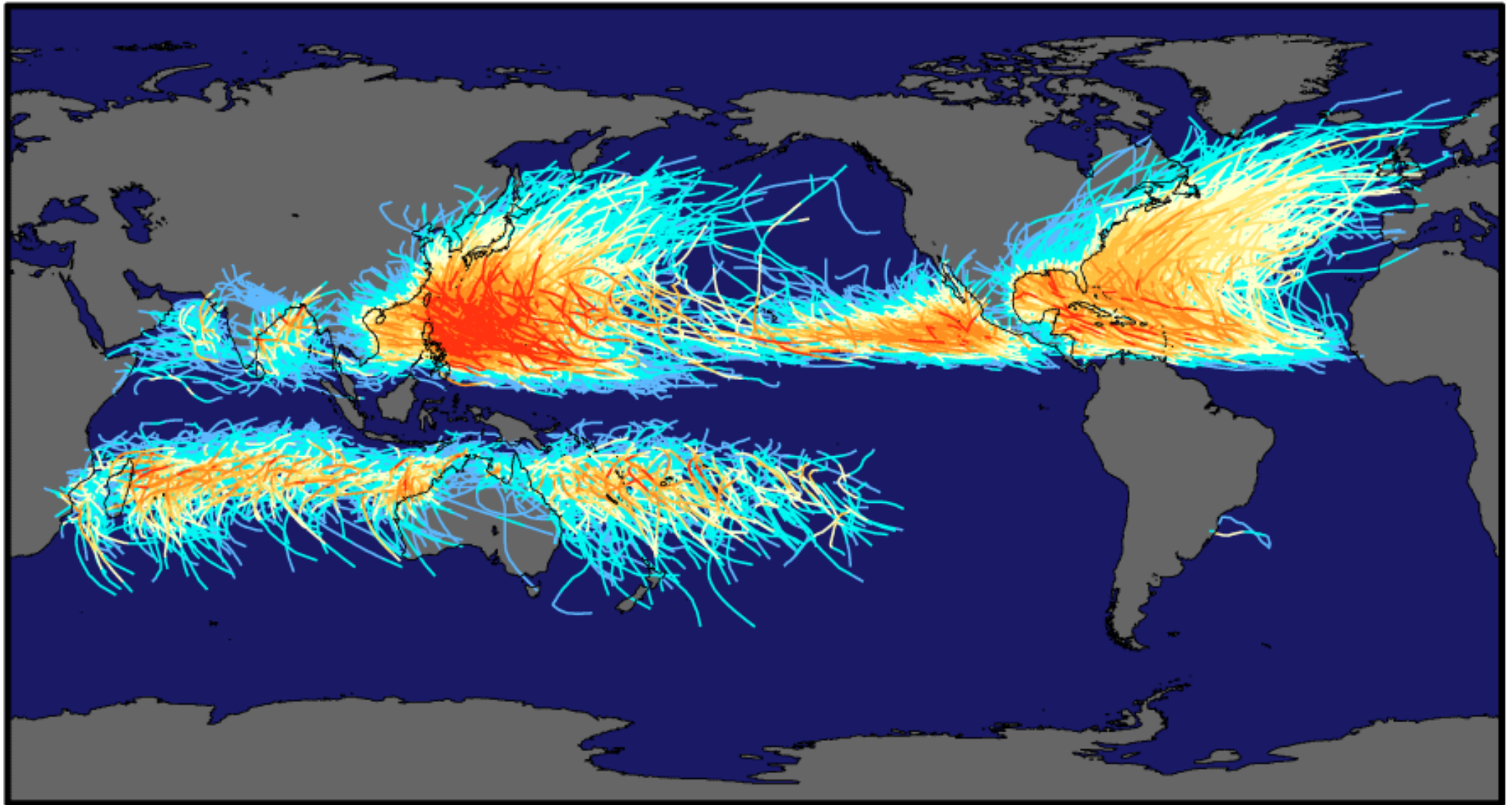
- ▶ Pacific Countries will decrease 2.9% to 15.2 GDP in 2100 due to Climate Change (ADB, 2013)
- ▶ Disaster lost simulation by World Bank (2010-2050) (Blue: Cyclone , Green: Earthquake , Orange: Both , Gray: Others)



Global tropical cyclone tracks

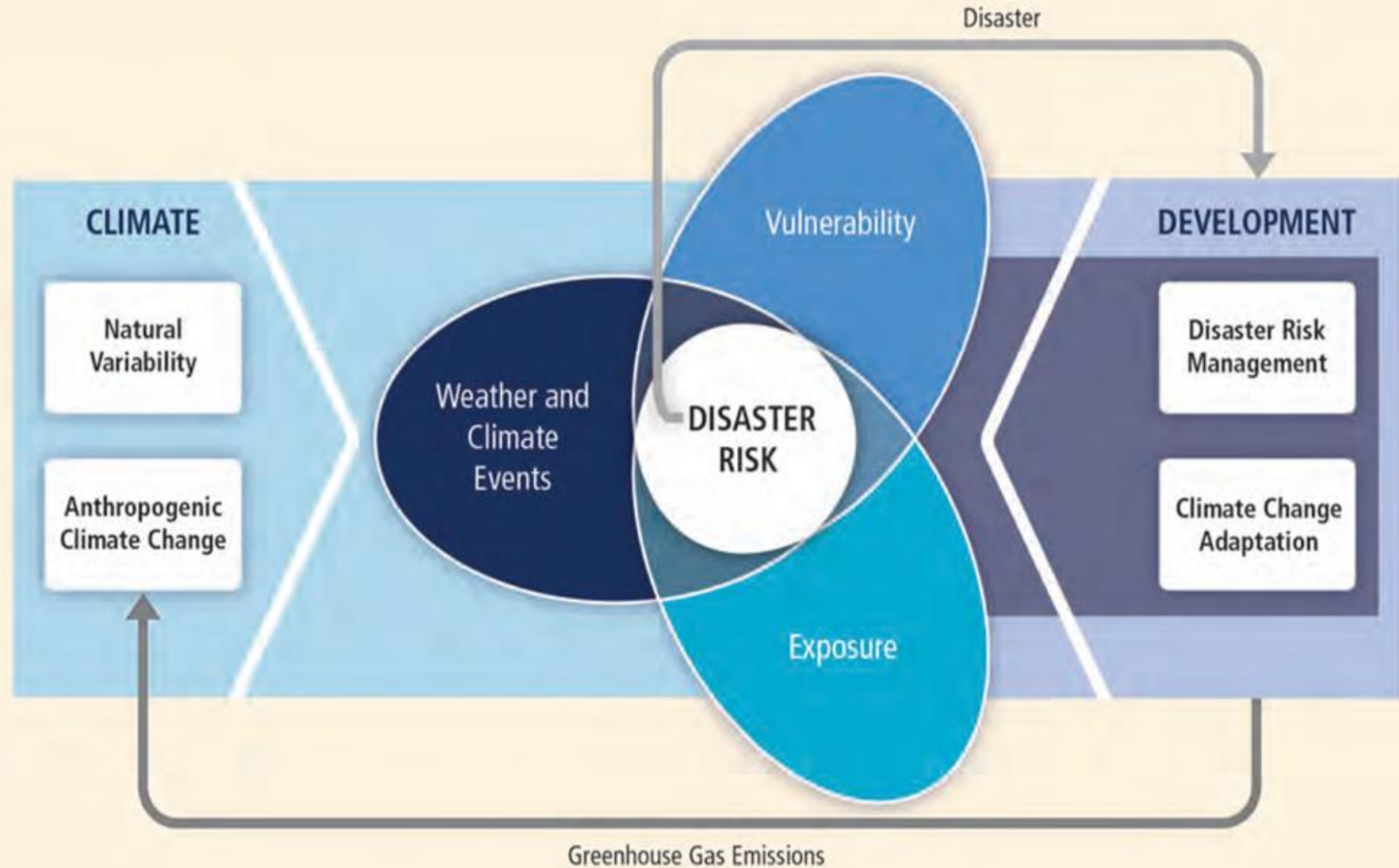


Tracks and Intensity of All Tropical Storms



Saffir-Simpson Hurricane Intensity Scale

The character and severity of impacts from climate extremes depend not only on the **extremes** themselves but also on **exposure** and **vulnerability**.





Five main impacts on business

- ▶ Risk is more globalized
- ▶ Once hit, it's hard to recover
- ▶ SMEs: the majority of business & the majority of risk
- ▶ More businesses are in the wrong place (exposure)
- ▶ Supply chain – the lifelines of business – are more vulnerable

- **2011 Christchurch NZ EQ:** 97% of all affected enterprises were SMEs & 14 months after EQ 37% SMEs still reported reduced revenues

- **2011 Japan EQ:** 10 months after the disaster one-third of SMEs had still not restarted business

- **UNISDR-PWC survey** of 1,200 enterprises in the Americas found fewer than 15% of firms with less than 100 employees had a business continuity plan





Remember DRR Plan is useful only it is used !



Six concepts for business

- ▶ A disaster impact has no borders – the risk is to all of us
- ▶ Indirect losses can cripple national economies, kill small businesses, shut down factories and take away jobs
- ▶ The private sector needs to start protecting itself – governments can't protect the economy alone
- ▶ **DRR is not a cost but an investment** fundamental to business
- ▶ The private sector is more agile than government - it can **quickly assess risk, promote systems and standards for resilience**
- ▶ ICDI is forging partnerships with business to **manage risks instead of disasters**



Sendai Framework for Disaster Risk Reduction 2015-2030

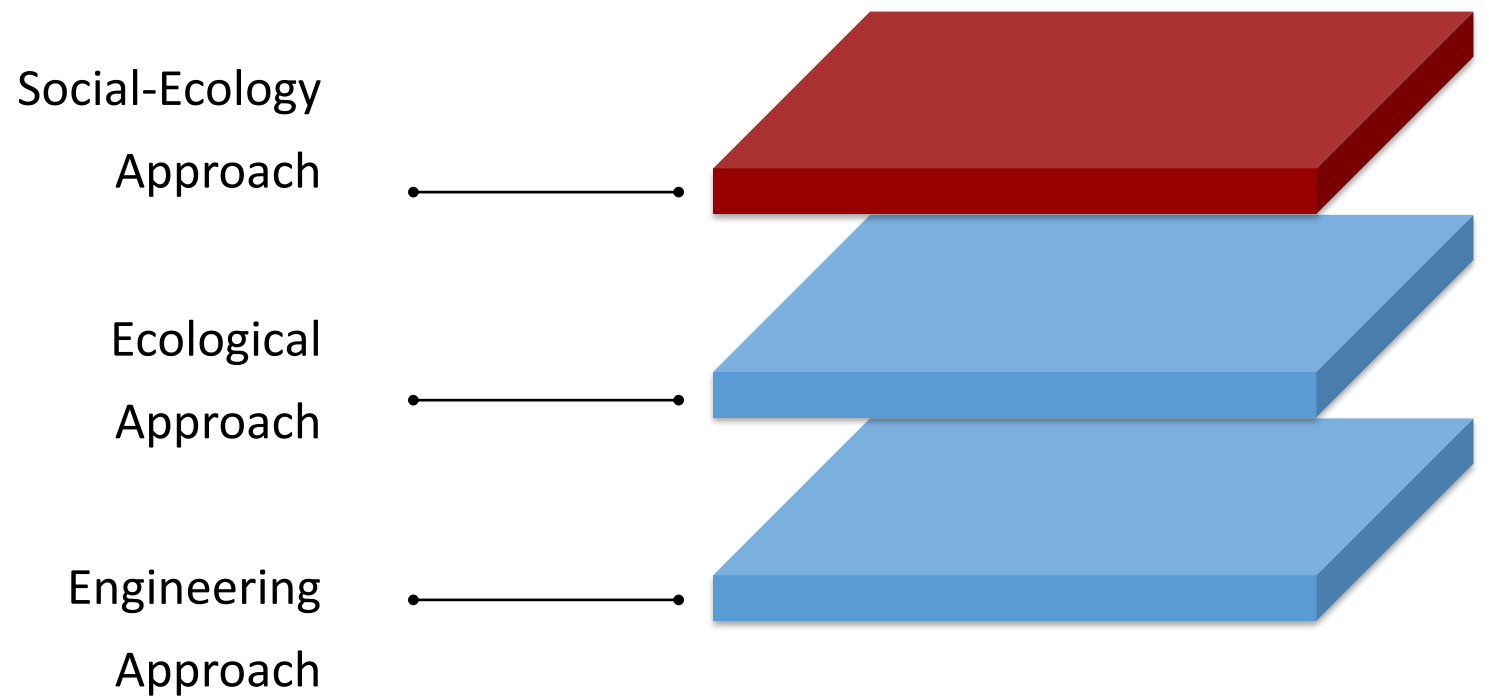
WCDRR Ser

WCDRR Sendai

WCDRR Sendai

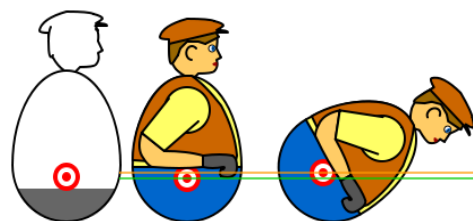
Making your corporation resilient !

Since its origins in ecological systems concept in the 1960s and early 1970s, resilience concept has progressively gained prominence.



What is a Resilience?

How would you describe it?



Roly-poly toy

Quick self-assessment





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第一步

了解企業所在環境的風險

韌性城市10要素

- 1. 韌性組織與行動
- 2. 界定、瞭解與運用現在及未來的風險情境
- 3. 強化韌性所需之財務能力
- 4. 追求韌性城市發展與都市設計
- 5. 保護天然緩衝帶，強化自然生態系統的防護功能
- 6. 提升部門與機構的韌性能力
- 7. 瞭解與強化公民社會的韌性能力
- 8. 提高基礎建設的韌性
- 9. 確保有效整備與災害應變管理
- 10. 加速復原與優化韌性力

韌性城市10要素

- 計分卡-城市基本資訊
- 已知最常發生之災害風險
- 已知最嚴重之災害
- 請描述貴公司曾有的災害風險經驗
(自身或夥伴, 供應鏈等)

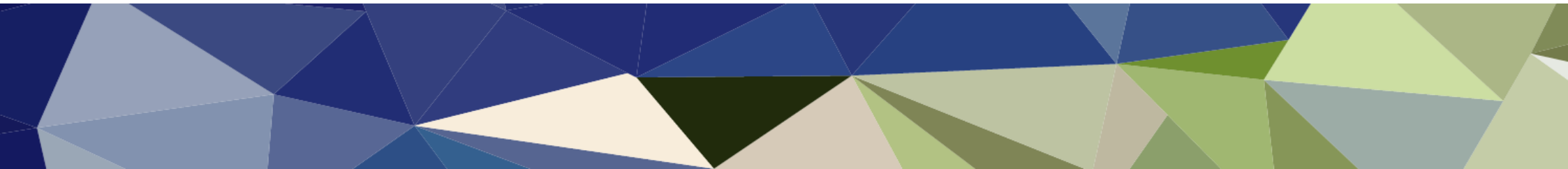
要素1：韌性組織與行動

- **1.1 Q：**企業所在城市主要的計畫或相關的政策計劃含括仙台減災綱領之降低災害風險之要素？
- **3分-**完全整合**DRR**計畫，全面涵蓋韌性十要素及完全遵守仙台減災綱領內容。
- **2分-**獨立的**DRR**計畫，其遵守仙台減災綱領及與十要素相關。
- **1分-**計畫內容符合部分仙台減災綱領與含括部分十要素。
- **0分-**沒有計畫或遵照仙台減災綱領或十要素。

要素6：提升部門與機構的韌性能力

- 6.1 Q企業確信為降低風險或回應已界定的災害情境需要的所有技能與經驗，其是否有明確的取得途徑？
- 企業應考量與災前規劃、災中回應及災後復原有關的的技能與經驗。
- 技能可能來自於企業本身，或位處城市內的外部組織(如機構)，或基於僱傭關係的顧問或諮詢單位等。
- 3分-企業本身能快速取得其為回應已界定的災害情境所需的所有技能、經驗與資源。
- 2分-企業能快速取得其為回應已界定的災害情境所需的大部份技能、經驗與資源；其他所需的技能可從鄰近的城市、國家或區域獲得。
- 1分-企業能取得其為回應已界定的災害情境所需的大部份技能、經驗與資源；但存在能力缺口。
- 0分-企業於取得已界定的災害情境所需的技能、經驗或資源方面，有顯著的缺口。

氣候變遷議題所帶來 長期經營衝擊與機會





IPCC SR15 & Multi-Stakeholders Adaptation Plan

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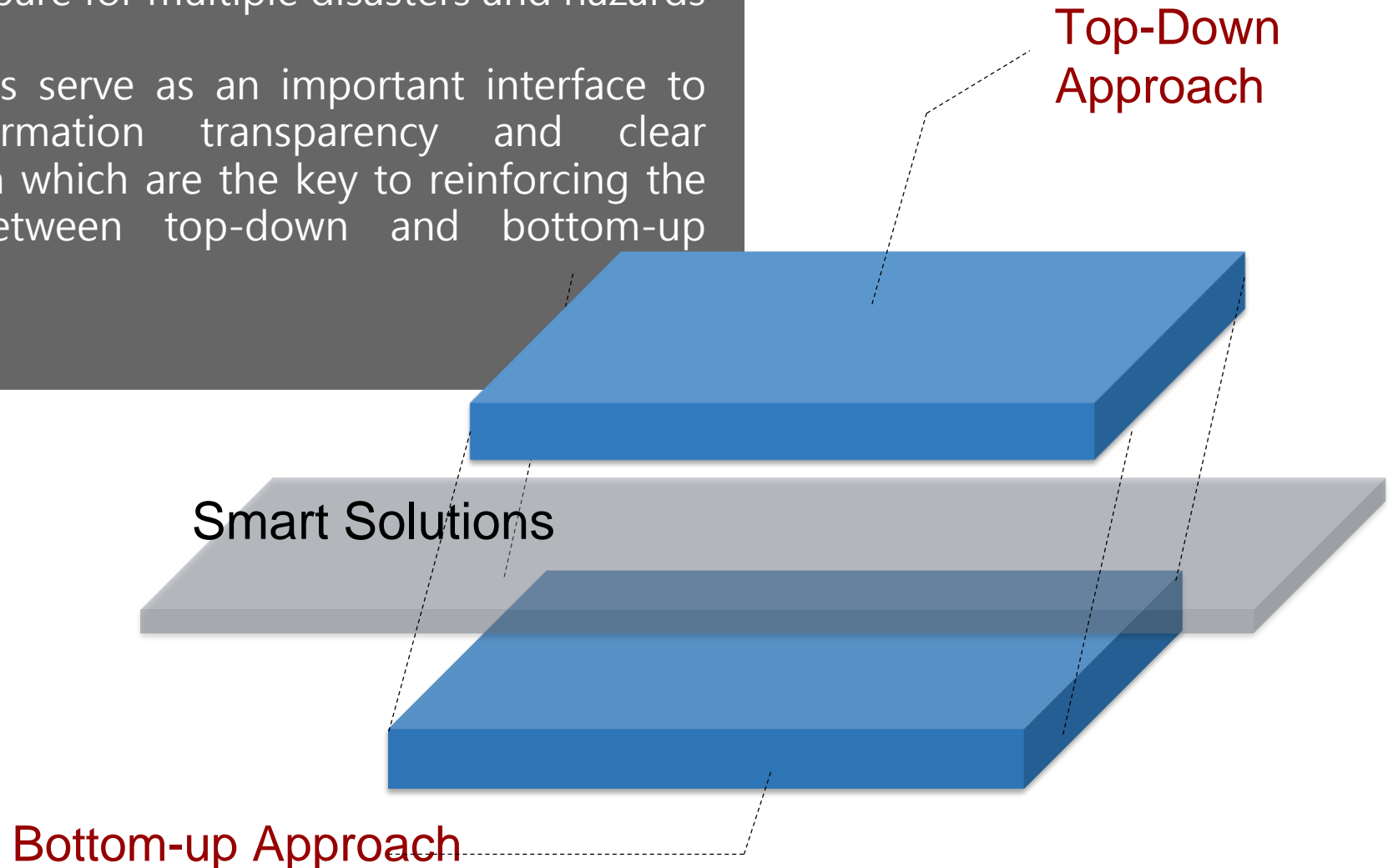
ICDI Network & Collaboration



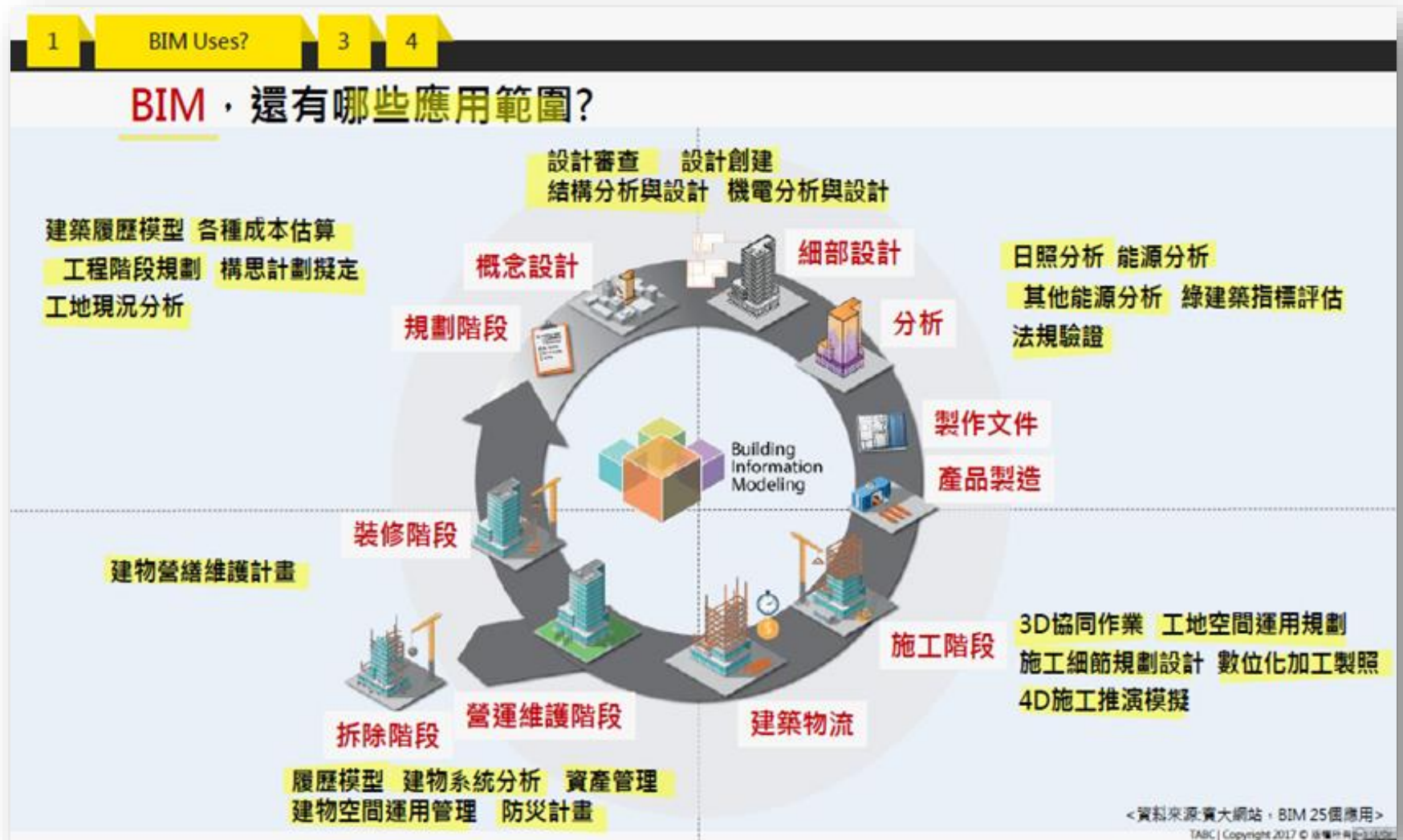
Top-Down Approach, ICDI considers climate services with professional knowledge and skills in climate governance to improve decision making systems under climate impacts.

Top-Down Approach, ICDI see building resilience in each system equips people with the knowledge and capacity to prepare for multiple disasters and hazards proactively.

Smart Solutions serve as an important interface to facilitate information transparency and clear communication which are the key to reinforcing the connection between top-down and bottom-up approaches



Climate Service Project of Green Buildings: Climate data website service for energy analysis of green BIM(cooperated with Delta Foundation) (2017.04-2019)



Climate Service Project of Green Buildings Press Conference (2017.03.07)



Smart City 2018

2018.03.27 Co-organized Smart City Summit Sustainable City Forum with Taipei Computer Association (TCA), EBRD

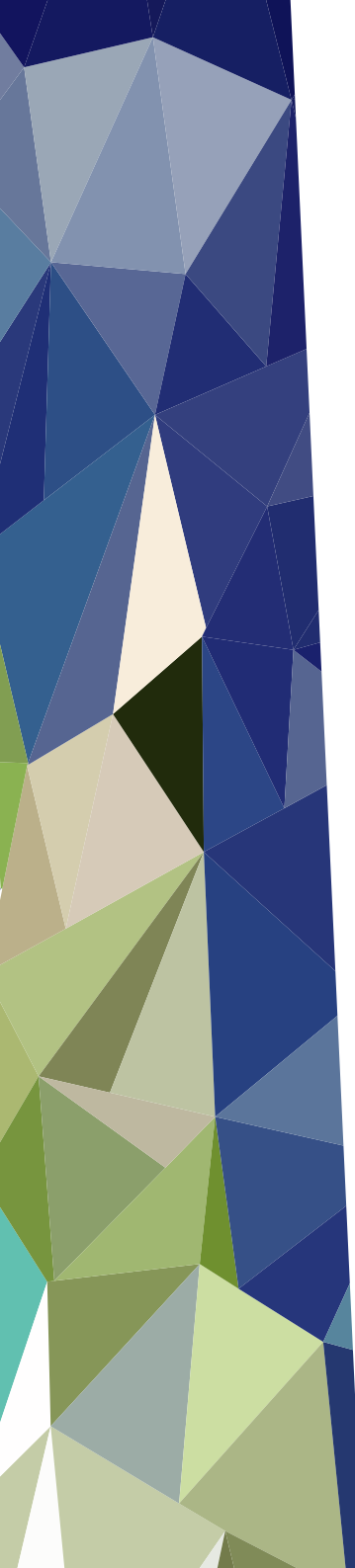


永續城市論壇
Sustainable City Forum

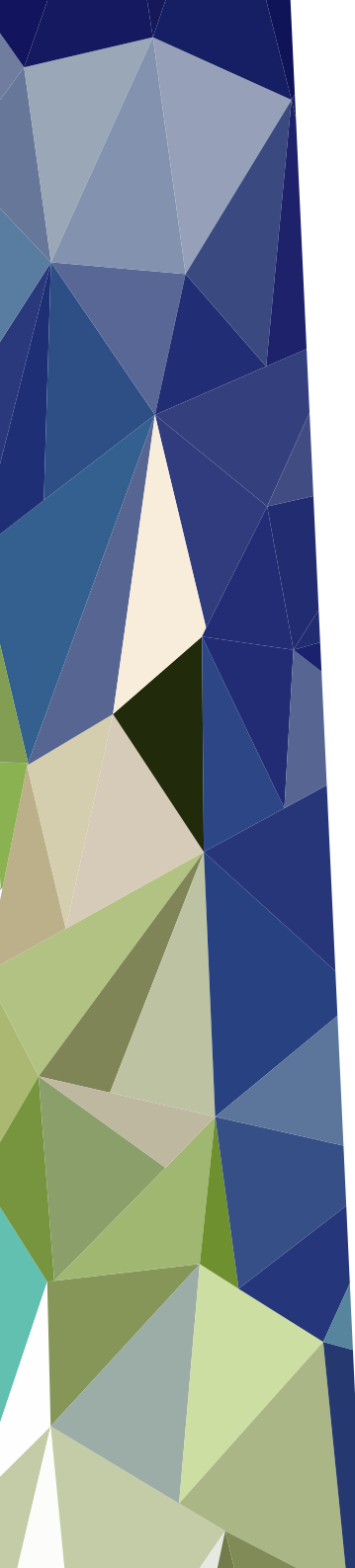
2019 Sustainable City Forum

In 2019, the forum will highlight smart solutions to Green Economy Growth, which help cities increase social capital and economic productivity to achieve urban resilience. We would like to invite global cities to participate in this forum and share their inspiring experiences.





	March 26th	March 27th	March 28th	March 29th
9:00~12:00	Grand Opening of SCSE 智慧城市展 開幕大會		● Green Finance 綠色金融	
12:00~13:00	Lunch Break			
13:00~17:00	● Circular Economy 循環經濟 ● Social Innovations and Civic Engagement 社會創新實踐及公民參與	● Main Forum: Green Economic Development 主論壇: 綠色經濟發展	● Creating Business Opportunity for Energy Service-Energy Storage and Demand Response Applications 智慧能源: 儲能與需量反應	● Sustainable City- Taiwan Circular Economy Forum 永續城市論壇系列: 臺灣循環經濟論壇



小 結



ICDI partners see:

- A continued move from business continuity planning to disaster risk management
- Climate Change risks management becoming more of a business opportunity
- Business accounting for and ‘owning’ its disaster risk
- Disaster/climate risk info being more integrated into investment decisions
- Business linking up more in stronger public-private partnerships

2014年8月31日@Kiribati



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Thank You