

APEC's evolving supply chain

Leading up to this year's Asia-Pacific Economic Cooperation CEO Summit in Vladivostok, Russia on September 7-8, PwC is sharing a series of infographics highlighting key Summit issues. This series also provides a sneak preview to some questions PwC is putting to business leaders in PwC's 2012 APEC CEO Survey which will be released at the Summit.

Weak link, strong link: APEC's unbalanced supply chains

Trade in fast-growing economies is nearly **twice as costly** and half as speedy in mature economies

To mature economy (import)

To fast-growing economy (import)

From mature economy (export)



\$617
/container



\$1,084
/container



From fast-growing economy (export)



\$1,307
/container



\$840
/container



APEC's eight supply chain chokepoints

Removing key trade bottlenecks will facilitate smoother, faster, less expensive and more secure intra-APEC trade



Transparency

Lack of transparency and awareness of the full scope of regulatory issues affecting logistics



Standards & regulations

Variations in cross-border standards and regulations for movement of goods, services and business travelers



Nodal connectivity

Underdeveloped multi-modal transport capabilities; inefficient air, land, and multimodal connectivity



Infrastructure

Inefficient or inadequate transport infrastructure and cross-border physical linkages (e.g., roads, bridges)



Logistics

Lack of capacity of local and regional logistics sub-providers



Transit

Lack of regional cross-border customs-transit arrangements



Clearance

Inefficient clearance of goods at customs and lack of coordination among border agencies



Documentation

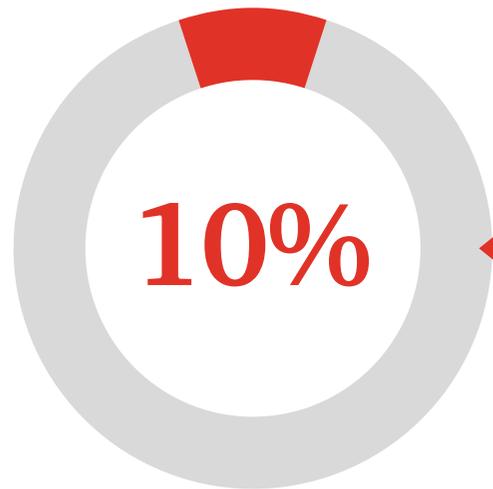
Burdensome customs documentation and other procedures

APEC's supply chain progress, goals

APEC has made progress across its supply chains, but must improve to keep up with ballooning trade volumes



Average applied tariffs in APEC economies have been reduced from 16.9% in 1989, when APEC was established, to around 5.8% in 2010.



APEC has set as a target to improve supply chain performance by 10% (i.e. improving the flow of goods and services within the APEC region in terms of reduced time, cost and uncertainty) by 2015.

Scattered success in lowering non-tariff trade barriers across APEC

The 8 economies that have improved non-tariff barrier mechanisms, 2005–2009

WEF non-tariff trade barriers index, 1–10, with 10 being lowest trade barrier rank

● 2005 ● 2009



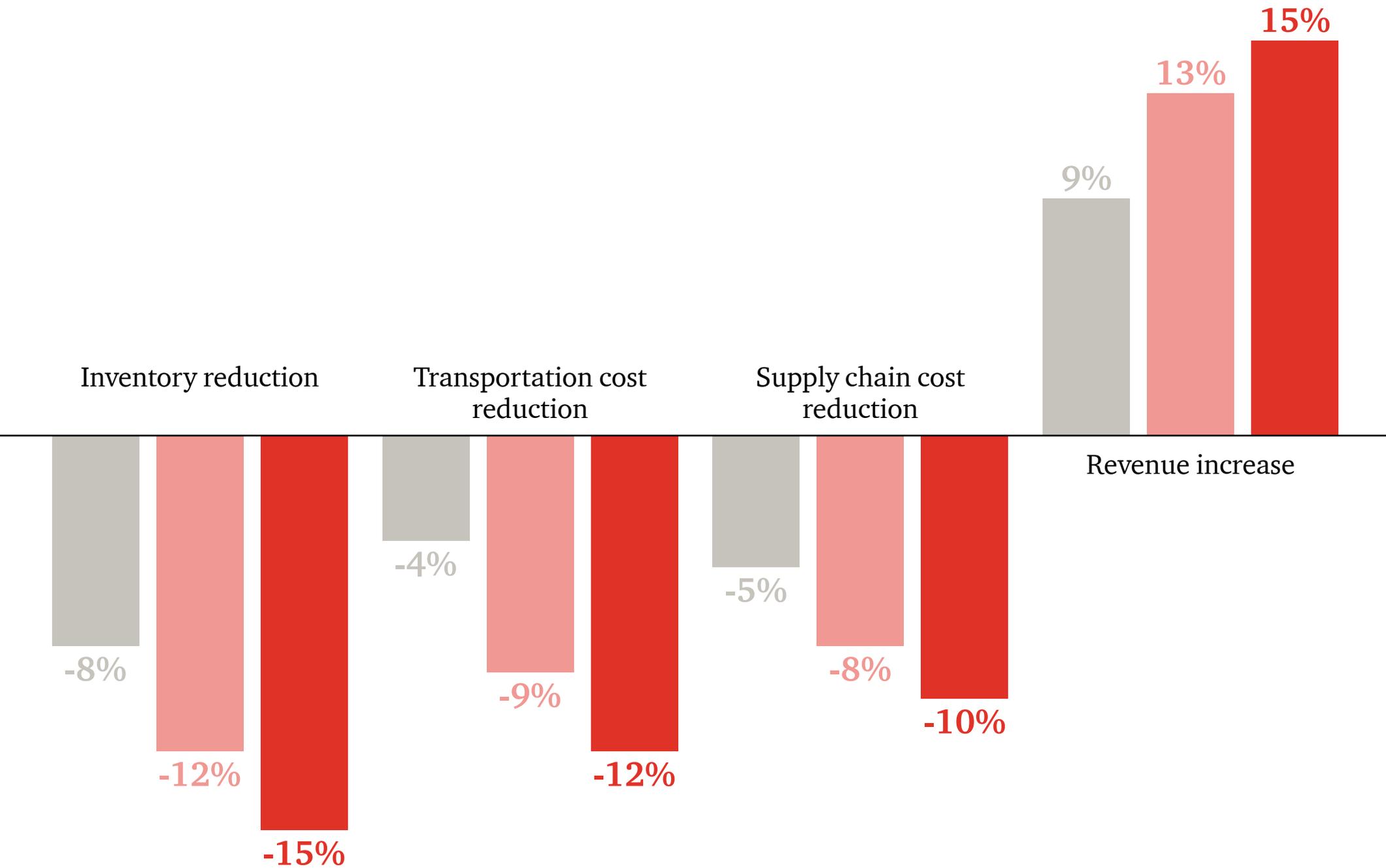
Note: Non-tariff barriers—taken from the World Economic Forum’s “Economic Freedom of the World Index.” 1=very high non-tariff trade barriers, 10=very low non-tariff trade barriers

Source: PwC analysis based on Oxford Economics data

Flexible supply chains: Where the costs savings are

Benefits of increased supply chain flexibility

Relative quality of a company's supply chain ■ Laggard ■ Challenger ■ Leader



APEC's supply chain challenges

Current barriers standing in the way of efficiencies



In fast-growing economies

Infrastructure, transparency of procedures, variability of clearance times, efficiency/quality of customs services, availability of logistics services, connectivity of transport nodes, lack of online IT logistics systems, presence of corruption



In mature economies

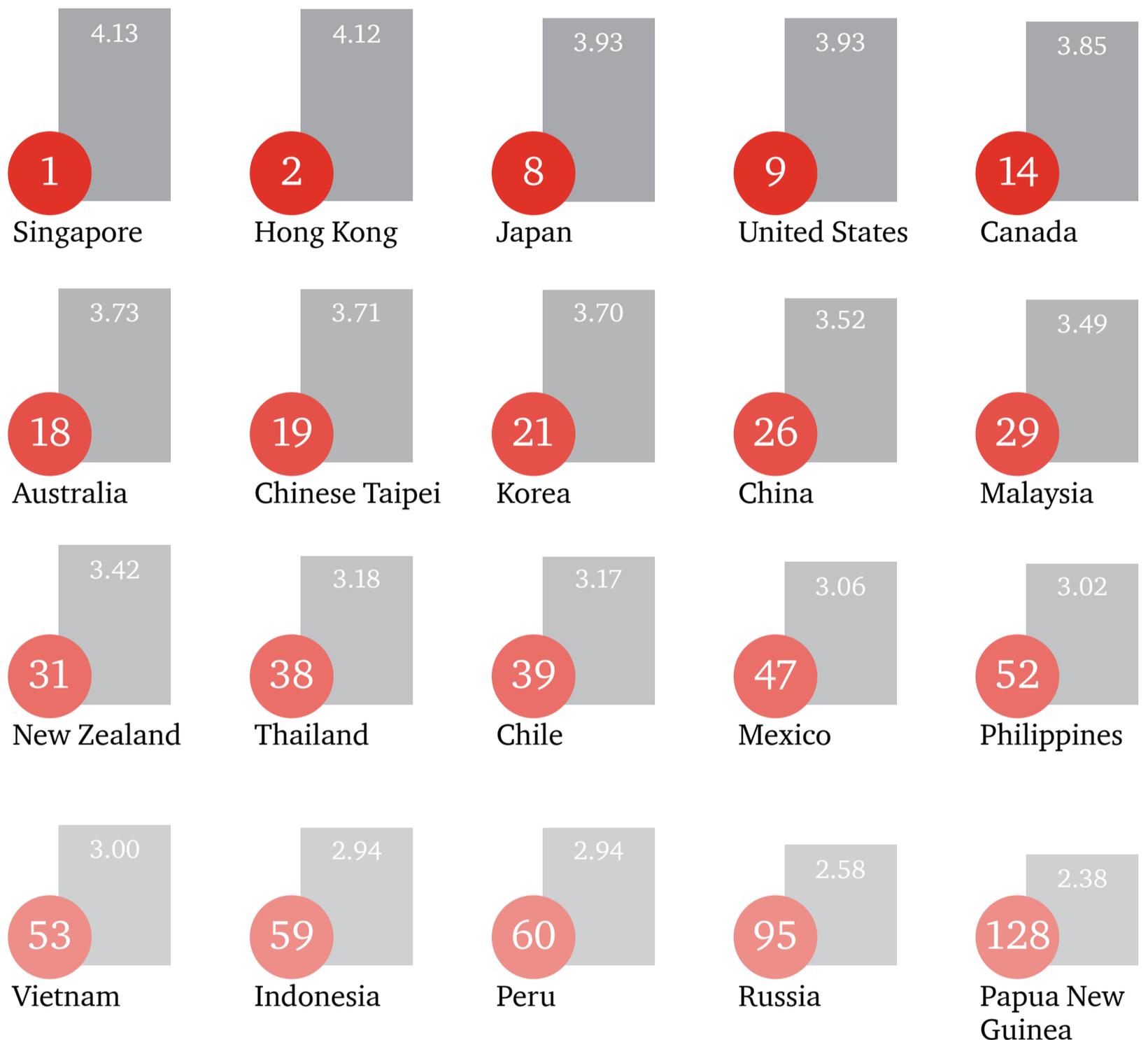
Customs/port clearance speed, complex regulations/standards, and burdensome document requirements

APEC's leaders—and laggards—in logistics efficiency

Singapore, Hong Kong top APEC and world in logistics ranking

2012 World Bank Logistics Performance Index (LPI) measured 155 countries' logistics efficiency from 1 (worst) to 5 (best)

● Global rank ■ LPI score



Customs clearance charges for fast-growing economies are estimated to average **\$134**—but in Korea, it averages just **\$30**, due in part to simple, electronic documentation

Russia's role as supplier to APEC economies widens through decade

Russian exports in US\$ millions ○ 2001 ● 2011 ● 2021 ■ Percentage of Russia's total exports



Over 50% of the business functions or activities, such as product development and/or new product introduction, demand planning and/or forecasting, supply chain planning and sales and operations planning, strategic sourcing and/or supplier development are to be moved offshore by 2012.
 —The Global Supply Chain Trends 2010–2012 conducted by PRTM Management Consultants in 2010

Offshoring and the expanding global supply chain

Percentage of companies surveyed globally who believed in offshoring these business functions, 2010–2012



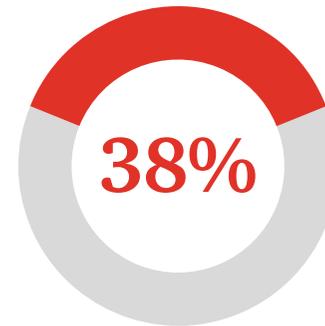
Strategic sourcing/
supplier development



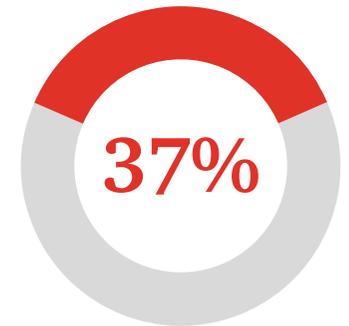
Product development/
new product
introduction



Shared services
(HR/finance/IT)



Manufacturing



Final assembly/
configuration

Technologies work together to track containers' logistics status en route in real time



e-Seals, or RFIDs (Radio Frequency Identification) are attached to shipping containers...



...which links to a web of communications tools to track the product's location...

Global Navigation Satellite System (GNSS)

Global Positioning System (GPS)

Geographic Information Systems (GIS)

General Packet Radio Service (GPRS)

Wireless communications (3G, WiMax)

Web services



...informing and connecting logistics players:

Shippers

Trucking services

Air cargo terminal personnel

Customs officials



Innovating the supply chain

Chinese Taipei's Ministry of Transportation and Communication is applying technologies in pilot projects across its supply chains both in-country and in other economies such as China and Malaysia. The pilots are aimed at improving underdeveloped air, maritime, and land transport logistics to improve the efficiency and security. Container traffic departures, arrivals, and other logistics status are logged and can be tracked online.

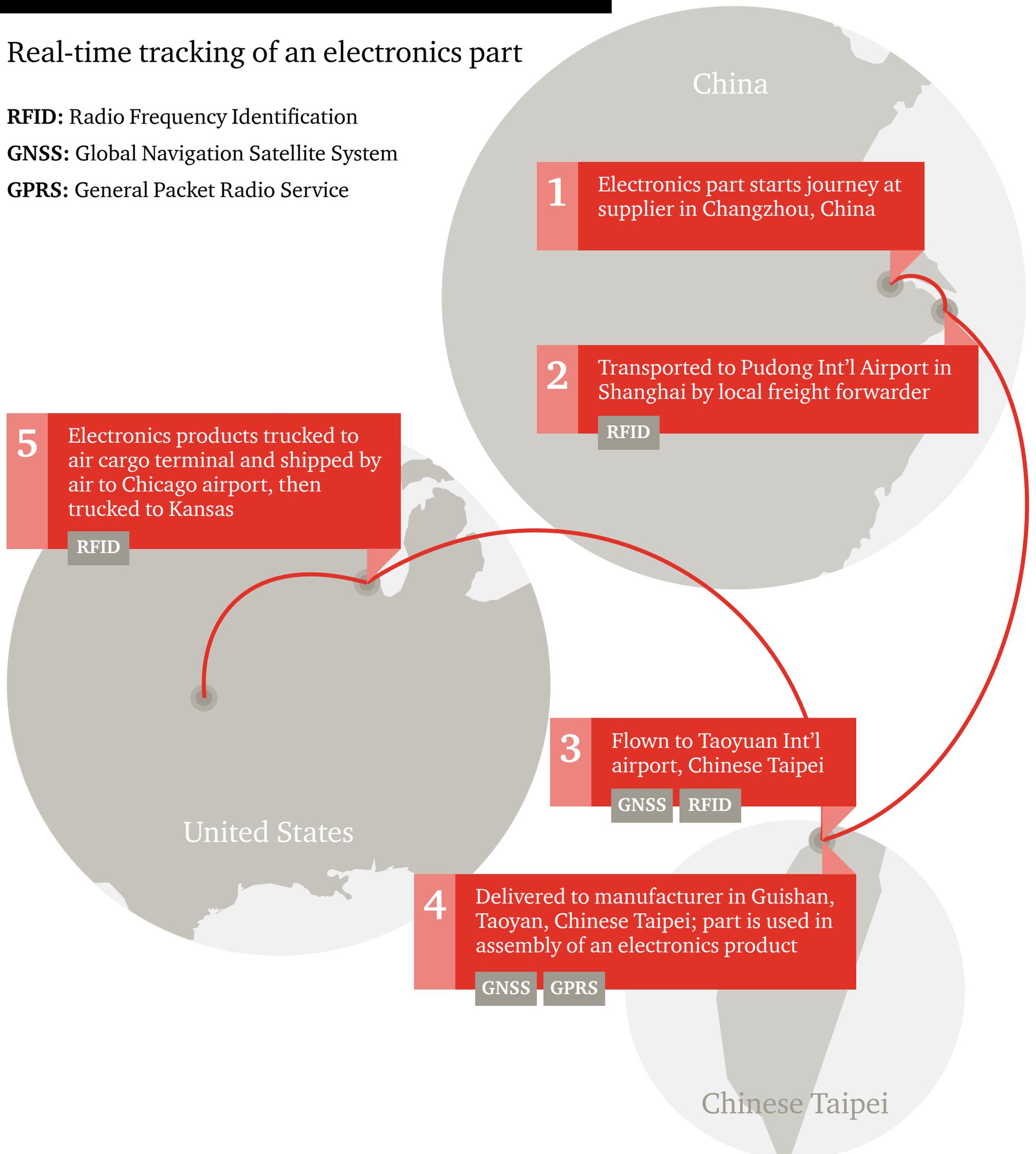
From Changzhou, China to Kansas, US

Real-time tracking of an electronics part

RFID: Radio Frequency Identification

GNSS: Global Navigation Satellite System

GPRS: General Packet Radio Service



What PwC is asking CEOs about supply chains in the 2012 APEC CEO Survey

- Should improving supply chain resilience rank as a highest priority for APEC to work on?
- Is your company using environmentally friendly technologies to increase operational efficiencies?
- Which supply chain actions are you taking?**
- Reducing geographic concentration of operations or supply chain
 - Building redundancies into operations or supply chain
 - Using technology for real-time visibility of operations and supply chain
 - Substituting domestic supplies for foreign supplies
 - Diversifying suppliers or partners/alliances
 - Increased demand planning with suppliers
- How great a need do you see for improving supply chain logistics through real-time global tracking and tracing?
- To what extent is the need to significantly improve the supply chain logistics of your organization through technology and innovation?

