



GROWING MARKET PENETRATION OF NATURAL REFRIGERANTS AROUND THE WORLD

2019 Ozone2Climate Industry Roundtable: Side-Session on Cold Chain Solutions
April 9, 2019



*Empowered lives.
Resilient nations.*



Jan Dusek
Business Development Manager APAC
shecco

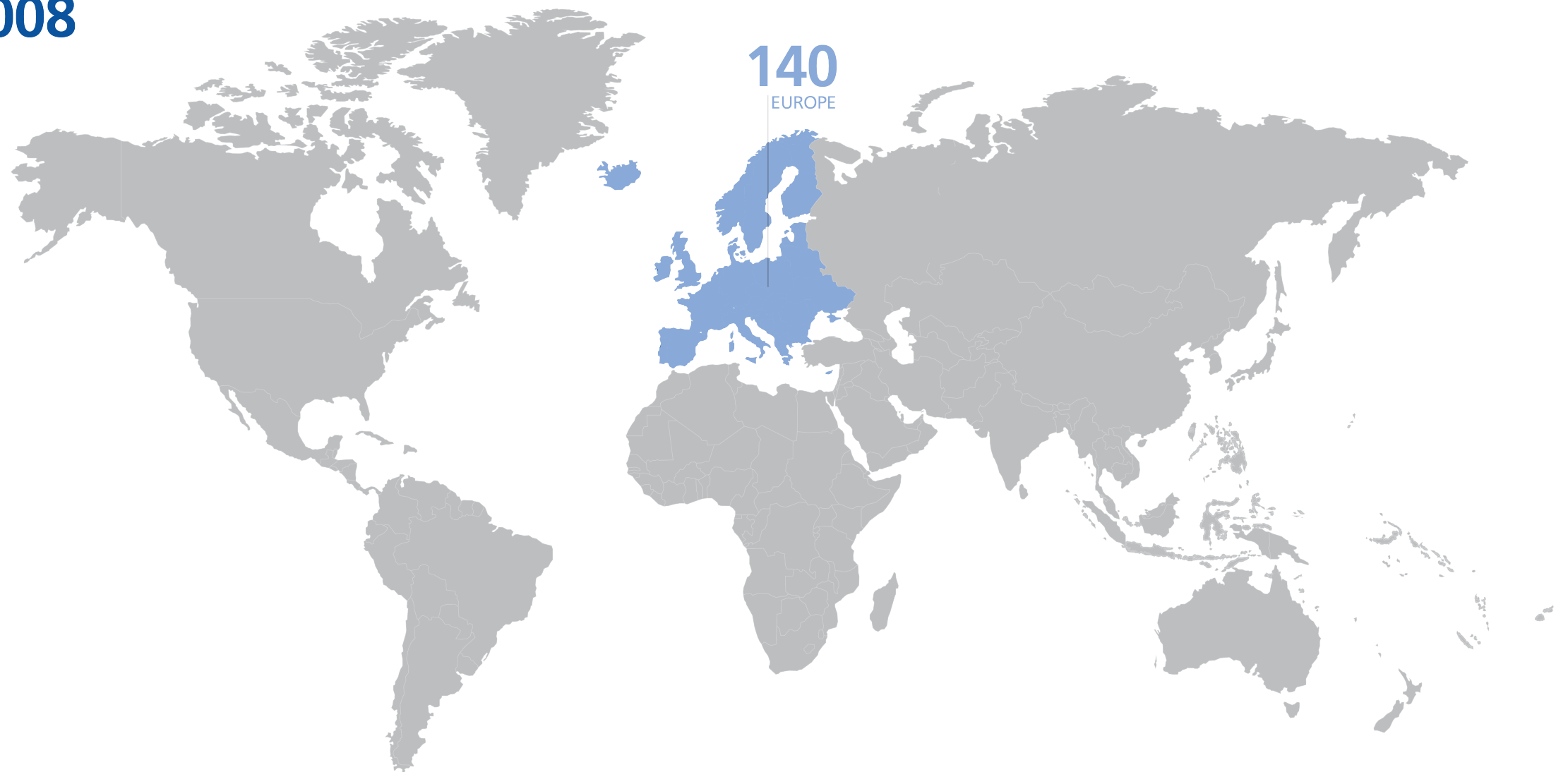
SHECCO简介



Global market accelerator for natural refrigerant based technologies

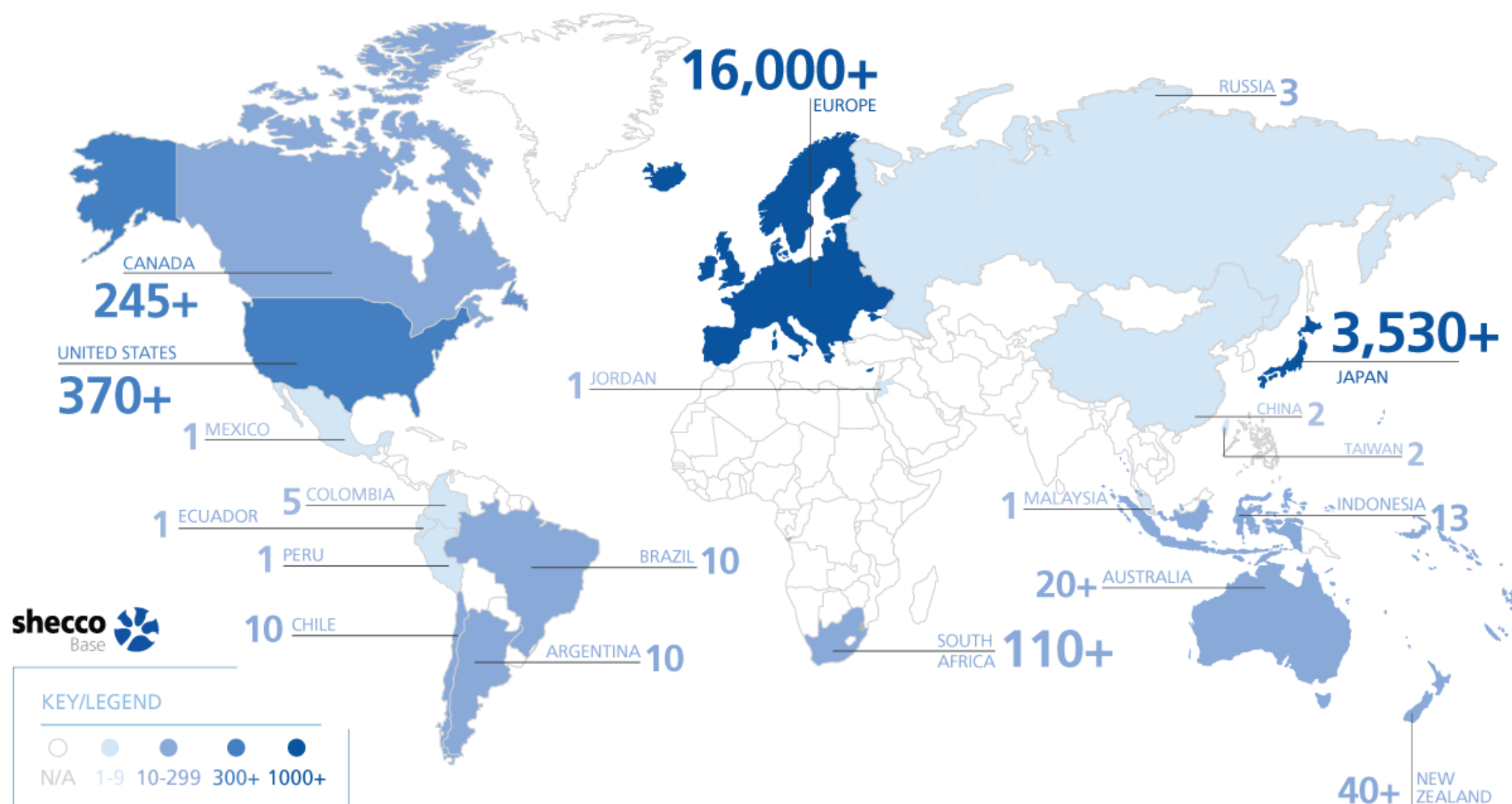
CO₂ TC STORES - FROM 140 TO 20,000 IN 10 YEARS

2008



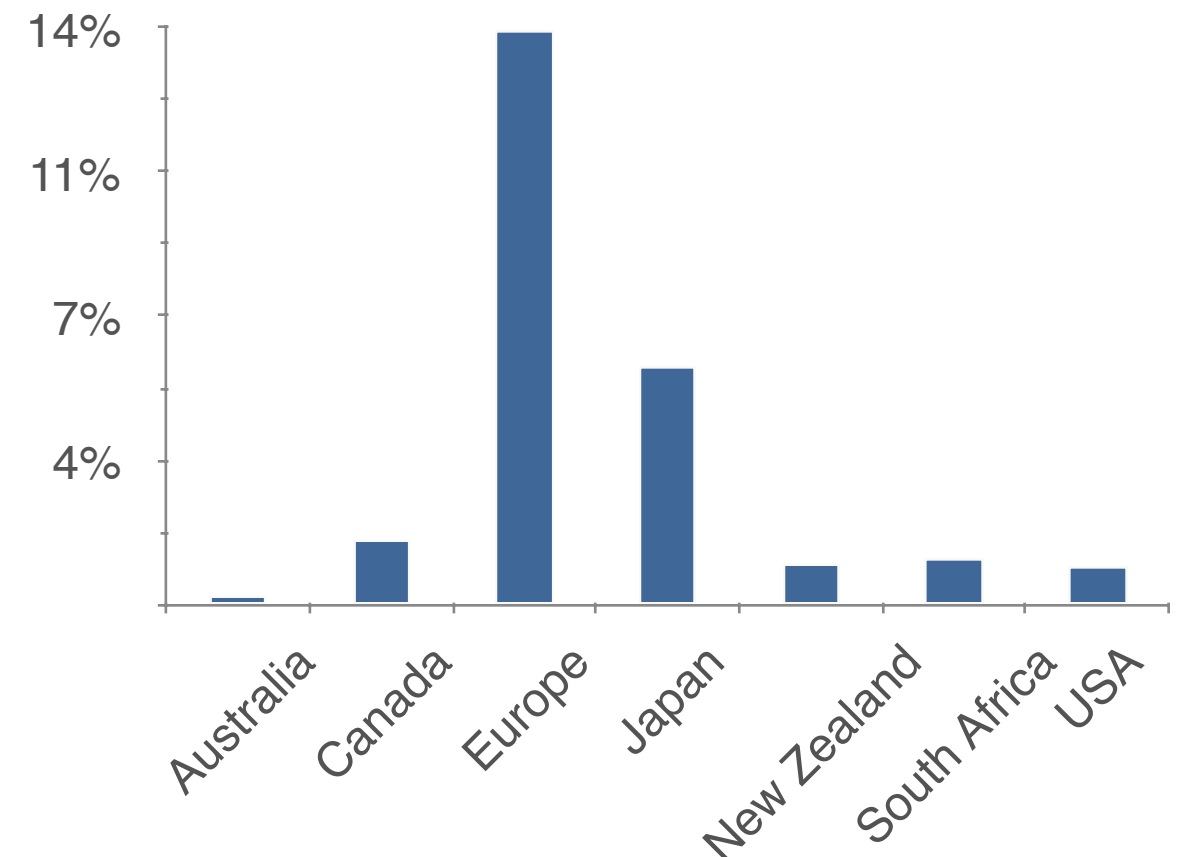
CO₂ TC STORES - FROM 140 TO 20,000 IN 10 YEARS

October 2018



跨临界二氧化碳门店在各个地区的占比

- The market transition is still in its early stages
- CO₂ TC stores account for about 1% in the USA (excluding small stores) and 2% in Canada
- Europe remains leader with more than 10% of CO₂ TC stores



Source: Primary research among key industry players, sheccoBase, October 2018

Europe: EU + Switzerland, Norway - food retail stores bigger than 400m²

Japan: Supermarkets & convenience stores combined

USA: Supermarkets

Canada: Supermarkets and grocery stores

PREPARING FOR MORE CO₂ IN CHINA FOOD RETAIL

- **First** major **CO₂ transcritical** in 2018
- **Today**: 2 CO₂ transcritical stores in operation + **2 more being built by METRO** in 2019
- Several **local CO₂ rack manufactures** - different stages of commercialization, support from established components suppliers
- European (HQ) system manufactures getting ready to supply CO₂ transcritical to Chinese market
- **10 CO₂ transcritical stores by 2020?**
- Challenges: **training, component availability & cost**



采用碳氢制冷剂的商用冷柜

全球预测(2018年8月) = 250万台

2017年年初150万台

碳氢充注量限额的提升将扩展碳氢技术应用的可能性。



碳氢水路循环系统

水路循环系统在全球各地越来越受欢迎。

据不完全统计全球共有1900家门店采用水路循环系统。

据了解，水路循环系统有以下优点：

- 相比二氧化碳设备，成本低，工期短
- 适合在环境温度高地区使用，能耗好
- 维修费低
- 对技术要求不高

最大的挑战：R290 充注量限额

MIGROS



Waitrose



TESCO

coop compact



TOKO MING JEN

NETTO



HYDROLOOP R290 SYSTEM IN THE PHILIPPINES - MARKETPLACE BY RUSTAN'S

- Opened in 2019



<https://freor.com/hydroloop-system-philippines-marketplace-rustan-s-example/>



PLATINUM



GOLD



SILVER



BRONZE



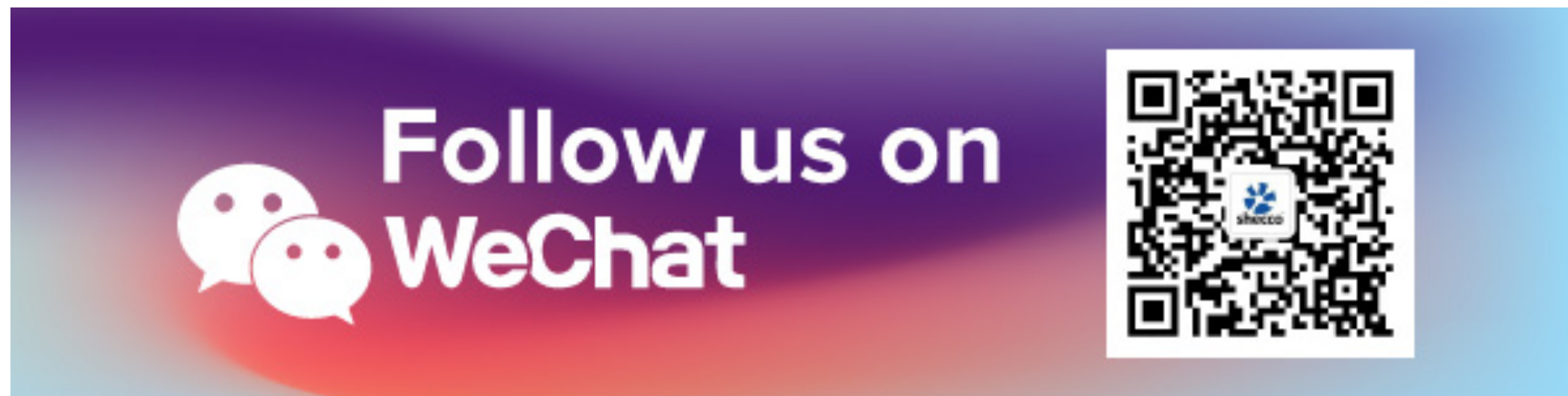
11-12/04/19
SHANGHAI

日期：4月11日-12日

地点：上海凯宾斯基大酒店

<http://www.atmo.org/china2019>

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THANK YOU!