

## La Camera di Commercio Italiana in Cina

La Camera di Commercio italiana in Cina (CCIC) è l'unica associazione di imprenditori e professionisti italiani ufficialmente riconosciuta dallo Stato italiano (Ministero dello Sviluppo Economico, MISE) e dalla Repubblica Popolare Cinese (Ministero degli Affari Civili, MoCA), che opera per favorire l'internazionalizzazione delle imprese italiane e promuovere il Made in Italy nella Repubblica Popolare Cinese.

Costituita nel 1991 a Beijing, la Camera è oggi radicata nel territorio con propri uffici a Beijing, Chongqing, Canton, Shanghai e Suzhou.

I Soci della CCIC (circa 580 nel 2020) comprendono le principali realtà imprenditoriali italiane (imprese a partecipazione statale e multinazionali italiane), PMI manifatturiere e commerciali, società di servizi etc.

Per le aziende localizzate sul territorio cinese e gli operatori economici con attività commerciali già attivate, la CCIC offre opportunità di informazione, formazione, condivisione contatti d'affari ed una autorevole piattaforma di rappresentatività riguardo tematiche di interesse comune. Per gli imprenditori e professionisti interessati ad ampliare il proprio business in Cina, la CICC offre servizi di assistenza, consulenza, promozione.

## About China- - Italy Chamber of Commerce

The China-Italy Chamber of Commerce (CICC) is the only business organization recognized by both the Italian Government (Ministry of Economic Development, MISE) and People's Republic of China (Ministry of Civil Affairs, MoCA) that aims to boost the internationalization of Italian business and to promote the "Made in Italy" in the People's Republic of China.

Established in 1991, CICC has now offices in Beijing, Chongqing, Guangzhou, Shanghai and Suzhou.

The CICC Members (almost 580 Members and Friends in 2020) represent the Italian business community such as public-invested and multinational corporations, small and medium-sized enterprises (both manufacturing and commercial), service companies etc.

To companies settled in China and those with on-going business within the Chinese market, the CICC offers informative, training and business networking opportunities. Besides, the CICC qualifies itself as a voicing platform for them to share topics of common interest. To companies interested in strengthening their business in China, the CICC offers consultancy, assistance and marketing services.

## 我们的组织

中国意大利商会 (CICC) 是唯一得到意大利政府 (经济发展部) 和中华人民共和国 (民政部) 官方认可的由意大利企业家和专业人士组成的协会, 其宗旨是推动意大利企业的国际化、在中华人民共和国推广意大利制造。中国意大利商会于 1991 年成立于北京, 现已在北京, 重庆, 广州, 上海和苏州五个城市分设有联络办公室。

2020 年中国意大利商会的会员会员数量近 580 个, 其中涵盖意大利的主体实业 (意大利国有控股和跨国公司), 中小型制造和贸易型企业, 咨询公司等。

中国意大利商会能够为在中企业以及已经开展贸易活动的商贸人士提供信息服务、培训机会以及分享商业资讯的机会。此外, 中国意大利商会还为他们提供了一个交流平台, 让他们分享共同感兴趣的话题。CICC 为有兴趣加强在中国业务的公司提供咨询、援助和市场服务。

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## Prefazione

È mio piacere presentarvi questo Quaderno della Camera di Commercio Italiana in Cina (CCIC), dedicato al settore dei trasporti e della logistica e pubblicato - sulla scorta della tradizione camerale - in tre lingue (italiano, cinese e inglese) per consentirne la diffusione ad un ampio pubblico.

Il Quaderno, nel progetto iniziale prevedeva la pubblicazione nella primavera del 2020. Con l'inaspettata insorgenza della pandemia dovuta al Covid-19 nello stesso periodo si è avuto uno spargimento nel settore del trasporto e della logistica non solo in Cina ma nel resto del mondo. Questa situazione ha reso difficile fermare il fotogramma e rappresentarlo. Oggi alcune delle componenti del settore sembra si siano stabilizzate, non sempre in maniera positiva, ma questo fatto ci consente di proporre un aggiornamento del Quaderno che verrà accompagnato anche dal materiale composto da schede tecniche afferenti le modalità di importazione in Cina di alcune commodities quali il fashion, i prodotti alimentari, automotive, ecc.

Il 2020 è stato il 50esimo anniversario delle relazioni diplomatiche fra l'Italia e la Repubblica Popolare Cinese: dovevano esserci ripetute occasioni di incontro fra le nostre due Nazioni, sia come scambi culturali, interpersonali ed economici, sia ai più alti livelli istituzionali, sulla scorta della firma del Memorandum d'Intesa sulla Nuova Via della Seta sottoscritto nel marzo 2019 durante la visita del Presidente Cinese Xi Jinping a Roma e della partecipazione del Presidente del Consiglio Giuseppe Conte al secondo Belt and Road Forum, tenutosi a Pechino nell'aprile dello stesso anno. Purtroppo tutti i programmi sono stati cancellati per l'impossibilità degli spostamenti tra Paesi.

L'Italia gode di una posizione geografica strategica, al centro del mare Mediterraneo e porta d'Europa. Un settore logistico efficiente costituisce, dunque, un'opportunità per aumentare ulteriormente gli scambi commerciali non solo fra i nostri paesi, ma anche tra la Cina e l'intera Europa; su questo fronte, nonostante la pandemia o forse, proprio a causa di questa, nell'anno trascorso sul territorio italiano vi sono state implementazioni via terra e rotaia che hanno facilitato le connessioni con la Cina e l'Europa. Il Quaderno offre la possibilità di acquisire informazioni aggiornate sulle ultime novità nel settore, dalla Nuova Via della Seta e i suoi corridoi logistici intermodali, agli ultimi recenti sviluppi in campo tecnologico.

Auguro a tutti una fruttuosa lettura.

FIRMA  


## Foreword

I am glad to present you this China-Italy Chamber of Commerce report on logistics and transportation. Following a long-standing tradition of CICC, this report is published in three languages (Chinese, Italian, and English) with the aim to reach the widest audience.

The year 2020 will mark the 50<sup>th</sup> anniversary of diplomatic relations between Italy and the People's Republic of China. There are plentiful contacts between our two countries, both as cultural, people-to-people and economic exchanges and at the highest institutional level: primarily, the Memorandum of Understanding on the Belt & Road Initiative signed in Rome during the visit of Chinese President Xi Jinping and the participation of Italian PM Giuseppe Conte to the second Belt and Road Forum, held last April in Beijing.

Italy enjoys a strategic geographical position: core of Mediterranean Sea and gateway to Europe. An efficient logistics industry is therefore an opportunity to further boost connectivity not only between our two countries but also between China and the whole Europe. This report offers the opportunity to get up to date with the latest dynamics in the logistics sector, including the New Silk Road and its intermodal logistics corridors and the most recent technological developments.

Enjoy your reading!

FIRMA  


## VERSIONE ITALIANA

### Introduzione

Questo Quaderno sulla logistica e i trasporti fra Europa e Cina ha l'obiettivo di offrire una panoramica dell'argomento trasporti e logistica che ha avuto significativi mutamenti nel corso di questi anni ma che, soprattutto, sta avviandosi verso una direzione la cui declinazione deriva sia dalla tecnologia, sia dallo scenario geopolitico internazionale cui sovrasta la Belt & Road Initiative [BRI].

Ci auguriamo che, alla fine della lettura, ciascuno possa avere un'idea di quale direzione stia intraprendendo questo settore comunque di vitale importanza nel commercio nazionale e transnazionale.

Si parte da una breve fotografia del trasporto tradizionale per poi arrivare a sfidare le frontiere dell'e-forwarder, passando attraverso la block chain, la guida autonoma e i droni non dimenticandosi di quale trasformazione sia avvenuta nel 2020, trasformazione procurata dalla pandemia Covid-19.

### Letteratura

Nel 2014 lo EU SME Center pubblicava una dettagliata e rigorosa China Logistics and Distribution Guide (EU SME Centre, 2014). Nella Guide venivano affrontati gli aspetti concernenti le diverse aree (import, export, via mare e via aerea) ponendo il focus sulle procedure che negli anni precedenti erano state fortemente modificate in Cina dal Governo centrale e da GAC (General Administration Custom – Amministrazione Generale delle Dogane) per adeguarsi alle richieste e agli standard internazionali, dove possibile.

Il risultato è stato un ottimo compendio a supporto degli operatori sia diretti (forwarders) sia indiretti (aziende manifatturiere e di servizi) che se ne sono avvalsi per comprendere meglio il mondo cinese del trasporto.

Oggi, dopo sette anni, buona parte del compendio dello EU SME Centre rimane valida ed attuale. Tuttavia, nell'ultimo lustro la logistica Europa-Cina ha anche subito cambiamenti significativi per molteplici ragioni, fra cui il differente scenario geopolitico – la guerra commerciale fra USA e Cina e Cina ed Australia e la Nuova Via della Seta –, nuove politiche infrastrutturali e istituzionali in Cina – quali le zone franche, ferrovie e autostrade –, senza contare i rapidi sviluppi tecnologici. Questo Quaderno affronta precisamente queste ultime dinamiche.

### La situazione attuale del trasporto convenzionale

Il trasporto aereo e marittimo sino al gennaio 2020 stava ancora conservando la propria identità, forte di una storia di secoli almeno per il mare. È altresì vero che qualche anno fa le principali compagnie di navigazione, pensando ad uno sviluppo del commercio internazionale intorno al 5% o 6% annuo si erano attrezzate con navi merci in grado di portare un carico di migliaia di container per poter essere più competitive e così ottenere maggiori ritorni economici. Purtroppo, ciò non è avvenuto ed anzi, abbiamo assistito ad una concentrazione ridotta di compagnie di navigazione dopo un processo di fusioni per incorporazione e la scomparsa di alcune compagnie per fallimento (vedi Hanjin). Oggi il mercato è nelle mani di quattro compagnie (Maersk, MSC, CMA e CoscoShipping) oltre ad alcune minori con un raggio di azione operativa circoscritto.

Certamente l'obbligo previsto di ridurre entro il 2050 le emissioni di gas ad effetto serra almeno del 50% rispetto al 2008 comporterà innovazione ed investimenti per allinearsi ai valori stabiliti da IMO (International Maritime Organization – Organizzazione Marittima Internazionale). In particolare, dal 1° gennaio 2020 è entrato in vigore l'Appendice VI della Convenzione MARPOL 73/78. L'Appendice VI introduce il limite dello 0.50% m/m (massa- su-massa) al contenuto di zolfo nei carburanti delle navi, mentre questo attualmente ammonta in media al 3,5%. Questa regolamentazione ha il potenziale di far crescere il costo dei noli marittimi (Billing, Fitzgibbon, & Shankar, 2018; Dodwell, 2019; Flexport, 2019; e Saul, Baertlein, & Geller, 2019) che, comunque sono cresciuti

indipendentemente da queste disposizioni normative ma, come vedremo più avanti a causa della situazione pandemica contingente.

Maersk che, con una flotta di 639 navi, è un leader globale nel trasporto merci, ha provato ad implementare soluzioni sostenibili: ad esempio, una nave-portacontainer di Maersk con una capacità di 18'000 TEU<sup>1</sup> ha portato a termine un viaggio andata/ritorno sulla rotta Rotterdam-Shanghai impiegando una miscela di bio- carburante Shell (Dodwell, 2019 e Leporati, 2019). In una recente intervista, Caroline Wu, Managing Director Maersk China, ha dichiarato che la riduzione dei contenuti di zolfo, per quanto concerne Maersk, è approssimativamente superiore del 9% rispetto alla media dell'industria navale e stima di arrivare ad un piano di neutralità a zero emissioni entro il 2050.

In ogni caso, questi adattamenti, lungi dall'essere limitati ad un singolo attore, appaiono invece come traiettoria comune del settore marittimo. Anche l'azienda italiana MSC, con sede a Ginevra, ha varato due navi merci da 23'000 TEU ciascuna e si attende a breve il varo di altre nove (Leporati, 2019). Evengreen, con base a Formosa (Cina), ha annunciato un piano d'investimento da 1,4-1,6 mld. US\$ (€1,28-1,46 mld.) per l'acquisto di dieci navi-portacontainer con una capacità di 23'000 TEU ciascuna (Swift, 2019). Ciò si inquadra nella tendenza generale che vede una crescita nella capacità delle navi-cargo.

A metà settembre 2019, CoscoShipping, di proprietà dello Stato cinese, ha varato la nave cargo Planet a Shanghai con una capacità di 21'000 TEU, terza di una flotta di otto vascelli. Come implicazione geopolitica, la Planet avrà un ruolo nell'implementazione della Nuova Via della Seta: infatti, dopo aver passato il Golfo Persico, la Planet navigherà verso i porti mediterranei del Pireo (Grecia) e di Vado Ligure (SV). D'altronde, i porti dell'Europa meridionale hanno il vantaggio competitivo di tagliare i tempi di percorrenza di circa cinque giorni rispetto a quelli del Nord Europa, ma patiscono la mancanza di infrastrutture logistiche sulla terraferma (Leporati, 2019). CMA ha varato a Shanghai, sempre nel settembre 2019, la nave cargo alimentata a metano con la più grande capacità di carico al mondo – ovvero 23'000 TEU. Questa nuova nave a gas metano di CMA combina all'accresciuta capacità di carico una maggiore sostenibilità ambientale: due tendenze comuni al settore. È la prima di nove navi, tutte costruite – come quelle di Cosco – nei due cantieri navali della CSSC (China State Shipbuilding Corp) sull'isola di Chongming a Shanghai (Wang, 2019b).

Una nota aggiuntiva va spesa sull'organizzazione che le compagnie di navigazione si sono date: infatti, una società quale la Maersk, arrivata a perdere in un anno 600 milioni di Euro, ha proceduto in Cina a digitalizzare il proprio sistema operativo trasferendo i centri di documentazione in aree con un basso costo del lavoro – la provincia dell'Anhui – o creando le premesse per l'uso della blockchain. La blockchain ha come finalità le trusted transactions e facilita la cooperazione nello scambio di informazioni con garanzia di riservatezza. Nella logistica, oltre a Maersk, vi sono al momento una quarantina di operatori che stanno utilizzando la block chain per il sistema di tracciamento e per i pagamenti, attraverso l'e-contract (cf. Rožman et al., 2019).

Le circostanze sopramenzionate, correlate a progetti di sviluppo per il futuro, si sono impaludate nel momento in cui il mondo del commercio in tutte le direttrici transazionali è rimasto sospeso per alcuni mesi nel primo semestre del 2020 per poi ripartire con uno sbilanciamento che vedeva, da un lato, la ripartenza della Cina nel terzo trimestre del 2020 e, dall'altro l'affanno nel tentativo di normalizzare senza grandi successi la vita economica e sociale degli altri Paesi nel mondo affetti pesantemente dalla pandemia.

Inizialmente le spedizioni avevano come finalità il trasporto di materiale sanitario ( DPI ) soprattutto con la via aerea ma poi stabilizzatosi anche sulla via mare e, successivamente con il trasporto di semilavorati o bene

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<sup>1</sup> TEU, Twenty-foot Equivalent Unit, è un'unità di misura della capacità nel trasporto container: 1 TEU equivale a circa 33 m<sup>3</sup> di capacità e 38 m<sup>3</sup> di ingombro.

di consumo per soddisfare la domanda incipiente. Nello stesso periodo sulla rotta transpacificca ed europea le compagnie marittime, al fine di capitalizzare i ritorni degli investimenti e le perdite pesantemente subite, avevano deciso di cancellare molte partenze (nell'ordine delle quattrocento in pochi mesi – nel termine tecnico Black sailing) per iniziare la politica dell'incremento del nolo. In un secondo momento, vista la scarsità di containers vuoti, hanno deciso di attuare una politica di diversione dei noli applicando, oltre ad aumenti consistenti delle strutture tariffarie denominate Diamond Tier per ottenere le priorità agli imbarchi (dal 30% al 70% con varianza settimanale).

In aggiunta dobbiamo considerare l'annoso problema dei vuoti, definito in termini tecnici "unbalance" che riguardava il numero di TEU disponibili in quanto quelli esportati erano sempre maggiori di quelli importati e spesso vi era scarsità di attrezzatura nei vari depositi o al porto, anche perché non sempre i container previsti in arrivo su una determinata nave non possono essere riutilizzati in breve tempo sia per l'insorgenza di problemi di natura doganale, sia per esigenze di pulizia o di manutenzione. Certamente nei momenti di alta stagione questa situazione si amplificava. Come scritto da Rodrigue (2017): "non è raro vedere intere navi partire soltanto per riposizionare container. [...] Il riposizionamento dei [container] vuoti può ammontare al 15-20% dei costi operativi di una compagnia di navigazione".

Oggi, a seguito della rivoluzione nel campo dei trasporti marittimi, la criticità nell'approvvigionamento dei vuoti ha assunto la connotazione di una scriminante gestionale. I continui ed intensificati controlli nelle aree portuali alla ricerca del virus stanno determinando ritardi nelle operazioni doganali; di questo, come si accennava sopra, va tenuto conto nel calcolo dei flussi di traffico maggiore in export che in import.

Nel corso del 2020 la Cina ha consegnato 2.600.000 Teus di nuova fabbricazione di cui il 70% è stato prodotto nella seconda parte dell'anno.

Solo a Shanghai, si è incrementata la produzione giornaliera di vuoti pari a circa 300.000 al mese che però non si è rivelata sufficiente a colmare la domanda esistente secondo i dati forniti da China shipowners' Association. L'oligopolio imperante favorirà solo i ritorni economici dei pochi attori in posizione di forza. Difatti, secondo l'UNCTD (2018, pag. 33): "Il consolidamento [del trasporto marittimo] può risultare in una migliore gestione dell'offerta [dei noli], utilizzo della flotta e maggiore efficienza", oltre ad "una minor fluttuazione nel costo dei noli". Nondimeno, ciò "può avere un impatto potenzialmente negativo sulla concorrenza [...] e potrebbe risultare in delle strutture di mercato oligopolistiche. Il crescente consolidamento rafforza il potere di mercato, portando potenzialmente ad una riduzione nell'offerta e nella qualità dei servizi e a prezzi maggiorati".

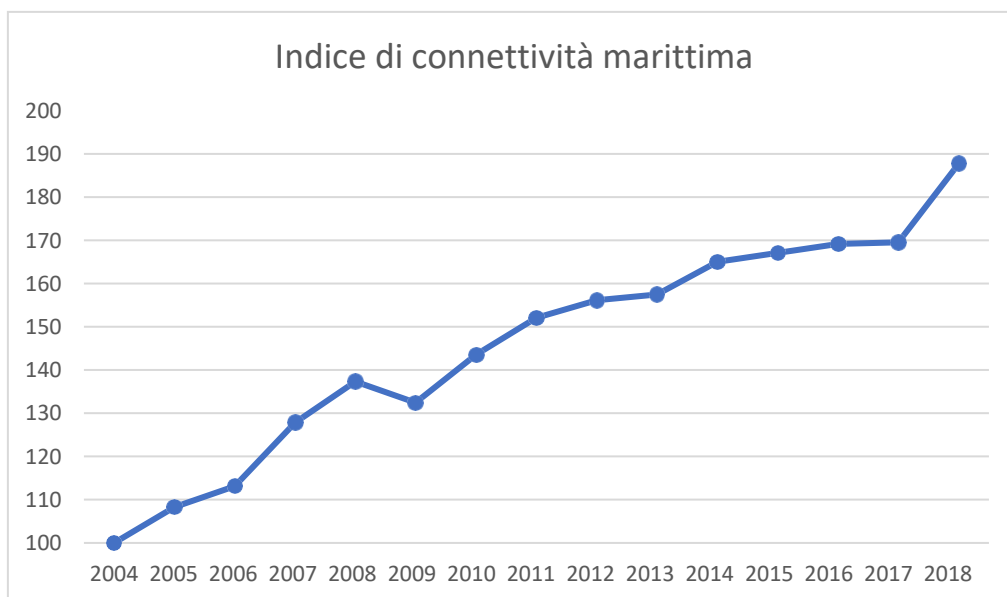


Figure 1: Indice di connettività marittima (2004=100); Banca Mondiale (2019).

Dalla pubblicazione della Guida dello EU SME Centre nel 2014, la Cina ha sperimentato una crescita del 13.77% nella connettività marittima: in particolare, il 2018, ha visto una crescita annua del 10.75%.

Anche per quanto riguarda la via aerea, alcuni vettori erano falliti, altri avevano abbandonato rotte per loro non strategiche, altri ancora avevano creato hubs in Cina come epicentro delle proprie attività (vedi Cargolux a Zhengzhou, nella provincia dell'Henan) e si era anche vista l'entrata nel mercato cinese di vettori aerei del Medio Oriente come Emirates ed Ethiad). Un altro elemento di novità è stata l'entrata in gioco nel settore cargo di Neos, società italiana partecipata da Alpitour che aveva iniziato il servizio passeggeri sull'aeroporto di Nanchino ma che, a seguito del Covid, ha aggiunto alla propria offerta un servizio charter diretto da aeroporti italiani su aeroporti cinesi.

Inoltre, sempre negli scorsi mesi, forwarders cinesi hanno integrato i servizi, in special modo con l'Europa, utilizzando servizi charters sia da aeroporti secondari in Cina, (Jinan, Seijezhuan,) verso altri Hubs europei come Liegi, Ostrava, Lipsia, per poi distribuire via camion nelle diverse destinazioni europee di riferimento.

Questi due scenari non avevano portato ad una frammentazione del mercato, ma anzi la loro concentrazione oligopolistica aveva condizionato i prezzi di vendita dei noli che già, ad eccezione di alcuni momenti, non avevano risentito nel 2019 di importanti ribassi mentre nel 2020 la situazione dei prezzi è andata fuori controllo senza alcuna possibile soluzione di continuità. Sempre nel luglio del 2019 il Fondo Monetario Internazionale aveva previsto una crescita del PIL globale pari al +3.2% nel 2019 e al +3.5% nel 2020, anche se alcuni analisti avevano individuato un possibile declassamento causato dal rallentamento di alcune importanti economie nel secondo quadrimestre del 2019 (Ouyang & Zhou, 2019). Il risultato del 2020 è stato di un PIL globale negativo del 2% ed una previsione positiva del per il 2021

Come si è accennato nei capoversi precedenti il quadro internazionale si è aggravato negli ultimi due anni a causa della guerra commerciale fra Stati Uniti e Cina che si spera termini nell'anno in corso. I dati europei, come mostra la tabella riportata sono incoraggianti ma il rallentamento in Cina del settore automobilistico con la supply chain dei fornitori pregiudica il mantenimento di questi risultati per l'anno in corso e soprattutto per il 2020. L'Europa rimane comunque uno degli importanti attori negli scambi commerciali con la Cina.





## Main trading partners - EU

bn €

	EU exports to			EU imports from			Trade balance	
	Jan-Sep 19	Jan-Sep 20	Growth	Jan-Sep 19	Jan-Sep 20	Growth	Jan-Sep 19	Jan-Sep 20
China	144.8	144.8	0.0%	268.6	280.7	4.5%	-123.9	-135.9
United States	288.0	259.3	-10.0%	173.0	153.2	-11.4%	115.1	106.1
United Kingdom	241.3	198.1	-17.9%	144.8	121.6	-16.0%	96.5	76.5
Switzerland	109.0	105.6	-3.1%	81.4	80.8	-0.7%	27.6	24.8
Russia	64.0	57.8	-9.7%	110.1	70.8	-35.7%	-46.1	-13.0
Turkey	49.7	49.3	-0.8%	52.1	45.0	-13.6%	-2.4	4.3
Japan	45.9	40.1	-12.6%	47.7	40.3	-15.5%	-1.8	-0.2
Norway	38.8	35.7	-8.0%	40.3	31.5	-21.8%	-1.5	4.2
South Korea	32.4	33.1	2.2%	35.6	31.9	-10.4%	-3.2	1.2
India	27.8	22.1	-20.5%	30.4	24.7	-18.8%	-2.6	-2.6

Source dataset: ext\_st\_eu27\_2020sitc

ec.europa.eu/eurostat

## La Nuova Via della Seta: la connettività via treno e via camion

Memori dei ricordi dell'Orient Express che, dalla Francia e attraversando parte dell'Europa, si spingeva sino a Costantinopoli e della Ferrovia Transiberiana fra Mosca e Vladivostok, oggi dobbiamo prendere atto che il trasporto via treno tra Europa e Cina, in una visione euroasiatica, è ormai divenuto realtà.

Circa vent'anni fa, quando si iniziava ad abbozzare di rivitalizzare la Via della Seta, Romano Prodi scriveva di una sua idea di connessione apparsa su Heartland – rivista partner di Limes: "Nel XVI secolo, all'inizio della prima espansione oltremare europea, l'Asia era di gran lunga la più ricca regione del mondo e la sua civiltà era probabilmente la più avanzata. La spettacolare crescita degli ultimi decenni, nonostante la crisi recente, ha portato ad una situazione in cui non è irrealistico aspettarsi un ritorno a questo lieto stato delle cose" (Prodi, 2000).

Volume dei noli marittimi	Provincia	2015	2016	Variazione annua	2017	Variazione annua
Total		784378	810933	3.39%	865464	6.72%
Dalian	Liaoning	41482	43660	5.25%	45517	4.25%
Yingkou	Liaoning	33849	35217	4.04%	36267	2.98%
Qinhuangdao	Hebei	25309	18682	-26.18%	24520	31.25%
Tianjin	Tianjin	54051	55056	1.86%	50056	-9.08%
Yantai	Shandong	25163	26537	5.46%	28816	8.59%
Weihai	Shandong	4213	4340	3.01%	4468	2.95%
Qingdao	Shandong	48453	50036	3.27%	51031	1.99%
Rizhao	Shandong	33707	35007	3.86%	36136	3.23%
Shanghai	Shanghai	64906	64482	-0.65%	70542	9.40%
Lianyungang	Jiangsu	19756	20082	1.65%	20605	2.60%
Ningbo-Zhoushan	Zhejiang	88929	92209	3.69%	100933	9.46%
Taizhou	Zhejiang	6237	6771	8.56%	7057	4.22%
Wenzhou	Zhejiang	8490	8406	-0.99%	8926	6.19%
Fuzhou	Fujian	13967	14516	3.93%	14838	2.22%
Xiamen	Fujian	21023	20911	-0.53%	21116	0.98%
Shantou	Guangdong	5181	4985	-3.78%	4890	-1.91%
Guangzhou	Guangdong	50053	52254	4.40%	57003	9.09%
Zhanjiang	Guangdong	22036	25612	16.23%	28209	10.14%
Beihai	Guangxi	2468	2750	11.43%	3169	15.24%

Fangcheng	Guangxi	11504	10688	-7.09%	10355	-3.12%
Basuo	Hainan	1767	1516	-14.20%	1605	5.87%
Haikou	Hainan	9204	9952	8.13%	11297	13.51%

Dal nostro punto di vista, questa gemmazione dell'originale Via della Seta rappresenta nel settore dei trasporti la vera novità e la potenziale alternativa di questi ultimi anni. Con le parole dell'ex-Primo Ministro francese Jean-Pierre Raffarin: "È critico che l'Europa approcci la Cina con proposte pratiche e bilanciate su come si possa cooperare per la Belt and Road Initiative, in uno spirito di mutuo beneficio. [...] C'è un enorme potenziale per la cooperazione Sino-Europea sulla Belt and Road: dobbiamo sviluppare insieme modi e mezzi per trarre beneficio da questa iniziativa.

Infatti, collegare l'Europa all'Asia con le prosecuzioni sino alle più importanti città della Cina ha permesso la riduzione dei tempi di spostamento (mediamente 18-20 giorni) rispetto al trasporto marittimo che, proprio in virtù di quanto si diceva sopra, è stato razionalizzato con tempi di percorrenza maggiori per ragioni di co-sharing (molte navi operano per più vettori con tempi di 35/40 giorni) e per le nuove definizioni delle rotte in termini di riduzione dei costi.

I noli via treno, inizialmente relativamente alti se comparati con quelli marittimi si sono rivelati competitivi nel corso del 2020 anche se il prezzo finale nell'ambito europeo è diverso per la Germania rispetto all'Italia. Quest'ultima, infatti, scontava la mancanza di una rete sviluppata di collegamenti ferroviari con la Cina e l'ultima parte del percorso è spesso portata a termine su gomma, da ciò derivava la maggiorazione dei prezzi per l'Italia.

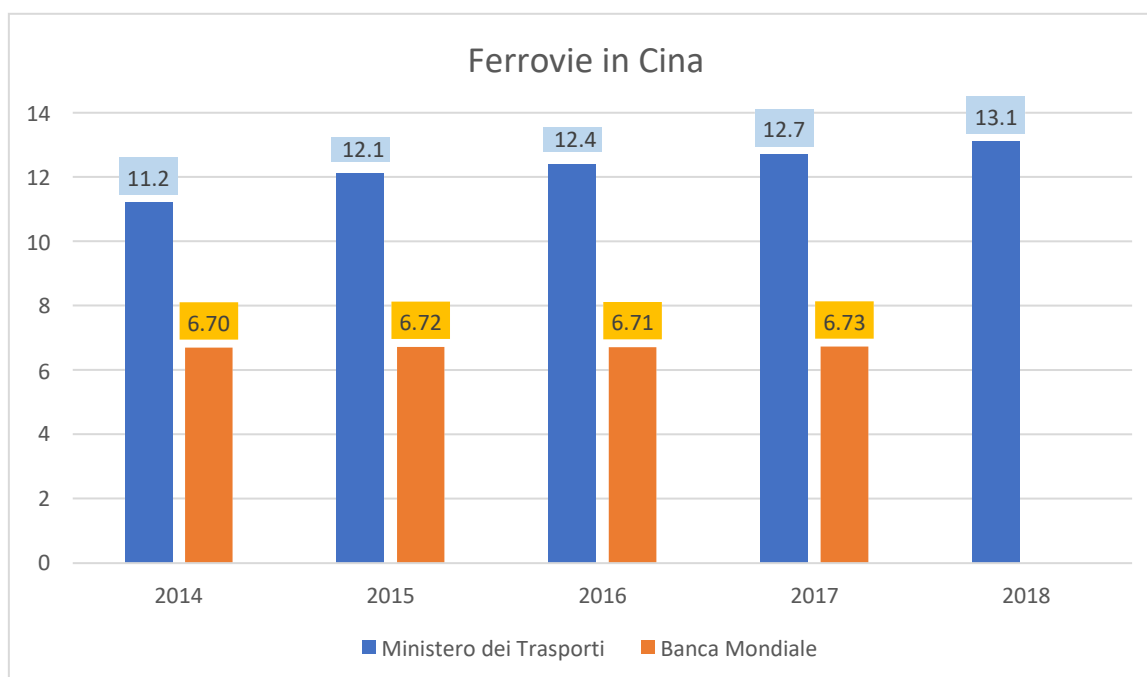


Figura 2: Ferrovie in Cina (MoT, 2019; World Bank, 2019). I dati del Ministero dei Trasporti tengono conto dei doppi binari, non considerati dalla Banca Mondiale, le cui stime per il 2018 non sono disponibili.

Per quanto ci riguarda, negli ultimi due anni, erano stati sperimentati tentativi di partenze dirette dall'Italia verso la Cina ma i risultati erano stati fallimentari.

Nel 2019 Hupac, società svizzera basata da molto tempo nel terminal di Busto Arsizio (VA), aveva ridisegnato un nuovo tragitto, nella speranza che questo potesse garantire una continuità nel futuro (Corso, 2019 e Rete 55, 2019). I due più importanti collegamenti ferroviari attualmente esistenti fra Cina e Europa sono quello con origine a

Chongqing, che sta ora sperimentando un commercio sino-europeo maggiormente bilanciato con più cargo andata/ritorno e meno spedizioni di sola andata verso l'Europa (Xinhua, 2019x), e la Zhengzhou-Europe Express Railway, che ha permesso alla provincia dell'Henan, nella Cina centrale, di raggiungere un volume di 39,7 mld RMB (€5,1 mld) di commercio estero, grazie alla vantaggiosa posizione geografica che permette una connessione via treno con l'Europa in 15 giorni (Xinhua, 2019x). A questi si è aggiunto anche il collegamento con Xian.

Oggi possiamo dire che, soprattutto con l'Hub di Verona i collegamenti con la Cina si sono razionalizzati ed in particolare attraverso Mercitalia (società partecipata da FS) e la stessa Hupac si stanno creando collegamenti tra Verona, Busto Arsizio e Marcanise e Giovinazzo per le prosecuzioni nelle altre regioni meridionali.

Tuttavia, è anche necessario menzionare come, in Cina secondo quanto stimato da Jiang et al. (2018), il 60% del costo dei noli via treno sia coperto da sussidi governativi, attualmente ridotti e con una serie di limitazioni.

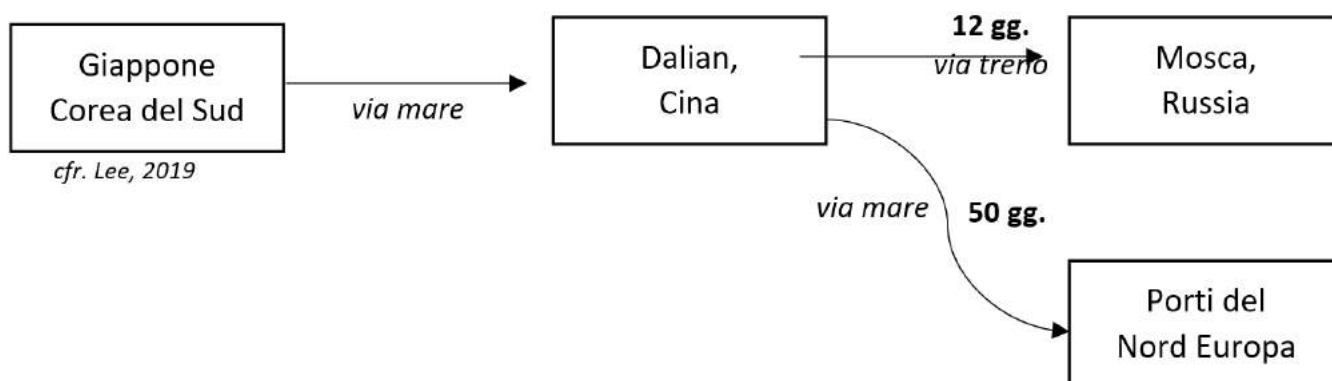
Ultimamente sono stati sperimentati anche dei tragitti via camion con dodici giorni di percorrenza tra Europa e Cina (Morgan, 2019), ma la mancanza di sicurezza stradale lungo il percorso e le eventuali condizioni metereologiche avverse non hanno ancora confermato se anche questa ipotesi può essere una soluzione per il futuro (Zheng et al., 2019).

Vi sono sei corridoi che possono essere considerati parte costitutiva della Nuova Via della Seta (Kunaka, 2018; Wiederer, 2018; Wen et al., 2019; Wenwen et al., 2019, World Bank, 2019):

- Nuovo Corridoio Economico Terrestre Euroasiatico
  - Cina-Europa (via terra)
- Corridoio Economico Cina-Mongolia-Russia
  - Cina-Europa (via terra)
- Corridoio Economico Cina-Penisola Indocinese
  - Kunming (provincia dello Yunnan, Cina) – Singapore (via terra) – Europa (via mare)
- Corridoio Economico Cina-Asia Centrale-Asia Occidentale
  - Regione Autonoma dello Xinjiang (China) – Vicino Oriente (via terra)
- Corridoio Economico Cina-Pakistan
  - Cina-Pakistan (via terra) – Europa (via mare)
- Corridoio Economico Bangladesh-Cina-India-Myanmar
  - Kunming (provincia dello Yunnan, Cina) – Calcutta (India) (via terra).

Oltre a questi, la Commissione Nazionale per lo Sviluppo e le Riforme (National Development and Reform Commission – NDRC) della Repubblica Popolare Cinese ha annunciato la creazione di un nuovo corridoio intermodale terra-mare che collegherà la città dell'entroterra di Chongqing e Chengdu, nella provincia del Sichuan, ai porti della Cina meridionale e, in primo luogo, ai quelli sul Golfo del Tonchino, nella regione autonoma del Guangxi, e al porto di Yangpu nella provincia insulare di Hainan (Ouyang, 2019).

In aggiunta, ulteriore attenzione deve essere prestata alla Via della Seta Marittima. Accanto alle linee marittime già prestabilite, come quella che connette Cina ed Europa attraverso il Mar Cinese Meridionale, lo Stretto di Malacca, l'Oceano Indiano e il Canale di Suez, anche la cosiddetta Via della Seta Polare sta acquisendo considerazione. Il Passaggio a Nord-Est ha il potenziale di accorciare la navigazione di circa nove giorni, con una riduzione del tempo di percorrenza di circa un quarto rispetto alle rotte attuali. Difatti, il Ministero dei Trasporti cinese ha sperimentato la possibilità di comunicazioni a corto raggio nel passaggio a Nord-Est e nella prima parte di quest'anno l'armatore russo Vladimir Rusanov ha trasportato 70'000 tonnellate di gas naturale liquefatto attraverso questa rotta, accorciando la navigazione del 60% (Global Times, 2019).



Volgendo lo sguardo all'Asia Meridionale, non si può non menzionare, dopo lunghi negoziati che hanno avuto inizio nello Stato del Brunei nel lontano 2013, la sottoscrizione del Regional Comprehensive Economic Partnership (RCEP) che dovrà essere ratificato per confermarne l'efficacia giuridica entro il 21 novembre 2021. Insieme alla Nuova Via della Seta, questo accordo di libero scambio fra Cina, Giappone, India, Corea del Sud, Australia, Nuova Zelanda e i dieci membri dell'ASEAN (ovvero Brunei, Cambogia, Indonesia, Laos, Myanmar, le Filippine, Singapore, Thailandia e Vietnam) potrà offrire alla Cina un cuscinetto contro le fluttuazioni e i rischi della guerra commerciale con gli Stati Uniti. L'India ne è parte esclusa (Wang & Bermingham, 2019); nonostante ciò il trattato diventerà riferimento normativo per il 30% degli scambi dell'economia mondiale con una platea di oltre 2.2 miliardi di persone.

Un simile ma distinto progetto di collaborazione fra la Cina e i membri dell'ASEAN sotto l'egida della China-Singapore (Chongqing) Demonstration Initiative on Strategic Connectivity (Iniziativa Dimostrativa sulla Connettività Strategica fra Cina e Singapore), era già stato firmato nel 2015 e si era sviluppato con più facilità: infatti, nel maggio del 2019 otto fra province e regioni autonome cinesi (ovvero Guangxi, Guizhou, Gansu, Qinghai, Xinjiang, Yunnan, Ningxia e Shaanxi) hanno dato il via libera al New International Land-Sea Trade Corridor (Nuovo Corridoio Commerciale Internazionale Terrestre e Marittimo), nell'ambito della cooperazione fra Cina e ASEAN (Ouyang, 2019). E proprio il New Western Land-Sea Corridor ha visto il completamento nel dicembre 2020, dopo i primi collegamenti parziali che avevano utilizzato 3600 servizi combinati di mare/treno per un totale di 190.000 teus movimentati con un incremento del 73% anno su anno. Questo progetto è rientrato nel 14° Piano quinquennale ed è parte costituente del 21st Century Maritime Silk Road.

Infine, sul limitare del 202, è stato portato a compimento un diverso accordo tra Ue e Cina sulla disciplina degli investimenti nelle due aree e, anche in questo caso, dopo lunghe e complesse trattative è stato sottoscritto il CAI (Comprehensive Agreement of Investments).

## Il trasporto domestico

Sin dagli anni Novanta il trasporto domestico è sempre stato gestito da imprese cinesi. Trent'anni fa si potevano osservare per le strade camion tutti uguali di colore blu, che si spostavano sulle poche arterie di comunicazione, con lunghi tempi di percorrenza, fermate per gli autisti in bivacchi, furti e condizioni meteorologiche avverse.

Oggi, invece, grazie ad una rete stradale che permette di attraversare la lungo le varie direttrici, ad una diversificazione del trasporto su strada legata alle diverse merci (temperatura controllata, congelato, farmaceutico ed alimentare, automobilistico e trasporti eccezionali di macchinari) e ai molti produttori cinesi di motrici e rimorchi, si può affermare che questo settore si è posizionato su standard europei, anche se esistono le problematiche relative al personale, ai turni di lavoro, al costo del carburante e alle limitazioni stradali.

Va sottolineato che, a causa degli investimenti richiesti per l'acquisto dei mezzi, il trasporto su strada è ancora quasi totalmente nelle mani di società cinesi, anche per via delle diverse tipologie di licenze ad operare e quelle straniere preferiscono avvalersi di subappaltatori, piuttosto che impegnarsi direttamente nella gestione di mezzi e personale.

Non dobbiamo dimenticare le centinaia di migliaia di camion che giornalmente sono impegnati nelle operazioni di carico e scarico dei containers con tempi di attesa nei terminali dei porti di ore o addirittura giorni.

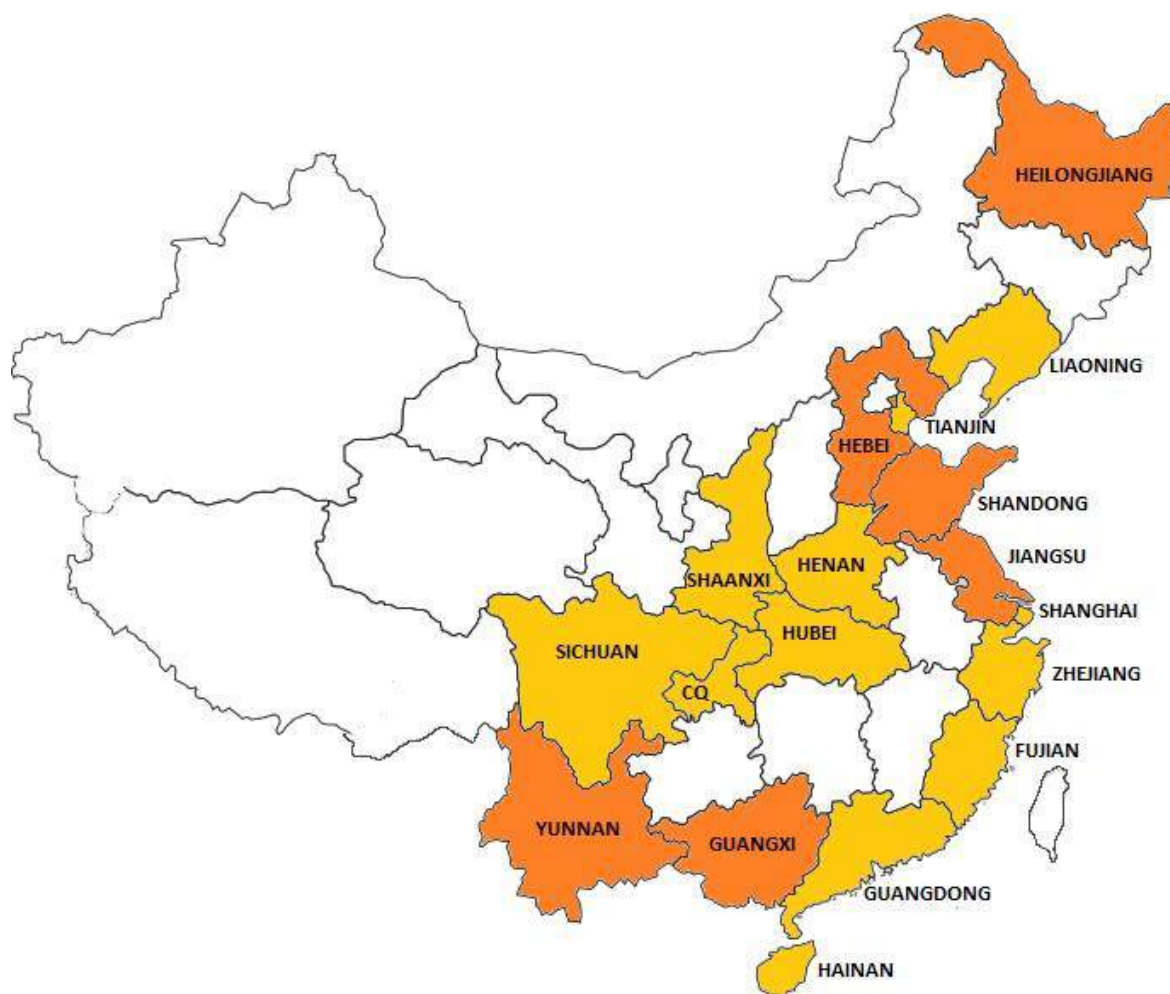
Sono passati i tempi di quando i magazzini in Cina erano capannoni con i tetti di legno o, sulla falsariga di quanto veniva costruito ad Hong Kong per la ristrettezza di spazio, a più piani.

Oggi il settore dell'immobiliare logistico si è adeguato ai modelli internazionali e la nuova funzionalità è nata nelle zone franche (free-trade-zones) e nei centri di distribuzione e consegna dei prodotti retail dopo il passaggio dell'etichettatura, necessaria per quei prodotti che non arrivano dall'estero già provvisti di etichetta cinese con la descrizione e la composizione del prodotto ed i riferimenti dell'importatore (attività di valore aggiunto). A differenza del trasporto su strada nell'immobiliare logistico sono presenti non solo società cinesi ma anche importanti multinazionali estere, in particolare di Singapore e Hong Kong, Cina.

La centralità dei centri di distribuzione si è accresciuta, in primo luogo come origine per il rifornimento di tutti i centri commerciali, quali negozi off line per i brand ma soprattutto per i servizi di e-commerce on line. Le nuove strutture fisiche sono diventate i luoghi o meglio i contenitori di quello che ogni giorno viene movimentato.

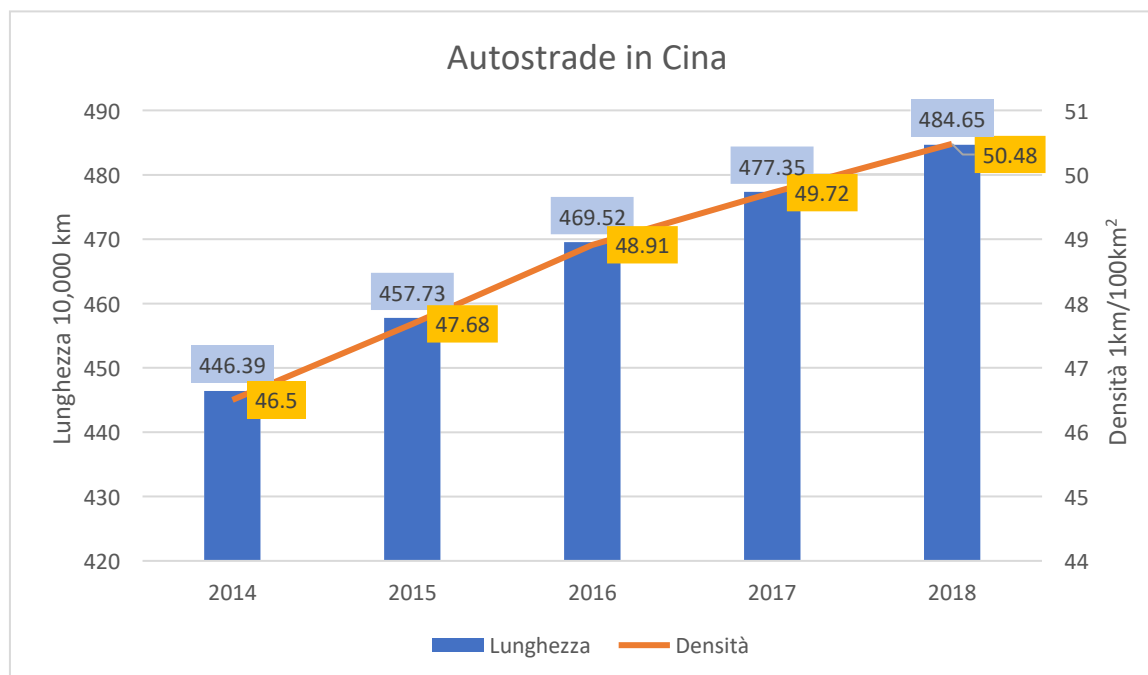
Come accennato sopra, l'immobiliare logistico è fiorito specialmente nelle zone franche per la regolamentazione favorevole. Nell'agosto 2019 il Ministero del Commercio aveva ribadito la fiducia nel successo di questo modello di sviluppo creando sei nuove zone franche – per un totale di 18, le quali secondo il Ministero del Commercio “faciliteranno ulteriormente un'apertura economica di alto livello e favoriranno uno sviluppo di alta qualità attraverso riforme più profonde” (Jing, 2019). Difatti, nelle dodici zone franche già stabilite il volume del commercio estero nella prima metà del 2019 è ammontato a 1,61 trilioni RMB (€ 206 mld), ovvero il 10,97% dell'intero commercio estero cinese, e con un incremento del 43% rispetto allo stesso periodo dell'anno precedente. Nel complesso, le zone franche costituiscono un punto focale di attrazione per gli investimenti esteri diretti. La Cina, infatti, pianifica di continuare l'espansione delle zone franche sia dal punto di vista della loro estensione territoriale, sia in termini di rilevanza (Ren, 2019). Ad esempio, la Pilot Free Trade Zone (Zona Franca Pilota) di Shanghai sarà allargata, includendo l'area di Lingang e dovrebbe avere un sistema istituzionale maturo per il 2025 (Nan & Shuiyu, 2019). E dall'area di Lingang un anno fa è uscito il primo modello di Tesla prodotto nel nuovo stabilimento ivi costruito che ha permesso, nel corso del 2020, di ottenere risultati molto importanti nel settore dell'auto elettrica (EV) facendo poi da traino agli altri competitor cinesi, in primis la NIO e Xpeng Motors.

Una nota particolare va estesa all'isola di Hainan quale punta di diamante per l'impostazione futura della Free Trade zone che dovrebbe fare da contraltare ad Hong Kong. I piani di sviluppo sono ambiziosi ed il Governo centrale ha destinato molte risorse per questo progetto: prova ne sia che dovrebbe diventare un centro scientifico per lo sviluppo del settore sanitario.



*Figura 2: le 18 zone franche in Cina.*

In una prospettiva di lungo periodo, alla fine del 2018 la Commissione Nazionale per lo Sviluppo e le Riforme (NDRC) ha delineato un tracciato secondo il quale, in aggiunta ai numerosi centri di distribuzione, si pianifica la creazione di 180 hub logistici per il 2025 in Cina, al fine di facilitare la connettività interna, oltre a migliorare il rapporto fra supply chain e PIL che, attualmente, ammonta al 14,5% e al 12% nel medio termine, con prospettive di crescita annue del 18% fino al 2021.



Qualche anno fa la consegna a domicilio non includeva il trasporto di prodotti freschi o congelati. Oggi invece nella frammentazione di questa nuova gamma di supermercati del fresco, come Hema di Alibaba tutto è possibile e per offrire questo tipo di servizio le strutture logistiche si stanno attrezzando con celle frigorifere e mezzi di trasporto di diverse dimensioni idonee al fresco. Anche l’imballaggio è innovativo. In particolare, nel settore del congelato in Cina si è avuta una crescita del 57,6 % negli ultimi cinque anni, diventando il secondo mercato dopo gli Stati Uniti. Secondo le previsioni di Euromonitor International entro il 2023 ci sarà un’ulteriore crescita del 14%. Secondo Frost & Sullivan: “La catena del freddo in Cina manca di buone infrastrutture e le capacità tecniche sono relativamente limitate: queste sono le maggiori manchevolezze che bloccano lo sviluppo nel settore dei surgelati. Con maggiori investimenti nella costruzione di una miglior catena del freddo, questa migliorerà e condurrà ad una rapida crescita nel mercato dei surgelati” (Zhu, 2019).

Quanto sopra rappresentava la situazione cinese precovid. Oggi la cold-chain, sia per la conservazione e la distribuzione del vaccino sia per una enorme massa di prodotti congelati, provenienti dall’estero che, nonostante la intensificazione dei controlli sanitari, si sta ammassando nei depositi refrigerati, ha accelerato le decisioni e le conseguenti azioni in questo settore.

Infatti, per quanto riguarda la conservazione dei vaccini, molti magazzini sono stati convertiti in aree a temperatura controllata (dai meno 80 ai più 8) mentre, al fine di evitare possibilità di contagio il Governo Centrale, attraverso la struttura dello State Administration for Market Regulation, ha lanciato un programma nazionale di tracking system per i prodotti importati surgelati e congelati. Questo programma consente la tracciabilità del prodotto con sistemi incrociati di controllo tra le diverse province dal momento dell’entrata nel territorio cinese e della registrazione in Dogana sino al deposito, al retail e al consumatore finale.

Digitalizzazione delle aziende cinesi (NBS, 2018)			
Settore	Computer	Siti web	E-commerce
Tutte le aziende cinesi	26	56	9.5%
Logistica	30	45	5.6%
Grossisti e retail	47	44	10.50%
ICT	128	106	22.7%
Anno di riferimento: 2017	Computer per 100 utenti	Siti web per 100 imprese	Aziende con transazioni ecommerce

### Il futuro della logistica in Cina

La rivoluzione di cui si accennava prima si è mossa di pari passo con l'innovazione tecnologica per coniugare la domanda di servizio con l'avanzamento della tecnologia: fenomeno unico sviluppatosi in Cina attraverso il sistema operativo del 5G (OS operative system).

Da qui in avanti la strada, complice il riconoscimento facciale (Fan, 2019a) e la guida autonoma (cfr. Nowak, 2017) è tutta nella direzione di voler automatizzare le consegne (cfr. Schröder et al., 2018).

La rivoluzione dell'e-commerce, inclusa l'opzione transfrontaliera (cfr. Xia 2016), ha sicuramente sviluppato nuovi modelli, poi utilizzati anche fuori dai confini cinesi.

Di conseguenza, l'espansione dell'e-commerce, lungi dall'essere ristretta alle megalopoli di Shanghai e Pechino sta vivendo una crescita repentina del tasso di penetrazione nelle città di fascia inferiore<sup>2</sup>. Ad esempio, circa il 70% dei nuovi utenti di JD – un gigante cinese dell'e-commerce – vengono da città di dimensioni relativamente ridotte: “il tasso di crescita dell'utenza in città delle fasce dalla terza alla sesta è più alto di quello delle città nelle prime due fasce”, trainato da una crescita nella domanda di prodotti di alta qualità in città nelle fasce inferiori (Fen, 2019b). Nel complesso, l'industria dell'e-commerce in Cina è stabile, sebbene con differenze a livello regionale: in particolare, una nota interessante va spesa sulla lieve ripresa dell'e-commerce nelle aree rurali nel corso di agosto 2019 (Xinhua, 2019). Durante la pandemia l'e-commerce ha giocato un ruolo fondamentale per la distribuzione di prodotti e pasti preconfezionati. Attraverso anche le free trade zone si sono incrementati il numero di consegne provenienti dall'estero. Nell'aprile del 2020 lo State Council China's cabinet autorizzava l'apertura di 46 nuove “cross border and commerce pilot zones” da aggiungersi a quelle già esistente per un totale di 105 strutture operative. Il valore del cross-border è cresciuto e, rispetto al mercato dell'e-commerce valeva il 12% nel 2015 mentre nel 2020 ha raggiunto la soglia del 26%.

Queste innovazioni non sono relegate ad un lontano futuro, ma sono già tangibili: nella Nuova Area di Xiong'an a Baoding, nella provincia dell'Hebei, JD e China Mobile sono in fase sperimentale per le consegne robotizzate. JD ha annunciato l'apertura della prima zona di dimostrazione per la logistica intelligente col 5G entro il 2019.

<sup>2</sup>Le città cinesi sono categorizzate gerarchicamente in sei fasce (中国城市等级制), a seconda del livello di sviluppo e dinamicità economica. Fanno parte della prima fascia le città di Shanghai, Pechino, Canton e Shenzhen. Questa categorizzazione non è ufficiale o di natura amministrativa, ma è comunemente usata nel gergo giornalistico e commerciale. N.d.T.



D'altronde, il 5G ha il potenziale di migliorare significativamente la gestione delle operazioni logistiche, ad esempio consentendo il calcolo ottimale del percorso stradale e di una distribuzione efficiente delle aree di parcheggio, oltre ad un'ulteriore digitalizzazione della tracciabilità delle spedizioni. Secondo l'Associazione GSM (Global System for Mobile Communications Association – Associazione del Sistema globale per le comunicazioni mobili), la Cina sarà entro il 2025 il più grande mercato per il 5G, con il 28% del mercato globale, anche grazie all'impegno per lo sviluppo del Ministero dell'Industria e della Tecnologia Informatica della Repubblica Popolare Cinese (Fei, 2019a).

L'innovazione tecnologica sta anche rivoluzionando il settore del trasporto su gomma su lunghe distanze, che nonostante il ruolo di grande importanza per l'economia cinese, è fortemente caratterizzato da un alto livello di frammentazione: il 95% dei camionisti di lungo raggio o sono liberi professionisti, o sono dipendenti di piccole imprese. In questo contesto, il Menbang Group, che può contare fra i propri investitori il Softbank Group (controllato dal miliardario giapponese Masayoshi Son), CapitalG (controllata da Alphabet, la holding di Google) e il Fondo per le Riforme (Reform Fund – garantito dal Governo cinese), ha sviluppato un'applicazione per la prenotazione delle spedizioni che è riuscita a ridurre dell'87% il tempo di mancato utilizzo dei camion. Difatti, il settore del trasporto stradale su lunghe distanze sembra sempre seguire sempre maggiormente le leggi di mercato, con prezzi calcolati dalle applicazioni (Dai, 2019).

Infine, relativamente alla digitalizzazione gli ultimi dati forniti dalla survey di Michael Page Group, Talent Trend 2020/2021, su un campione rappresentativo di 21000 intervistati e 5.500 aziende nell'area APAC, il 68% ha dichiarato di incrementare gli investimenti nella tecnologia e negli strumenti digitali nell'anno in corso. Buona parte degli intervistati era in Cina ed afferivano al settore della logistica e dei trasporti.

Nel dicembre del 2020 il Governo centrale ha pubblicato il documento "Sustainable Development of Transport in China" che racchiude le linee guida in parte abbozzate da questo quaderno. Nelle conclusioni del documento si sancisce che: "Transport will play a stronger part in leading economic and social development...At the present, the world is facing challenges from the COVID-19 pandemic and economic recession. Transport can play an important role in binding countries together and promoting economic growth during this difficult time".

## 引言

我很高兴向大家介绍中国意大利商会的这本手册，它是专门针对运输和物流行业的，并按照商会的传统，用三种语言（意大利语、汉语和英语）出版，以便向广大读者传播。

在最初的计划里手册将于 2020 年春季出版。随着同期新型冠状病毒导致的疫情意外发生，新冠肺炎疫情不仅在中国，在世界其他地区的运输和物流领域也出现了扩散。这种情况使得印刷和出版变得很难。现在，该行业的一些组成部分似乎已经稳定下来，但并不总是以积极的方式，但这一事实使我们能够更新这一手册，还将附上与某些商品（如时装、食品、汽车等）进口到中国的方法有关的技术资料。

2020 年是中意建交 50 周年：在 2019 年 3 月中国国家主席习近平访问罗马期间签署《新丝绸之路谅解备忘录》和同年 4 月朱塞佩·孔特总理参加在北京举行的第二届“一带一路”论坛后，我们两国之间本该有多次会晤机会，无论是文化、人际交往和经济，还是最高机构层面。遗憾的是，由于无法跨国移动，所有的项目都被取消了。

意大利位于地中海的中心和欧洲的门户，享有战略性的地理位置。因此，建设一个高效的物流产业不仅是进一步增加我们两国之间贸易往来的机会，也是增加中国和整个欧洲之间贸易往来的机会；在这方面，尽管发生了疫情，或者也许是因为疫情，在过去的一年里，在意大利，通过在陆路和铁路方面实施了一些项目，促进了与中国和欧洲的联系。手册提供了获取该领域最新信息的机会，从“新丝绸之路”及其多式联运物流走廊到技术领域的最新发展。

祝愿大家阅读后有所收获。



FIRMA  
Giuseppe Conte

## 介绍

这本关于中欧运输和物流的手册旨在提供一个关于运输和物流主题的综述，近年来，中欧运输和物流经历了显著的变化，但最重要的是，它正朝着一个由技术和以“一带一路”倡议为主导的国际地缘政治形势的方向发展。

我们希望，在读完这篇文章后，每个人都能了解这个在国内和跨国贸易中至关重要的部门正在朝着什么方向发展。

这本手册先是对传统运输的简单概括，然后继续挑战电子货代的前沿，通过区块链、自动驾驶和无人驾驶，不忘 2020 年发生了什么转变，这是新冠肺炎疫情带来的转变。

## 说明书

2014 年，欧盟中小企业中心发布了一份详细而严格的《中国物流与配送指南》（欧盟中小企业中心，2014 年）。该指南涉及不同领域（进口、出口、海运、空运），重点介绍了前几年为遵守国际要求，并尽可能遵守国际标准，中国中央政府，例如海关总署对程序进行了大力修改。

其结果是一份既支持直接运营商（即货代）也支持间接运营商（即制造和服务公司）的无懈可击的报告，各方一直通过该报告更好地了解中国的物流。

时至今日，经过 7 年的时间，欧盟中小企业中心指南在大多数情况下仍然有效。然而，在这五年中，中欧物流也因各种原因而经历了显著的变化，包括不同的地缘政治情势（中美贸易战、中澳贸易战和“新丝绸之路”倡议），中国的基础设施和体制政策（自贸区、铁路和公路）以及高速的技术发展。该手册将恰好反馈这些最新的动态。

## 传统运输的现状

在 2020 年 1 月之前，空运和海运仍然保有自己的地位，至少海运已有着上百年的悠久历史。事实也是如此，几年前各大航运公司预计国际贸易将以每年 5%-6% 的速度增长，为了提高竞争力，获得更好的经济效益，配备了能够承载数千个集装箱的船舶。不幸的是，这种情况并没有发生，相反，我们目睹了一些航运公司合并和破产，例如汉京。目前，市场被马士基、地中海航运、中远、达飞四家公司占据，而其他一些小公司只能拥有有限的生存空间。

当然，为了与国际海事组织（IMO）规定的数字保持一致，自 2008 年到 2050 年之前至少要减少 50% 温室气体排放量，这个任务意味着创新和投资。特别是《73/78 防污染公约》附件六已于 2020 年 1 月 1 日生效。附件六规定船舶燃料中硫的含量限制为 0.50% m/m（质量比），而目前的平均值为 3.5%。该法规有可能增加海运成本（Billing, Fitzgibbon, & Shankar, 2018; Dodwell, 2019; Flexport, 2019; Saul, Baertlein, & Geller, 2019）。然而，这些规定的增长是独立于这些监管规定的，但是，正如我们在后面会看到的那样，这是由于意外发生的疫情导致的。

马士基拥有 639 艘船舶，是全球货运的领导者，该公司一直在努力实施可持续的解决方案：

例如，一艘容量为 18000 标准箱的马士基集装箱船使用壳牌生物燃料混合物（Dodwell, 2019 年；Leporati, 2019 年）完成了鹿特丹至上海的往返旅程。马士基中国区董事总经理 Caroline Wu 近日在接受采访时表示，就马士基而言，硫含量的降低比航运业的平均水平高出约 9%，估计到 2050 年达到零排放的中和计划。

然而，这种尝试不仅限于一家公司，似乎是业内的共同尝试。总部设在日内瓦的意大利地中海航运公司也已下水两艘 23000 标准箱的货船，另外九艘同类货船也计划很快投入运营

（Leporati, 2019）。总部位于中国台湾的长荣公司宣布，计划投资 14-16 亿美元（12.8-14.6 亿欧元）购买 10 艘大型货船，每艘货船的容量为 23000 标准箱（Swift, 2019 年）。这一行动符合航运公司提高其货船运力的大趋势。

2019 年 9 月中旬，中国国有企业中远集团在上海推出了“星球”号货轮，其容量为 21000 标准箱，容量为 8 艘货轮船队的三分之一。从地缘政治的角度来看，“星球”号将在 BRI 的实施过程中发挥作用：其海上航线经过波斯湾后，将指向希腊的比雷埃夫斯和意大利的瓦多利古雷的地中海港口；事实上，比起北欧国家，这些南欧港口具有将海上时间缩短约 5 天的竞争优势，但是陆地上缺乏物流基础设施（Leporati, 2019）。

达飞也是 2019 年 9 月在上海推出了全球载货量最高的液化天然气动力集装箱船，即 23000 标准箱：达飞的新型液化天然气货轮结合了不断增长的载货量和增强的环境可持续性的行业趋势。这是 9 艘船舶中的第一艘。所有这些集装箱船都是在上海崇明岛中国船舶重工集团公司的两个船厂建造的，与中远集团一样（Wang, 2019b）。

另一个注意事项应涉及航运公司的内部组织：马士基在一年内损失了 6 亿欧元，将其在中国的运营系统数字化，将其文件中心移至劳动力成本较低的地区（即安徽省），或为部署区块链创造先决条件。区块链技术以可信交易为目标，在维护机密性的同时，有助于信息交换的合作。在物流业中，马士基的终端现在大约有 40 家运营商使用区块链进行系统跟踪和支付（电子合同）（参见 Rožman et al., 2019）。

上述情况与未来的发展项目相关联，但在 2020 年上半年所有的国际贸易领域暂停了几个月，然后又重新启动，出现了不平衡，一方面，中国在 2020 年第三季度重新启动，另一方面，世界上其他受疫情严重影响的国家的经济和社会生活努力正常化，但没有取得很大成效。

起初，运输的目标货物是卫生材料（IPR），主要是通过空运，但后来在海上航线上也趋于稳定，接下来，为了满足初期的需求，也有了半成品或消费品的运输。在同一时期，在跨太平洋和欧洲航线上，为了推行提高运费的政策，航运公司使投资回报和突然的严重损失资本化，决定取消许多出发（在几个月内四百个订单 - 技术术语取消航线）。然后，考虑到集装箱的稀缺性，他们决定上涨船租，而这一部分的上涨是不包括持续增加的被称作钻石层的结构税率，以获得他的优先登船权（从 30%到 70%，每周都有变化）。

此外，我们还必须考虑到延续多年的空箱问题，用技术术语定义为“不平衡”，这涉及到可用的标准箱数量，因为出口的标准箱总是多于进口的标准箱，而且各仓库或港口的设备往往不足，还因为预定到达某艘

船上的集装箱由于海关问题或由于清洁或维修要求，不可能总是在短时间内重新使用。当然在旺季的时候，这种情况被放大了。正如罗德里戈(2017)所写：“整艘船离开只是为了重新放置集装箱的情况并不少见。重新放置空集装箱可占航运公司经营成本的 15-20%”。

如今，随着海运领域的革新，空箱的储备问题又有了新的管理上的挑战。在港口地区不断加强管制以寻找病毒，造成海关业务的延误；如上所述，在计算出口流量大于进口流量时必须考虑到这一点。

2020 年期间，中国交付了 260 万标准箱的新的生产制造，其中 70%是在下半年生产的。

根据中国船舶工业协会提供的数据，仅在上海日产量增加，每个月就能生产约 30 万个，但还没有充分的显示出能够填补现有的不足。

这种普遍的寡头垄断只会有利于排名靠前的少数公司。事实上，根据联合国运输和发展委员会的规定（2018 年，第 33 页），海运“整合可以带来更好的供应管理，提高船队利用率和效率”，以及“较小的运费波动”。然而，它“可能对竞争产生潜在的负面影响[.....]，并可能导致形成寡头垄断。不断增长的整合可以增强市场力量，但也可能导致供应和服务质量下降，价格上涨。”

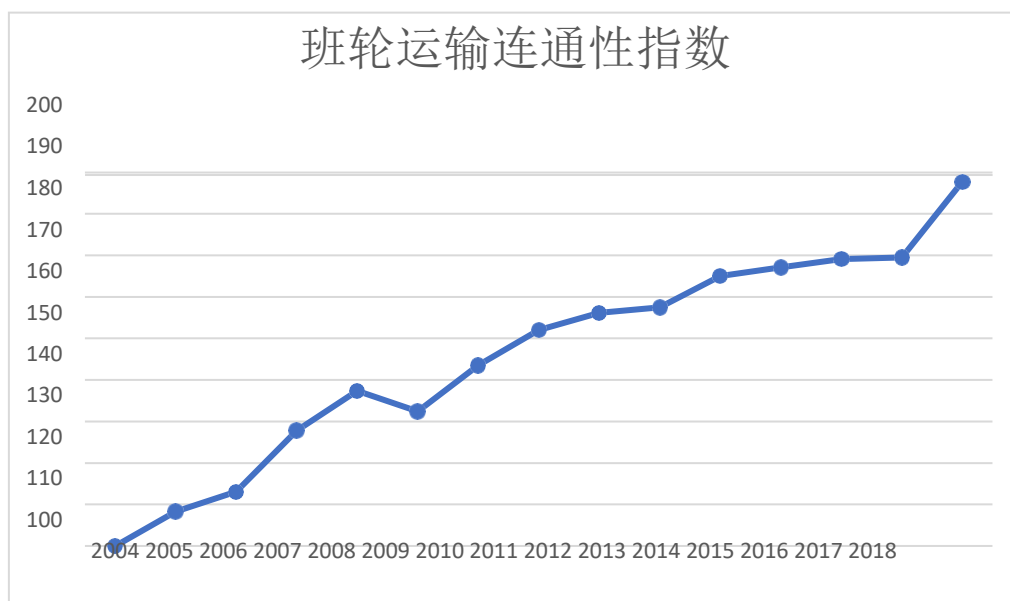


图 1: 班轮运输连接指数 (2004=100) ; 世界银行 (2019) 。

自 2014 年《欧盟中小企业中心指南》发布以来，中国班轮运输连通性提高了 13.77%，特别是 2018 年同比增长了 10.75%。

对于航空运输而言，一些航空公司已经破产；一些航空公司放弃了对其没有战略意义的航线；一些航空公司在中国建立枢纽作为其活动的核心，（例如河南郑州的卡哥特卢克斯）；一些中东航空公司也已经进入中国市场，例如阿联酋航空公司和埃塞俄比亚航空公司。另一个新的因素是勒奥斯航空进入货运领域，这是意大利 Alpitour 公司旗下的一家公司，曾在南京机场开展客运服务，但自疫情爆发以后，又增加了从意大利到中国机场的直接包机服务。

此外，最近几个月，中国转运公司已经整合了服务，特别是与欧洲的服务，利用包机从中国的二级机场，（济南、石家庄）到欧洲其他枢纽，如列日、奥斯特拉瓦、莱比锡，然后通过公路运输到欧洲不同的目的地。

这两种情况并没有导致市场分裂，相反，它们的寡头垄断集中制约了货运销售价格，2019 年除了少数时刻，已经没有受到大跌的影响，而到了 2020 年，价格情况就失去了控制，没有任何可能解决的延续性。还是在 2019 年 7 月，国际货币基金组织预测，2019 年全球 GDP 增速将接近+3.2%，2020 年将增至 +3.5%，尽管一些分析人士预计，由于 2019 年第二季度一些主要经济体增长可能放缓（欧阳和周，2019）。2020 年全球 GDP 为负值 2%，2021 年预测为正值。

如前文所述，近两年受中美贸易战影响，国际形势恶化，希望今年能结束贸易战。如表所示，欧洲的数据振奋人心，但在中国的汽车行业与供应商供应链的下降，危及今年尤其是 2020 年业绩的维持。欧洲仍然是对华贸易的重要参与者之一。

海运吞吐量	省份	2015	2016	年/年变化	2017	年/年变化
总计		784378	810933	3.39%	865464	6.72%
大连	辽宁	41482	43660	5.25%	45517	4.25%
营口	辽宁	33849	35217	4.04%	36267	2.98%
秦皇岛	河北	25309	18682	-26.18%	24520	31.25%
天津	天津	54051	55056	1.86%	50056	-9.08%
烟台	山东	25163	26537	5.46%	28816	8.59%
威海	山东	4213	4340	3.01%	4468	2.95%
青岛	山东	48453	50036	3.27%	51031	1.99%
日照	山东	33707	35007	3.86%	36136	3.23%
上海	上海	64906	64482	-0.65%	70542	9.40%
连云港	江苏	19756	20082	1.65%	20605	2.60%
宁波-舟山	浙江	88929	92209	3.69%	100933	9.46%

台州	浙江	6237	6771	8.56%	7057	4.22%
温州	浙江	8490	8406	-0.99%	8926	6.19%
福州	福建	13967	14516	3.93%	14838	2.22%
厦门	福建	21023	20911	-0.53%	21116	0.98%
汕头	广东	5181	4985	-3.78%	4890	-1.91%
广州	广东	50053	52254	4.40%	57003	9.09%
湛江	广东	22036	25612	16.23%	28209	10.14%
北海	广西	2468	2750	11.43%	3169	15.24%
防城	广西	11504	10688	-7.09%	10355	-3.12%
八所	海南	1767	1516	-14.20%	1605	5.87%
海口	海南	9204	9952	8.13%	11297	13.51%

### 新丝绸之路：铁路和公路互联互通

例如东方快车，从法国出发，穿越欧洲部分地区，到达伊斯坦布尔，横贯西伯利亚的铁路，从莫斯科延伸到海参崴，我们必须意识到，在欧亚视野中，欧洲和中国之间的铁路运输如今已经成为现实。

大约 20 年前，当复兴丝绸之路的构想初具雏形时，意大利前总理、欧盟委员会前主席罗曼诺·普罗迪表达了他的连通理念：“16 世纪欧洲第一次海外扩张开始时，亚洲是当时世界上最富有的地区，它的文明可能是当时最先进的。历经过去几十年的惊人增长，尽管最近发生了危机，造成了现在的局面，但是期望恢复到以前的状态并非是不现实的”（普罗迪，2000）。

从我们的角度来看，这条恢复原有丝绸之路的道路代表了这几年交通运输业的真正的创新和潜在的选择。正如法国前总理让·皮埃尔·拉法兰所说的那样：“欧洲必须本着互惠互利的精神，就如何在一带一路倡议上开展合作，向中国提出切实可行、公平的建议。[.....]中欧“一带一路”有着巨大的合作潜力，因此我们必须共同制定从中受益的方式方法”。（国际商会北京会议 2018）

事实上，欧洲和亚洲之间的联系已经延续到中国大部分主要城市，由于共同承担（许多船只为多个承运公司运货）和重新绘制海运路线，与 35-40 天的较长海运时间相比，海运的过境时间平均减少 18-20 天，并且成本更低。

与海运相比，最初铁路的运费相对较高，但在 2020 年，在欧洲，即使德国与意大利的铁路运费最终价格不同，但仍具有竞争力。事实上，由于意大利目前缺乏发达的铁路货运线路网络与中国进行连接，最后一部分往往由公路运输，因此导致意大利铁路运费的最终价格较高。

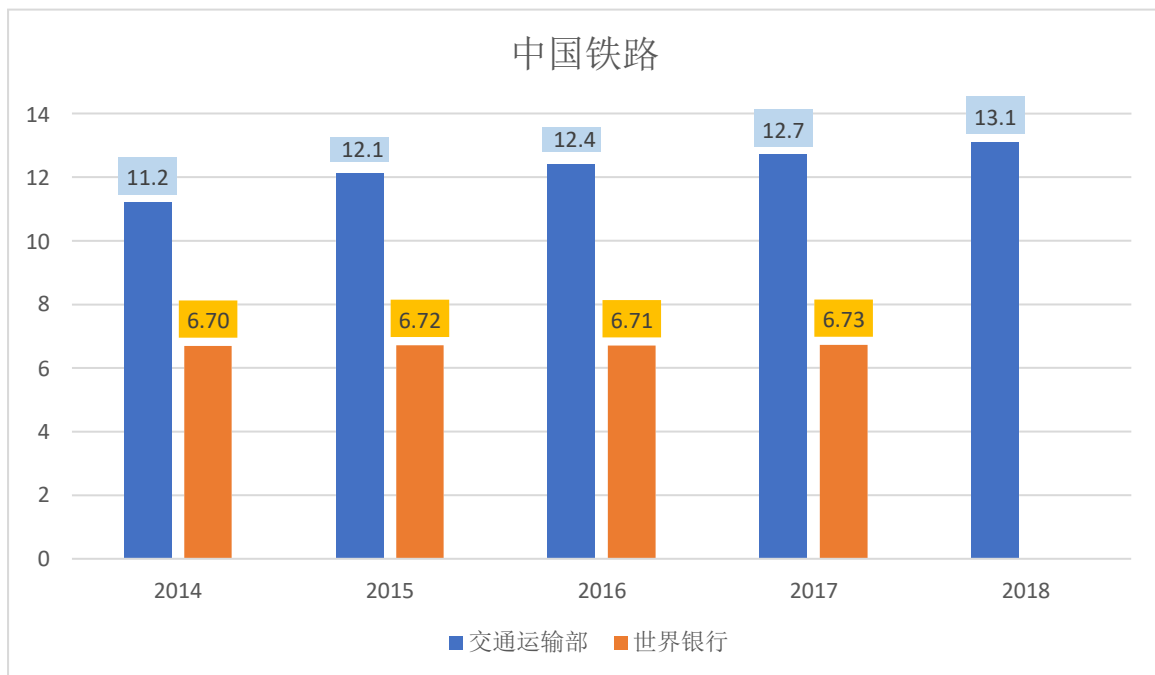


图 2: 中国的铁路 (交通运输部, 2019 年;世界银行, 2019 年)。交通运输部数据说明了平行轨迹, 而世界银行数据则不然。世界银行尚未提供 2018 年的估算。

近两年来, 中国和意大利曾进行铁路直达货运试验, 但没有取得成功。2019 年, 总部位于意大利布斯托-阿西齐奥的瑞士公司霍派重新规划了一条新路线, 希望这条路线可以保证未来的连通性 (Corso, 2019 年和 Rete 55, 2019 年)。目前中欧之间最重要的两条铁路通道是以重庆为始发地的铁路线路, 如今中欧贸易更加平衡, 运向欧洲的货物, 往返的比单程的多 (新华网, 2019), 以及郑州至欧洲的特快铁路凭借得天独厚的地理位置, 可以在 15 天内与欧洲实现铁路连接 (新华, 2019), 除此之外, 还加强了与西安的联系。

如今我们可以说, 维罗纳枢纽与中国的联系已经合理化, 特别是通过 Mercitalia (FS 拥有的一家公司) 和霍派与维罗纳、布斯托-阿西齐奥的瑞士公司、马尔恰尼塞和焦维纳佐之间的联系正在建立, 以便在其他南部地区继续发展。

尽管如此, 根据 Jiang et al. (2018) 的说法, 提到的一点也很重要, 铁路货运成本的 60% 是由政府补贴承担的, 而目前政府补贴规模较小, 且存在诸多限制。

最近, 已经进行了中欧公路货物运输时间为 12 天的试验 (Morgan, 2019), 但由于沿途道路缺乏安全性和可能出现的恶劣天气状况, 导致这一方案尚未被证实是否能成为未来可行的解决方案 (Zheng et al., 2019)。

有六条走廊可以被视为新丝绸之路的组成部分 (Kunaka, 2018; Wiederer, 2018; Wen et al., 2019; Wenwen et al., 2019, World Bank, 2019):



- 新欧亚大陆桥经济走廊
  - 中欧（陆路）
- 中蒙俄经济走廊
  - 中欧（陆路）
- 中国-印度支那半岛经济走廊
  - 昆明（中国云南省）-新加坡（陆路）-欧洲（海运）
- 中国-中亚-西亚经济走廊
  - 新疆自治区（中国）-西亚/中东（陆路）
- 中巴经济走廊
  - 中巴（陆路）-欧洲（海运）
- 孟中印缅经济走廊
  - 昆明（中国云南）-加尔各答（印度）（陆路）

除此之外，国家发展和改革委员会（发改委）已宣布将建立一条新的陆海走廊，将内陆城市重庆和成都（四川）与华南的港口连接起来，首先是广西壮族自治区的北部湾港口和海南省的洋浦港。（欧阳，2019）

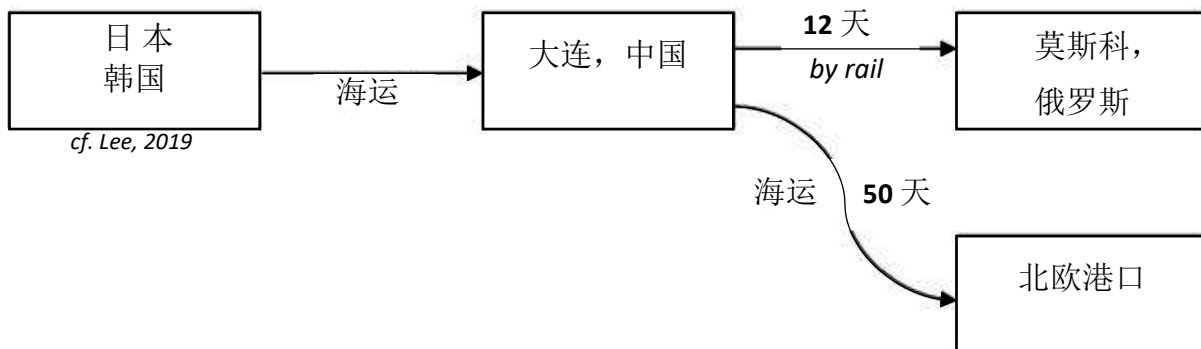


图 3: “一带一路”倡议沿线联运实例

此外，应进一步关注海上丝绸之路。除了已经建立的航运路线，如通过中国南海，马六甲海峡，印度洋和苏伊士运河连接中国和欧洲的路线外，所谓的“极地丝绸之路”也在考虑之中。北冰洋的东北通道有可能将行程缩短 9 天，与当前路线相比减少 1/4。实际上，交通部一直在探索东北通道的短波通信能力，今年上半年，俄罗斯货运公司俄罗斯船东弗拉基米尔·鲁萨诺夫通过东北通道运送了 7 万吨液化天然气，将运输时间缩短了 60%（环球时报，2019）。

纵观南亚，自 2013 年漫长的谈判在文莱开始之后，人们不禁要提及签署区域全面经济伙伴关系（RCEP），必须批准该协定以确认其法律效力，2021 年 11 月 21 日.. 与“新丝绸之路”一

起，中国，日本，印度，韩国，澳大利亚，新西兰与东盟十国（即文莱，柬埔寨，印度尼西亚，老挝，缅甸）之间的自由贸易协定，菲律宾，新加坡，泰国和越南）将能够为中国提供缓冲，以抵御与美国贸易战的波动和风险。印度被排除在外（Wang & Bermingham, 2019）；尽管如此，该条约仍将成为世界经济 30% 贸易的监管参考，受众超过 22 亿。

中国与东盟成员国之间在中国-新加坡（重庆）战略互联互通示范倡议的主持下，开展了一个类似但截然不同的合作项目，该项目已于 2015 年签署，并且发展起来更加容易：事实上，2019 年 5 月，中国的八个省区（广西，贵州，甘肃，青海，新疆，云南，宁夏和陕西）为新的国际陆海贸易开了绿灯。作为中国与东盟合作的一部分（新国际陆路和海上贸易走廊）（欧阳，2019 年），新的西部陆海走廊于 2020 年 12 月竣工，在使用 3600 次海运/火车组合服务，总共处理了 190.000 个标准箱的第一部分连接之后，同比增长 73%，是“十四五”计划的一部分并且是 21 世纪海上丝绸之路的组成部分。

最后，在 2020 年尾声，欧盟和中国之间就这两个领域的投资纪律达成了另一项协议，在这种情况下，经过漫长而复杂的谈判，还签署了 CAI（全面投资协议）。

## 国内货运

自 1990 年代以来，国内货运一直由中国公司管理。三十年前，有可能在大街上发现蓝色的标准化卡车，这些卡车在少数道路上行驶，运输时间长，露营棚当作休息区，非常容易遭受盗窃和恶劣天气的影响。如今，由于以下三个原因，该行业已达到欧洲标准：第一，遍布中国的公路网；第二，公路运输的商品多样化（例如，受控温度、冷链、制药和食品、汽车以及重型机械）；第三，许多中国的卡车和拖车制造商。但是，与人力资源、工作班次、燃料成本和道路限制有关的一些问题仍然存在。

我们不应忘记每天部署在集装箱装卸作业中的几十万辆卡车，等待数小时甚至数天的时间来装卸集装箱。空箱这个长期存在的问题，行话被称为不平衡。这一问题涉及到可用的标准箱数量，因为出口的标准箱总是多于进口的标准箱，而且往往在仓库或港口设备短缺。此外，并非所有进入某艘船的集装箱都能被及时重新使用，无论是由于清关问题，还是由于清洁和维护：这些问题在旺季会被放大。事实上，正如 Rodrigue (2017) 所指出的：“整艘集装箱船被租用仅仅是为了重新定位空集装箱的情况并不少见。[.....]重新定位空舱可占航运公司运营成本的 15% 至 20%。”

在中国，由于空间稀缺，曾沿用中国香港开发的木制屋顶或多层棚屋的仓库时代已经一去不复返了。如今，物流房地产已经符合国际标准，新的功能在自由贸易区（FTZ）和分销中心（DC）诞生，用于零售产品在重新贴标后的分销和交付，特别是缺少附有产品说明、成分和进口方参考（增值服务）中文标签的进口产品。与公路货运不同的是，房地产物流业不仅经营中国企业，而且经营国外主要跨国公司，尤其是新加坡和中国香港。

作为百货商店翻新和离线品牌商店的起源，分销中心的关键作用得到了增强，但主要用于电子商务在线服务。新的房地产已经成为日常运输的场所，或者更好的空间。

如上所述，房地产物流由于其良好的监管环境而蓬勃发展，特别是在自贸区。就在 2019 年 8 月，商务部

(MOC) 重申了对这一发展模式成功的信心，该模式创建了 6 个新的自由贸易区， 总共 18 个， 商务部表示，“将通过更深入的改革进一步促进高水平的开放和高质量的发展” (Jing, 2019) 。

事实上，在之前建立的 12 个自贸区中，2019 年上半年进出口总额为 1.61 万亿元人民币 (2060 亿欧元)，比上年增长 43%，占中国外贸总额的 10.97%。最终，自贸区是吸引外国直接投资的主要场所。中国计划继续扩大自贸试验区的领土和意义 (Ren, 2019)：例如，上海自贸区将扩大至包括临港地区，并在 2025 年前建立成熟的制度体系 (Nan&Shuiyu, 2019) 。

一年前，在临港地区的新工厂生产出来的第一批特斯拉模型从临港地区发布，这使 2020 年在电动汽车 (EV) 领域获得了非常重要的成果，然后带动其他中国竞争对手，主要是蔚来汽车和小鹏汽车。

特别要注意的是海南岛，它是未来自由贸易区的先锋，而自由贸易区应与香港相制衡。发展计划雄心勃勃，中央政府为该项目分配了许多资源：这证明它应该成为卫生部门发展的科学中心。

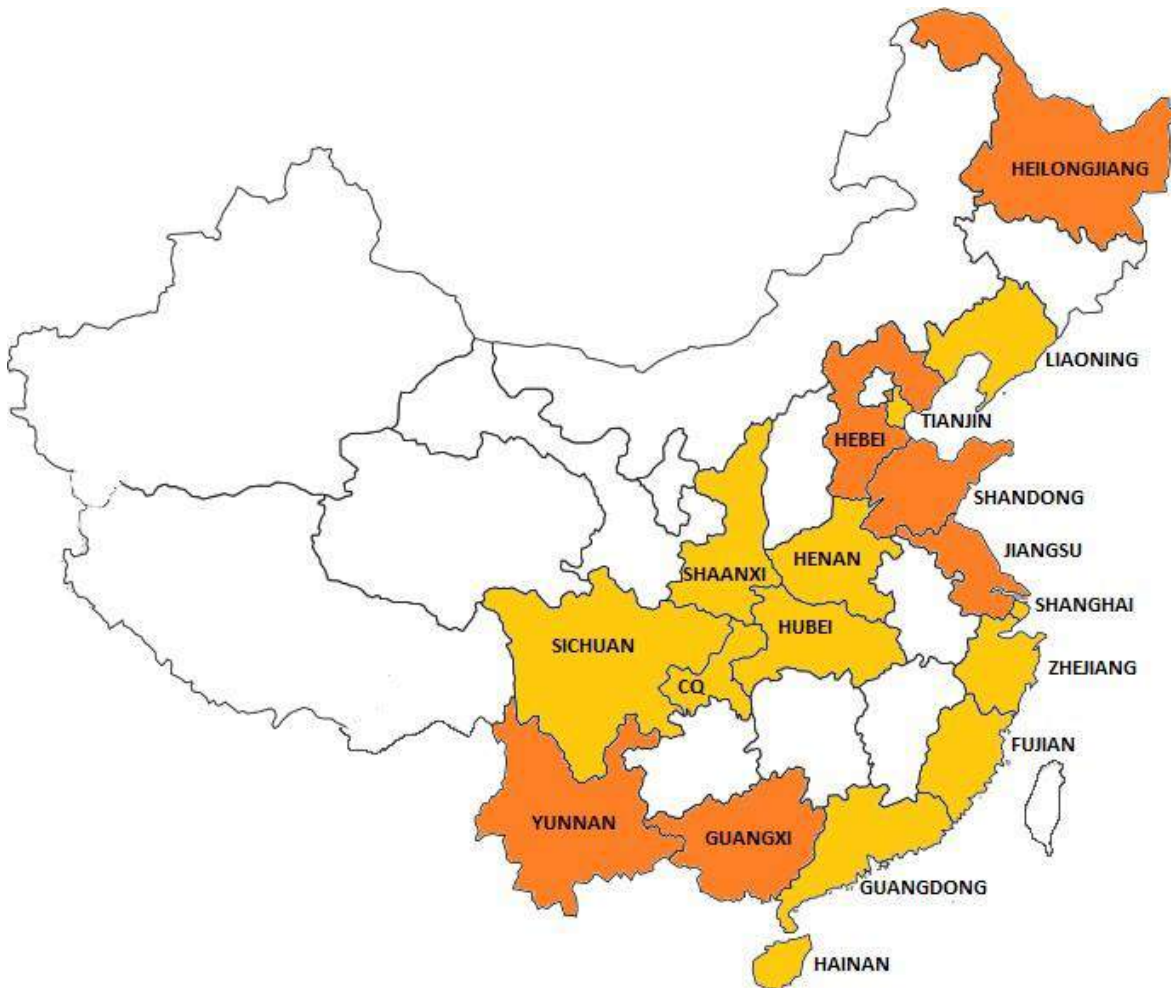
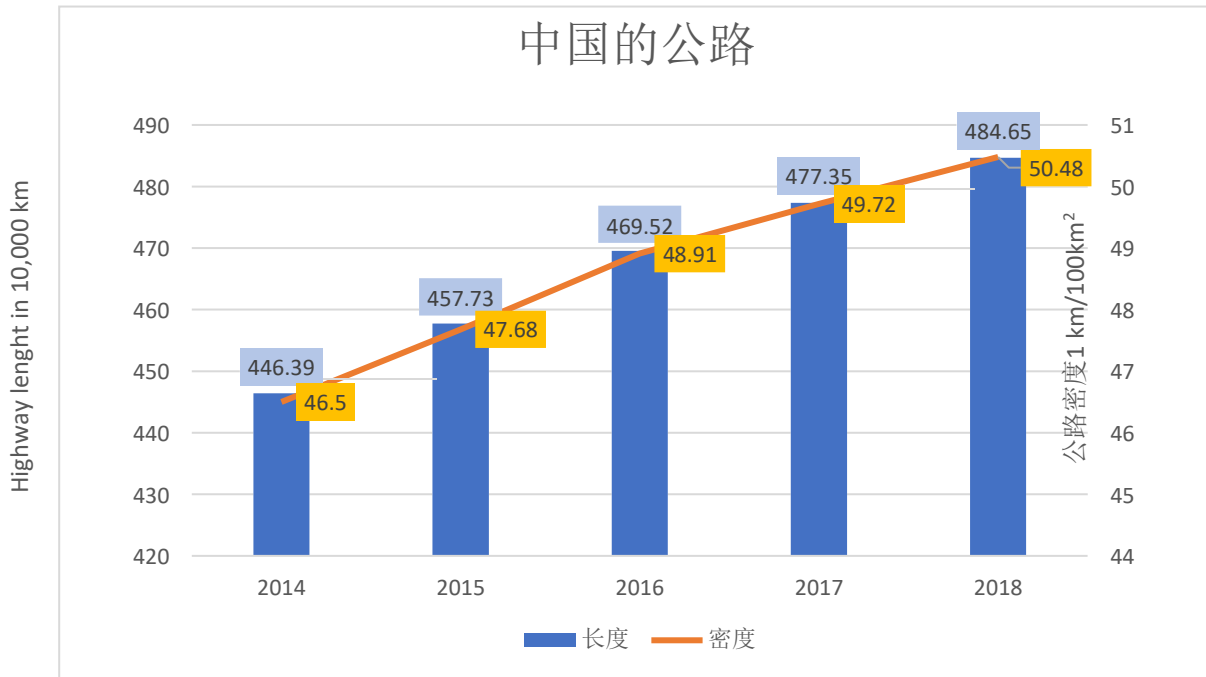


图 4: 中国 18 个自由贸易区。

从长远的角度来看，国家发展和改革委员会已于 2018 年年底制定了一个蓝图，该蓝图计划在几个特区的基础上，到 2025 年在中国建立 180 个物流枢纽，以缓解国内运输连接的压力，以及提高供应链在 GDP

中的比例：目前该比例在中期为 14.5% 和 12%，预计到 2021 年的年增长前景为 18%。

这进一步的进展是对以前所取得成就的发展：为乘客和部分货运修建了 25000 公里的高速铁路，并建立了以主要干道为基础的公路网。



几年前，食品运输不包括新鲜或冷冻产品的运输。但是现在，相反，在像盒马或阿里巴巴这样的生鲜食品链的爆发性增长中，一切皆有可能：要提供这种服务，物流基础设施将配备冷藏室，装有各种车厢的冷藏卡车，以及创新包装(cf. Zhao et al., 2019)。特别是，中国的冷冻行业增长了 57.6%，成为仅次于美国的第二大市场。欧睿国际（预测，到 2023 年将进一步增长 14%。Frost & Sullivan 表示：“中国的冷链物流系统缺乏良好的基础设施，其技术相对薄弱，这是阻碍冷冻食品行业发展的最大缺点。随着更多的投资用于建设更好的冷链物流，它将改善并推动速冻食品行业的更快发展” (Zhu, 2019)。

以上代表了中国在疫情之前的情况。如今，从国外进口的用于保存和分发疫苗以及大量冷冻产品的冷链，尽管进行了健康检查，但仍在冷藏库中堆积，尽管进行了健康检查，但它仍在冷藏库中堆积，这加快该领域的决策和后续行动。

实际上，在疫苗的保存方面，许多仓库已改成温控区（从负 80 到正 8），而为了避免传染的可能性，中央政府通过国家市场监督管理总局的结构，已启动了针对冷冻进口产品的国家跟踪系统计划。该程序允许从进入中国领土并向海关注册的那一刻起，直到仓储、零售、最终到达消费者手里，在不同省份之间使用交叉控制系统对产品进行追溯。

电子商务革命，包括跨境方案(cf. Xia, 2016)，毫无疑问开发了新模式，然后扩展到中国境外。还值得注意的是，水果，鱼和冷冻肉的进口量占进口的最大份额：天津，青岛和宁波等港口 在港口区附近建造了先进的接收模式。

中国公司数字化 (国家统计局, 2018)			
	电脑	网站	电子商务
所有中国企业	26	56	9.5%
运输、储存和邮寄	30	45	5.6%
批发和零售	47	44	10.50%
信息通信技术	128	106	22.7%
参考年份 2017	供 100 个用户使用的计算机	百家企业网站	有电子商务交易的公司百分比

### 中国物流的未来

电子商务革命已经与技术创新同步进行，以使服务需求与技术进步相匹配：这是在中国由于5G 操作系统（OS 操作系统）开发而出现的独特事件。从现在开始，还需要考虑到面部识别(Fan, 2019a)和自动驾驶 (cf. Nowak, 2017)，发展趋势是朝着进一步自动化交付(cf. Schröder et al., 2018)迈进的。

电子商务革命，包括跨境选择 (cfr.Xia 2016)，无疑开发出了新的模型，这些模型随后也在中国以外使用。

此外，电子商务的扩展不仅限于上海和北京的特大城市，它正在渗透到低线城市中。例如，中国电子商务巨头京东的新增用户中，约有 70%来自较小的城市，受低线城市对高质量产品需求不断增长的推动，三至六线城市的用户增长率高于一、二线城市(Fen, 2019b)。总体而言，尽管存在地区差异，中国的电子商务行业还是稳定的：特别值得注意的是，2019 年 8 月农村地区的电子商务略有复苏（新华网，2019）。在疫情期间，电子商务在预包装产品和餐食的分销中起着根本性的作用，通过自由贸易区从国外运送的商品数量也有所增加，2020 年 4 月，国务院中国内阁批准在已有的 105 个运营机构中增加 46 个新的“跨境和商业试验区”，与电子商务市场相比，跨境电商的价值已经增长，它在 2015 年的价值为 12%，而 2020 年达到26%。

这些创新不是在遥远的未来，而是很快就会进行展示：在雄安新区（河北保定），京东和中国移动正处于机器人交付的试验阶段，京东已宣布在 2019 年内开放第一个 5G 智能物流示范区。5G 具有显著改善运营管理的潜力：从能够优化计算行车路线和停车场分布，到进一步数字化跟踪。根据全球移动通信系统协会的数据，到 2025 年，中国将成为全球最大的 5G 市场，即占全球市场的 28%，这也要归功于中华人民共和国工业和信息化部的发展推动（Fei, 2019a）。

技术创新也正在给长途卡车运输业带来革命性的变化，尽管长途卡车运输业对中国经济具有显著的影响，但其主要特点是高度分散：95%的长途卡车司机要么是自营职业，要么是受雇于一家小公司。在这种情况下，Menbang 集团与其投资者 Softbank 集团（由日本亿万富翁Masayoshi Son 控制）、CapitalG（谷歌控股公司 Alphabet）和改革基金（由中国政府担保）一起开发了一个货运预订应用程序，能够将卡车

空车的时间减少 87%。事实上，长途卡车货运行业越来越遵循市场规律，定价完全可以由应用程序计算 (Dai, 2019)。

最后，关于数字化，米高蒲志集团调查提供的最新数据，即人才趋势 2020/2021，该调查的代表性样本来自亚太地区 21,000 名被调查者和 5,500 家公司，其中 68% 的人宣布在本年度增加对技术和数字工具的投资，其中很大一部分受访者在中国，并且与物流和运输业有关。

2020 年 12 月，中央政府发布了《中国交通的可持续发展》文件，其中包含本手册部分勾勒的指导方针。该文件的结论指出：运输将在领导经济和社会发展中发挥更重要的作用。目前，世界正面临着新冠疫情和经济衰退的挑战。在这一困难时期，运输在将各国团结在一起并促进经济增长方面发挥重要作用”。

## 结论

我们希望为 *hic et nunc* 提供一个框架。

接下来的几年中，在我之后，肯定会有人受到任命来更新此出版物，因为未来会有更多的外部解决方案诞生。人工智能肯定会覆盖那些少量依靠人工的任务。

## English version

### Introduction

This CICC report on China-Europe transportation and logistics aims at providing an updated description of this crucial component of the economic framework. Logistics has experienced significant changes during these last years and it has been influenced by the sway of both technology and international geopolitical scenario, chiefly by the Belt & Road Initiative [BRI].

After reading this publication, we wish that each reader can have a better idea of the direction undertaken by this sector, still of vital importance for national and transnational trade.

Starting with a brief picture of traditional transportation, this report reaches the frontier of e-forwarder, touching upon the Internet of Things [IoT], block chain, self-driving technology, and drones.

#### Literature review

In 2014 the EU SME Centre published a detailed and rigorous China Logistics and Distribution Guide (EU SME Centre, 2014). The Guide dealt with different areas (import, export, sea freight, air freight), focusing on the procedures that in the previous years had been strongly modified in China by the Central Government, i.e. by the General Administration Custom (GAC), to comply with international requests and, when possible, with international standards.

The result is a well-written report supporting both direct operators – i.e. forwarders – and indirect ones – i.e. manufacturing and service firms –, which have been using it to better understand logistics in China.

Now, five years later, for the most part the EU SME Centre Guide remains valid. However, in these five years China-Europe logistics has also experienced sensible changes for a variety reasons, including a different geopolitical scenario – the US-China Trade War and the BRI –, infrastructural and institutional policies in China – namely FTZs, railways and highways –, as well as fast technological developments. This report will tackle precisely these latest dynamics.

#### Status quo of conventional transportation

Air and sea freight still preserve their own identity, strong of a centennial history, at least at sea. However, some years ago the major shipping lines, foreseeing a yearly development of international trade around 5%-6%, equipped themselves with vessels capable to carry thousands of containers, in order to boost competitiveness and get higher economic returns. Unfortunately, this has not happened and instead we witnessed the concentration of shipping lines through merges by incorporation and to the bankruptcy of some companies, such as Hanjing. At present, the market is held by four companies – namely Maersk, MSC, COSCO, CMA – on the top of some minor ones with a limited scope of operations.

For sure, the mandate to cut at least 50% of 2008 greenhouse gas emissions before 2050 will imply innovations and investments aimed at aligning with the figures fixed by the International Maritime Organization (IMO). On January 1, 2020, the Annex VI of the MARPOL 73/78 convention will enter into force: Annex VI introduces a limit on the content of sulfur in ship fuels of 0.50% m/m (mass by mass), while the current average amounts to 3.5%. This regulation has the potential to increase the cost of sea freight (Billing, Fitzgibbon, & Shankar, 2018; Dodwell, 2019; Flexport, 2019; and Saul, Baertlein, & Geller, 2019).

Maersk which, with a fleet of 639 vessels, is a global freight leader, has been trying to implement sustainable solutions: for instance, a Maersk container vessel with a capacity of 18,000 TEUs completed a Rotterdam-Shanghai round trip running on a Shell biofuel blend (Dodwell, 2019; Loporati, 2019).

However, such adaptation, far from being limited to one player, appears as common trajectory in the industry. The Italian company MSC, headquartered in Geneva, has also set onto the water two 23,000 TEUs freight ships and nine more of the same kind are planned to become soon operational (Loporati, 2019). Evergreen, based in Taiwan (China), has announced its plan to invest 1.4-1.6 bn US\$ (€1.28-1.46 bn) in the purchase of ten giant cargo vessels, each with a capacity of 23,000 TEUs (Swift, 2019). This course of action fits into the general trend which sees shipping lines increase the capacity of their freight vessels.

In mid-September the Chinese SOE Cosco launched the cargo ship Planet in Shanghai, with a capacity of 21,000

TEUs, third of an eight freight vessels fleet. As geopolitical implication, the Planet will have a role in the implementation of the BRI: its sea route, after passing by the Persian Gulf, will point toward the Mediterranean ports of Piraeus, in Greece, and of Vado Ligure, in Italy; in fact, these Southern European ports have the competitive advantage of cutting time at sea by roughly five days with respect to the Northern European ones, but experience a lack of logistics infrastructures on dry land (Leporati, 2019).

CMA launched, again in Shanghai and in September, the container ship powered by liquefied natural gas with the highest cargo capacity around the globe – i.e. 23,000 TEUs: CMA new LNG-freight vessel combines the industry trends of increasing cargo capacity and enhanced environmental sustainability; the first of nine ships, all built – as the the Cosco ones – in the two shipyards of the CSSC (China State Shipbuilding Corp) in Chongming Island, Shanghai (Wang, 2019b).

A further note shall concern the internal organization of shipping lines: Maersk, which lost 600 million euros in one year, digitalized its operative system in China, moving its document centers in areas with low labor costs (i.e. Anhui province) or creating the preconditions to deploy block chain.

Block chain technology aims at trusted transactions and helps cooperation in information exchange while upholding confidentiality. Within the logistics industry, on the top of Maersk there are now around 40 operators using block chain for tracking system and payment (e-contract) (cf. Rožman et al., 2019).

For what concerns air freight, some carriers went bankrupt, others left non-strategic routes, others established hubs in China as core of their activities – e.g. Cargolux in Zhengzhou, Henan province (Cargolux, n/d) –, and some Middle Eastern carriers entered the Chinese market – e.g. Emirates and Ethiad.

These two scenarios did not lead to market fragmentation, but rather this oligopolistic concentration influenced the selling price of sea freight, which – albeit exceptions – has not experienced significant depreciations. Last July, the IMF forecasted global GDP growth to close at +3.2% in 2019, increasing to +3.5% in 2020, even if some analysts expect an IMF downgrading due to the growth slowdown of some major economies in 2Q (Ouyang & Zhou, 2019).

Unfortunately, the forecasted growth of international trade did not become reality and in 2019 they will maybe close below 3%. In the last months, the international scenario has been exacerbated by the US-China trade war, even if the recent trade talks in October 2019 have sparked the possibility of significant developments. As in the table shown above, European data are encouraging, but the slowdown of the Chinese automotive industry with its supply chain jeopardizes the retention of this output levels in the current year and especially in 2020.

<b>EU-China Trade in goods, € billions</b>			
<b>Year</b>	<b>EU imports</b>	<b>EU exports</b>	<b>Balance</b>
2016	352.3	169.7	-182.6
2017	375.4	197.6	-177.7
2018	394.8	209.9	-184.9
<b>Source: European Commission, 2019</b>			

This prevalent oligopoly will favor only the returns of those few players at the top of the ranking. Indeed, according to the UNCTD (2018, p.33), the sea freight “[c]onsolidation can result in better supply management, fleet utilization and improved efficiency”, as well as in “less fluctuation in freight rates”. However, it “can have a potential negative impact on competition [...] and may result in oligopolistic market structures. Growing consolidation can reinforce market power, potentially leading to decreased supply and service quality and higher prices.”



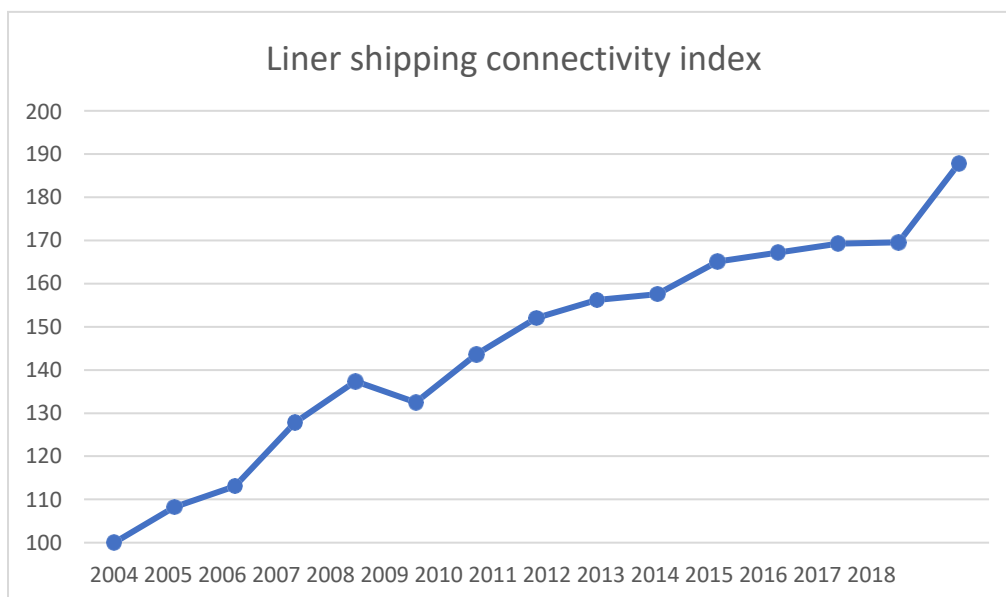


Figure 3: Liner shipping connectivity index (2004=100); World Bank (2019).

Since the publication of the EU SME Centre Guide in 2014, China experienced an improvement of 13.77% in liner shipping connectivity: in particular, during 2018 there was a year-on-year increase of 10.75%.

Volume of sea freight handled	Province	2015	2016	y/y change	2017	y/y change
Total		784378	810933	3.39%	865464	6.72%
Dalian	Liaoning	41482	43660	5.25%	45517	4.25%
Yingkou	Liaoning	33849	35217	4.04%	36267	2.98%
Qinhuangdao	Hebei	25309	18682	-26.18%	24520	31.25%
Tianjin	Tianjin	54051	55056	1.86%	50056	-9.08%
Yantai	Shandong	25163	26537	5.46%	28816	8.59%
Weihai	Shandong	4213	4340	3.01%	4468	2.95%
Qingdao	Shandong	48453	50036	3.27%	51031	1.99%
Rizhao	Shandong	33707	35007	3.86%	36136	3.23%
Shanghai	Shanghai	64906	64482	-0.65%	70542	9.40%
Lianyungang	Jiangsu	19756	20082	1.65%	20605	2.60%
Ningbo-Zhoushan	Zhejiang	88929	92209	3.69%	100933	9.46%
Taizhou	Zhejiang	6237	6771	8.56%	7057	4.22%
Wenzhou	Zhejiang	8490	8406	-0.99%	8926	6.19%
Fuzhou	Fujian	13967	14516	3.93%	14838	2.22%
Xiamen	Fujian	21023	20911	-0.53%	21116	0.98%
Shantou	Guangdong	5181	4985	-3.78%	4890	-1.91%
Guangzhou	Guangdong	50053	52254	4.40%	57003	9.09%
Zhanjiang	Guangdong	22036	25612	16.23%	28209	10.14%
Beihai	Guangxi	2468	2750	11.43%	3169	15.24%

Fangcheng	Guangxi	11504	10688	-7.09%	10355	-3.12%
Basuo	Hainan	1767	1516	-14.20%	1605	5.87%
Haikou	Hainan	9204	9952	8.13%	11297	13.51%

### Belt and Road initiative: rail and truck connectivity

Remembering the Orient Express which, starting from France and crossing parts of Europe, reached Istanbul and the Trans-Siberian Railway, stretching from Moscow to Vladivostok, now we must realize that rail freight between Europe and China – in a Eurasian vision has already become real.

Around twenty years ago, when the idea to revitalize the Silk Road was first sketched, the former Italian Prime Minister and former President of the European Commission, Romano Prodi, expressed his idea of connectivity: “When Europe’s first overseas expansion began in the 16th century, Asia was by far the richest region in the world, and its civilization was probably the most advanced. The spectacular growth of the last few decades, despite the recent crisis, has resulted in a situation in which it would not be unrealistic to expect a return to that happy state of affairs” (Prodi, Heartland 1/2000).

From our point of view, this renewal of the original Silk Road represents the real novelty of these last years in the transportation sector. As the former French Prime Minister Jean-Pierre Raffarin states: “It is critical that Europe approaches China with practical and balanced proposals for how we can cooperate for the Belt and Road Initiative, in a win-win spirit. [...] It appears there is tremendous scope for Sino-European cooperation for the Belt and Road, so together we have to develop ways and means to benefit from such initiative” (ICC conference Beijing 2018). The link between Europe and Asia, reaching the most important Chinese cities, led to a reduction in transit time (18-20 days on average) with respect to sea freight, which has been rationalized with longer travel time (35-40 days) due to co-sharing (many vessels operate with more vectors) and the re-drawing of sea routes aimed at cost savings.

Train freight is still relatively more expensive than sea freight, but the final cost of the former within Europe is different between Germany and Italy. Since Italy lacks at present a developed network of rail freight routes with China, the final leg is often carried out by truck: hence, the increased final price for Italy.

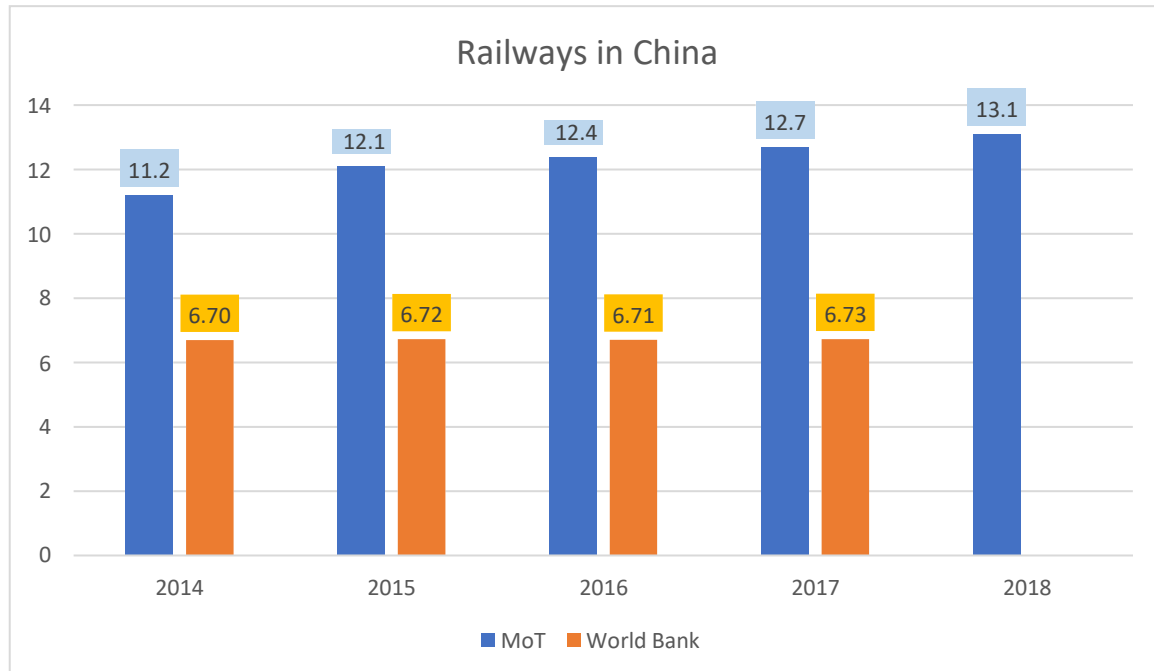


Figure 4: Railway in China (MoT, 2019; World Bank, 2019). The MoT data account for parallel tracks, while the World Bank data, do not. World Bank estimate for 2018 is not yet available.

In the last two years, there have been experiments of direct rail freight linking China and Italy, but with unsuccessful results. In these last months, the Swiss company Hupac, headquartered in Busto Arsizio (Varese, Italy), has redrawn a new route that might guarantee a future connectivity (Corso, 2019 and Rete 55, 2019). The two important existing rail links between China and Europe are the rail route originating in Chongqing, now experiencing a more balanced Sino-European trade with more freight return trips than one-way departures (Xinhua, 2019x), and the Zhengzhou-Europe Express Railway, which has let the central Chinese province of Henan reach 39.7 bn RMB (€5.1 bn) in foreign trade volume, thanks to its favorable geographical position allowing a rail connection with Europe in 15 days (Xinhua, 2019).

Nonetheless, it is also important to mention that, according to Jiang et al. (2018), 60% of the cost of rail freight is absorbed by government subsidies.

Recently, there have been trials in Europe-China truck freight with a 12 days transit time (Morgan, 2019), but the lack of road safety and possible adverse weather conditions have not confirmed yet whether this is a viable future solution (Zheng et al., 2019).

There are six corridors which can be considered part of the BRI (Kunaka, 2018; Wiederer, 2018; Wen et al., 2019; Wenwen et al., 2019, World Bank, 2019):

- New Eurasia Land Bridge Economic Corridor
  - China-Europe (by land)
- China-Mongolia-Russia Economic Corridor
  - China-Europe (by land)
- China-Indochina Peninsula Economic Corridor
  - Kunming (Yunnan province, China) – Singapore (by land) – Europe (by sea)
- China-Central Asia-West Asia Economic Corridor
  - Xinjiang Autonomous Region (China) – Western Asia/Middle East (by land)
- China-Pakistan Economic Corridor
  - China-Pakistan (by land) – Europe (by sea)
- Bangladesh-China-India-Myanmar Economic Corridor

- Kunming (Yunnan, China) – Kolkata (India) (by land).

In addition to these, the National Development and Reform Commission [NDRC] has announced the creation of a new land-sea corridor linking the inland cities of Chongqing and Chengdu (Sichuan) with ports in Southern China and, most prominently, with the ports in the Beibu Gulf – Guangxi – and with Yangpu Port – Hainan (Ouyang, 2019).

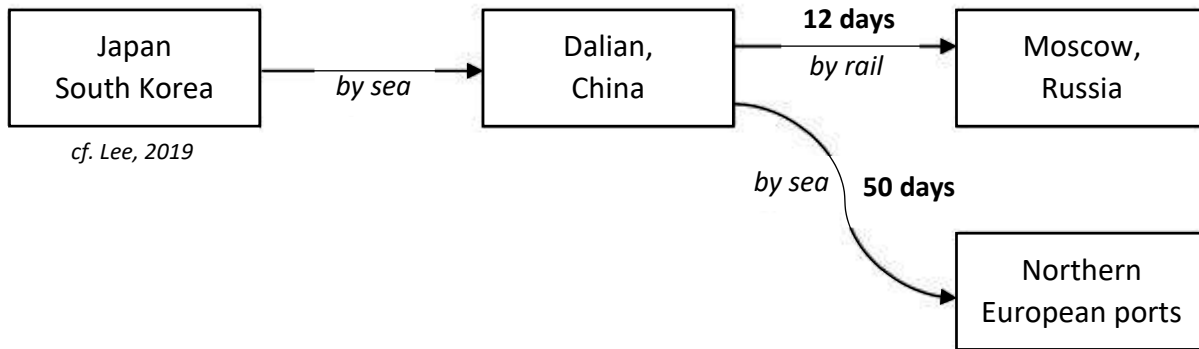


Figure 5: example of intermodal transportation along the BRI route

In addition, due attention should be also devoted to the maritime Silk Road. On the top of the well-established shipping routes, such as the one connecting China and Europe through the South China Sea, the Malacca Strait, the Indian Ocean and the Suez Canal, also the so-called Ice Silk Road is gaining consideration. The North-East Passage [NEP] of the Arctic has the potential to cut the trip short of nine days, a reduction of  $\frac{1}{4}$  with respect to the current route. In fact, the MoT has been exploring short-wave communication capabilities in the NEP and earlier this year the Russian freight carrier Vladimir Rusanov shipped 70,000 tons of liquefied natural gas through the NEP, cutting the route short by 60% (Global Times, 2019).

Looking at Southern perspectives, the ongoing negotiations for the Regional Comprehensive Economic Partnership (RCEP) cannot be avoided. Coped with the BRI, this free-trade deal between China, Japan, India, South Korea, Australia, New Zealand, and the ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam) might offer to China a buffer against the fluctuations and the risks of the current US-China Trade War. However, as of now, the RCEP is being blocked by the hesitations of India (Wang & Bermingham, 2019).

On the contrary, a similar but distinct project of cooperation between China and the ASEAN countries under the China-Singapore (Chongqing) Demonstration Initiative on Strategic Connectivity, signed in 2015, has been experiencing a smoother development: last May eight Chinese provinces and autonomous regions (i.e. Guangxi, Guizhou, Gansu, Qinghai, Xinjiang, Yunnan, Ningxia, and Shaanxi) agreed to establish the New International Land-Sea Trade Corridor within the framework of Sino-ASEAN cooperation (Ouyang, 2019).

### Domestic freight

Since the 1990s, domestic freight has been managed by Chinese companies. Thirty years ago, it was possible to spot on the streets blue, standardized trucks, that moved on the few roads, with long transit times, bivouac shelters as resting areas, exposed to the risk of thefts and to adverse weather conditions.

Nowadays this sector has reached European standards thanks to three reasons: first, a road network that spans across China; second, a commodity diversification of road transport (e.g. controlled temperature, cold chain, pharmaceutical and food, automotive, and heavy loads of machinery); third, the many Chinese manufacturers of trucks and trailers. However, some issues related to human resources, work shifts, fuel costs, and road limitations still persist.

We shall not forget the hundreds of thousands of trucks that are daily deployed in loading and unloading operations of containers, with waiting times in the port yards of hours or even days.

The long-standing problem of empty containers, called in jargon imbalance, concerns the number of available TEUs, since those exported are always more than those imported and often there is equipment scarcity in depots or ports. Moreover, not always the incoming containers on a certain ship can be promptly re-used, either for custom clearance troubles, or for cleaning and maintenance: these issues are amplified during peak season. Indeed, as Rodrigue (2017) points out: “[i]t is not uncommon to see whole containerhips being chartered solely to reposition empty containers. [...] Repositioning empties can account between 15 and 20% of the operating costs of a shipping line”.

Gone are the times when depots in China were warehouses with wooden roofs or multi-story shed, on the track of the model developed in Hong Kong, China, due to space scarcity.

Nowadays, real estate for logistics has adapted to international standards and the new functionality is born in the free-trade-zones (FTZs) and in the distribution centers (DCs) for the distribution and delivery of retail products after re-labelling, necessary for those imported products lacking the Chinese label with the description and composition of the product and the reference of the importer (value-added service). Differently from road freight, in the real estate logistics industry operate not only Chinese companies, but also major foreign MNCs, from Singapore and Hong Kong, China.

The crucial role of DCs has been boosted, as origin of department stores refurbishment and off-line brand stores, but mainly for e-commerce online services. The new real estate has become the place, or better the container, of what is moved daily.

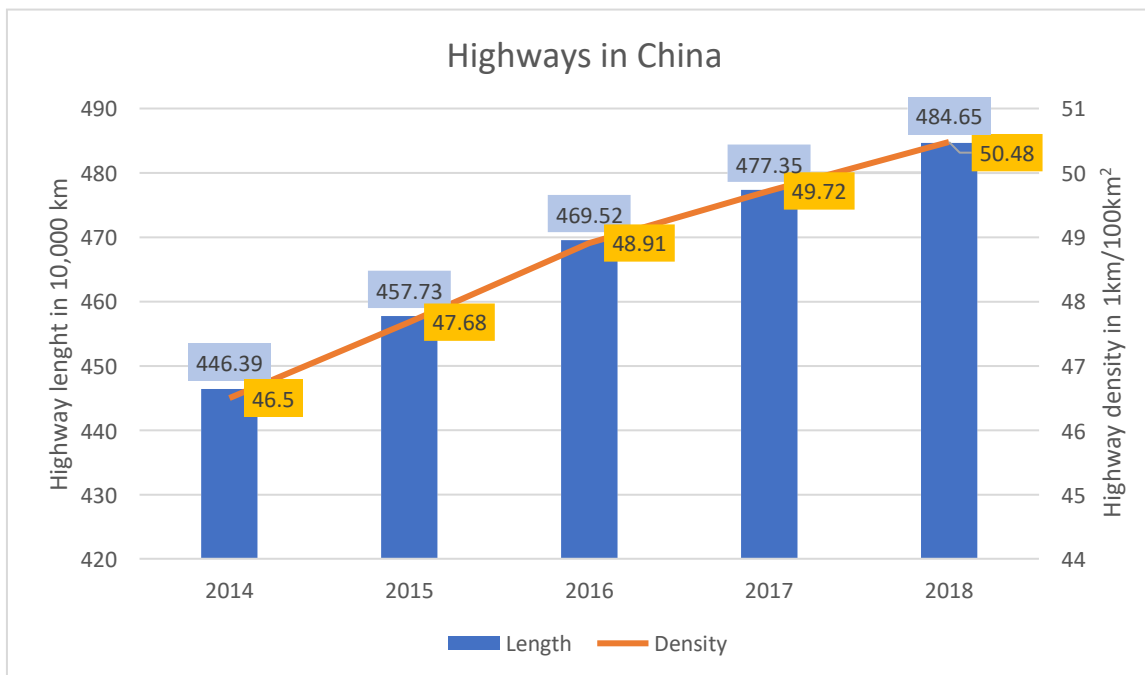
As mentioned above, real estate logistics has flourished especially in the FTZs due to their favorable regulatory environment. As recently as last August, the Ministry of Commerce [MoC] has reiterated the confidence in the successfulness of this developmental model creating six new FTZs – for a total of 18 –, which according to the MoC itself “will further facilitate high-level opening up and boost high-quality development through deeper reforms” (Jing, 2019). As a matter of fact, in the twelve previously established FTZs the import/export volume amounted to 1.61 trillion RMB (€206 bn) during the first half of 2019, i.e. +43% on the previous year and 10.97% of the total foreign trade of China. Ultimately, the FTZs constitute a main point of attraction for foreign-direct investment. China plans to continue the expansion in territory and significance of FTZs (Ren, 2019): for instance, the Pilot Free Trade Zone in Shanghai will be enlarged to include the Lingang area and it should have a mature institutional system by 2025 (Nan & Shuiyu, 2019).



*Figure 6: The 18 FTZs in China.*

In a long-sighted perspective, the National Development and Reform Commission has drawn a blueprint in the end of last year which, on the top of the several DCs, envisions the creation of 180 logistic hubs by 2025 in China to ease domestic connections, as well as to foster the ratio of supply chain on GDP: currently this ratio is 14.5% and 12% in the medium term, with yearly growth prospects of 18% until 2021.

This further step is the plain development of what has been achieved previously: 25,000 km of high-speed railways for passengers and, partially, for freight, as well as the set-up of a road network based on main arterials.



Some years ago, food delivery did not include the transport of fresh or frozen products. Now, instead, in the fragmentation of this new stream of fresh-food chains, such as Hema or Alibaba, everything is possible: to supply this kind of services the logistics infrastructure is being equipped with cool rooms, refrigerated trucks with various carriages, and innovative packaging (cf. Zhao et al., 2019). In particular, the frozen sector experiences a 57.6% growth in China, becoming the second market after the United States. Euromonitor International forecasts by 2023 a further 14% increase. According to Frost & Sullivan: “China’s cold chain logistics system lacks good infrastructure, and its techniques are relatively weak which are the biggest shortcomings that hinder the development of the frozen food sector. With more investments in the building of better cold chain logistics, it will improve and drive faster growth of the quick-frozen food industry” (Zhu, 2019).

The e-commerce revolution, including the cross-border option (cf. Xia, 2016), has surely developed new models, then deployed outside China. It is also noteworthy to remember the import of fruit, fish, and frozen meat, which have the lion’s share of imports: ports such as Tianjin, Qingdao, and Ningbo have built highly advanced receptive structures nearby the harbor area.

Company digitalization in China (NBS, 2018)			
	computer	website	ecommerce
All Chinese enterprises	26	56	9.50%
transport, storage, and post	30	45	5.60%
wholesale and retail	47	44	10.50%
ICT	128	106	22.70%
Year of reference 2017	Computers for 100 users	Websites for 100 enterprises	Percentage of companies with ecommerce transactions

Moreover, the expansion of e-commerce, far from being restricted to the megalopolis of Shanghai and Beijing, is experiencing a fast-paced increase of penetration rate in lower-tier cities. For instance, around 70% of new JD users – a Chinese e-commerce giant – are from smaller cities “the users’ growth rate from third- to sixth-tier cities is higher than that from first- and second-tier cities”, driven by the increasing demand for high-quality products in lower-tier cities (Fen, 2019b). As a whole, the e-commerce industry in China is stable, albeit with slight regional differences: more in particular, an interesting note is the slight rebound of rural e-commerce in August 2019 (Xinhua, 2019).

### The future of logistics in China

The aforementioned e-commerce revolution has rolled out on the same wavelength of technological innovation to match the demand for services with technologic advancement: a unique event, developed in China through the 5G operative system (OS operative system).

From now onwards, also considering facial recognition (Fan, 2019a) and autonomous driving (cf. Nowak, 2017), the trend is toward a further automation of deliveries (cf. Schröder et al., 2018).

Rather than in a far future, these innovations are ready to be showcased soon: in the Xiong’an New Area (Baoding, Hebei) JD and China Mobile are in the trial phases of robot deliveries and JD has announced the opening of the first 5G intelligent logistics demonstration zone within 2019. 5G has the potential to significantly improve the management of operations: from enabling the optimal calculation of driving routes and of parking lots distribution to a further digitalization of tracking. According to the Global System for Mobile Communications Association, China should be the largest 5G market by 2025, i.e. 28% of the global market, also thanks to the developmental push of the Ministry of Industry and Information Technology of the People’s Republic of China (Fei, 2019a).

Technological innovation is also revolutionizing the long-haul trucking industry, which despite its saliency for the Chinese economy is overwhelmingly characterized by a high degree of fragmentation: 95% of long-haul truck drivers are either self-employed or employed by a small company. In this context, the Menbang Group, which can enumerate among its investors Softbank Group (controlled by the Japanese billionaire Masayoshi Son), CapitalG (Alphabet, the holding company of Google) and the Reform Fund (guaranteed by the Chinese Government), has developed a freight booking app capable of reducing by 87% the time in which a truck was empty. In fact, the long-haul truck freight sector appears increasingly to follow market laws, with pricing calculated by apps (Dai, 2019).

### Conclusion

We hope to have offered a framework of the *hic et nunc*.

Someone, after me, in the next years, will have the task to update this publication with the external solutions that will come. Artificial intelligence will surely cover the few remaining tasks still entrusted to humans.



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## PREVENTIVE AND COMPREHENSIVE DISINFECTION FOR IMPORTED COLD CHAIN FOOD

Implementation of the procedure and regulations under COVID-19 era  
在新冠肺炎疫情下进口冷链食品预防性全面消毒的程序和规章的贯彻执行

*Edited by: Vincenzo Morano, Andrea De Sio, Danilo Sergi Alampi*

In accordance with the COVID-19 pandemic and with the discovered cases of infected import cargo in cold chain discovered in China Mainland, last November 8th, 2020, Central Government has issued an official notice to implement the control and the COVID-19 prevention for all the imported cargo in the cold chain.

根据新冠肺炎疫情和在中国大陆发现的冷链进口货物相关感染病例，2020年11月8日中央政府正式发布通知，对所有冷链进口货物实施管控和新冠病毒预防措施。

Here after it is reported the (2020) N. 255's original text and his English translation (Table 1)<sup>1</sup>.

下面是 2020 第 255 号文件原文及英译本。

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<sup>1</sup> Translation is meant for explanation and is not officially release from the Customs. Indeed the Chinese version is what has value.

Table 1

<p>关于印发进口冷链食品预防性全面消毒工作方案的通知 联防联控机制综发〔2020〕255号</p> <p>各省、自治区、直辖市及新疆生产建设兵团应对新冠肺炎疫情联防联控机制（领导小组、指挥部）：</p> <p>为切实加强常态化疫情防控工作，有效防范新冠肺炎疫情通过进口冷链食品输入风险，海关总署会同交通运输部、卫生健康委、市场监管总局等部门研究制定了《进口冷链食品预防性全面消毒工作方案》，已经国务院应对新型冠状病毒肺炎疫情联防联控机制同意。现印发给你们，请认真贯彻执行。</p> <p>国务院应对新型冠状病毒肺炎疫情联防联控机制综合组</p> <p>2020年11月8日</p>	<p>Notice on Issuing the Work Plan for Preventive and Comprehensive Disinfection of Imported Cold Chain Food Joint Prevention and Control Mechanism Comprehensive Development (2020) No.255</p> <p>All provinces, autonomous regions, municipalities directly under the Central Government and Xinjiang Production and Construction Corps respond to the new Coronavirus pneumonia epidemic joint prevention and control mechanism (leading group, command):</p> <p>In order to effectively strengthen the normalized epidemic prevention and control work and effectively prevent the risk of the new crown pneumonia epidemic from importing cold chain foods, the General Administration of Customs, in conjunction with the Ministry of Transport, the Health Commission, and the State Administration of Market Supervision, has studied and formulated the "Preventive Imported Cold Chain Food The "Comprehensive Disinfection Work Plan" has been approved by the State Council's joint prevention and control mechanism for the new coronavirus pneumonia epidemic. It is issued to you, please conscientiously implemented.</p> <p>Comprehensive Team of the State Council's Joint Prevention and Control Mechanism in Response to the Novel Coronavirus Pneumonia Outbreak</p> <p>November 8, 2020</p>
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## DISINFECTATION AND TESTING FLOW 消毒和检测流程

The intended cargo will be sent for disinfection right after it arrives at the entry port. The process could take from 1 day to "x" number of days depending on the volume and the traffic (Table 2).

The minimum unit to be disinfected is one pallet\* but if the commodity isn't raw meat or fish and similar otherwise it is required to go for the box unit.

拟运货物到达入境港后，将被立即送去消毒。这个过程可能需要 1 天到数天不等的的时间，这个时间取决于货物的总量和交通状况（表 2）。

消毒的最小单位是一个货盘\*，但如果商品是生肉或鱼类或类似的商品，就需要以箱的单位去消毒。

After the disinfection, the cargo can enter the warehouse and start to be tested for the COVID-19 virus. The testing requires usually up to 5 working days but also here depends on the amount of commodity to be tested and on its nature (Raw meat and fish could require a longer period.).

Import procedure and clearance can commence during the testing period but of course, the release of the cargo is ruled by the COVID-19 test result.

消毒后，货物即可进入仓库，开始进行新冠病毒检测。检测通常需要 5 个工作日，但检测时间也由要检测的货物的数量及其性质决定（生肉和鱼类可能需要更长的时间）。

进口程序和清关可以在检测期间开始，当然，货物的放行是由新冠病毒检测结果决定的。

Exception for the raw commodity the nucleic acid test and sampling is not mandatory, but the importer could request separately.

除了生鲜货物，核酸检测和取样不是强制性的，但进口商可以就此提出单独要求。

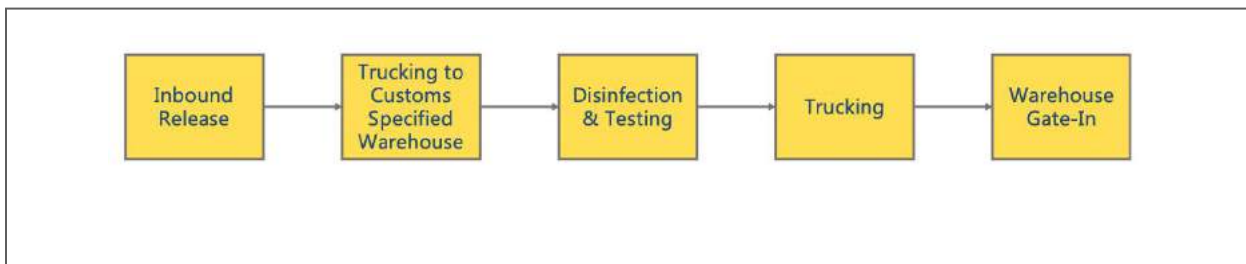
Both cargo disinfection certificate and the nucleic acid test result will be issued to the importer who could use them together with the standard releases certification to operate in the country.

货物消毒证书和核酸检测结果都将发给进口商，进口商可将其与标准放行证书一起用于国内经营。

\*Importer can decide to disinfect and test smaller units, like one box.

进口商可以选择消毒和检测更小的单位，例如一箱。

Table 2



Precautions:

1. During the sterilization period, due to the corrosive nature of the sprayed disinfectant, it may cause damage to the outer box of the goods, please be aware.
2. During the elimination period, it will affect the normal entry and exit time limit.

注意事项:

1. 请注意在消毒期间，由于喷洒的消毒剂具有腐蚀性，可能会对货物的外箱造成损坏。
2. 在排除期间，将会影响正常的进出口时间限制。

In order to better understand the specific situation, hereby we share a notice from the Comprehensive Team of the State Council's Joint Prevention and Control Mechanism for the New Coronavirus Pneumonia Epidemic, for your reference<sup>2</sup>.

为了更好地理解具体情况，特此分享国务院新型冠状病毒肺炎疫情联防联控机制综合组的通知，供大家参考。

<sup>2</sup> Source: [https://mp.weixin.qq.com/s/Scml\\_OtEYdJSDI9DdF0WWg](https://mp.weixin.qq.com/s/Scml_OtEYdJSDI9DdF0WWg)

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## PREVENTIVE AND COMPREHENSIVE DISINFECTION WORK PLAN FOR IMPORTED COLD CHAIN FOOD

### 1. Goals and principles

#### (1) Work objectives

Solidly advance the prevention and control of the new crown pneumonia epidemic, and on the basis of doing a good job in the detection of imported cold chain foods, give full play to the killing effect of disinfection on the new crown virus, and effectively prevent the new crown pneumonia epidemic through imported cold chain food (including edible agricultural products, The same below) Import risk, to achieve the goal of “safe, effective, fast and economical”, while ensuring the safety of imported cold chain food, improve the efficiency of port customs clearance, avoid the backlog of goods in the port, and ensure the stability of the industrial chain supply chain.

#### (2) Implementation basis.

The "Law of the People's Republic of China on the Prevention and Control of Infectious Diseases" and its implementation measures, the "Frontier Health and Quarantine Law of the People's Republic of China" and its implementation rules, the "Food Safety Law of the People's Republic of China" and its implementation regulations and other laws and regulations, and the joint prevention and control mechanism of the State Council Group "Notice on Comprehensive and Accurate Implementation of Environmental Sanitation and Disinfection Work" (Joint Prevention and Control Mechanism [2020] No. 195), and "Emergency Notice on Strengthening New Coronavirus Nucleic Acid Testing of Cold Chain Foods" (Joint Prevention and Joint Control Mechanism (2020) No. 220), “Notice on Printing and Distributing the New Coronavirus Pneumonia Prevention and Control Plan (Seventh Edition)” (Joint Prevention and Control Mechanism (2020) No. 229), “About Printing and Distributing Cold Chain Food Production and Operation of New Coronavirus "Notice on the Technical Guidelines for Prevention and Control and the Technical Guidelines for the Prevention, Control and Disinfection of New Coronavirus in the Production and Operation Process of Cold Chain Food" (Joint Prevention and Control Mechanism [2020] No. 245) and other relevant regulations and technical specifications.

#### (3) The scope of disinfection.

This scheme is suitable for the disinfection of the loading and transportation tools of imported cold chain food and the inner and outer packaging of products.

#### (4) Relevant Principles

Complete elimination, strict prevention of import; government-led, departmental collaboration; laws and regulations, perform their own duties; scientifically standardized, safe and effective; cost-saving, fast and economical.

### 2. Division of work

The relevant departments of the State Council strengthen the guidance, supervision and coordination of the preventive and comprehensive disinfection of imported cold chain food according to the division of responsibilities. The local people's government is responsible for organizing and implementing the preventive and comprehensive disinfection work in the region, achieving the traceability of the whole process closed-loop control, and minimizing the new crown virus Import risks through imported cold chain food.

(1) Customs department. Responsible for carrying out the monitoring and testing of imported cold chain food for the new crown virus in accordance with regulations, organizing and guiding imported cold chain food importers and customs inspection site business units to do a preventive and comprehensive disinfection of the inner walls of imported cold chain food containers and the outer packaging of goods selected in the port link Processing work.

(2) Transportation department. Responsible for supervising and guiding import cold chain food carriers to implement the main responsibilities of the transportation link and implement corresponding disinfection treatment measures, strictly check the customs clearance documents of imported cold chain food in the domestic transportation section, and implement the disinfection of imported cold chain food transportation tools and personal front-line staff Protective measures, and cooperate with the inspection of the implementation of disinfection treatment measures in the process of reloading imported cold chain foods (from imported containers to domestic transportation vehicles).

(3) Health departments. Responsible for compiling and analyzing the nucleic acid test results of imported cold chain foods for the new coronavirus, researching and judging the risk of transmission of imported cold chain foods for new coronaviruses, and conducting the guidance, evaluation and inspection of preventive comprehensive disinfection measures.

(4) Market supervision department. Responsible for on-site inspections and ticket requests, and urge market operators and food producers to request disinfection certificates issued by detoxification units for imported cold-chain food products. Those who cannot provide disinfection certificates cannot be sold. Strengthen the traceability management of imported cold chain foods by food production and operation enterprises, and investigate and deal with imported cold chain foods from unknown sources in accordance with the law. Cooperate with relevant departments to supervise market operation units to do a good job in disinfecting the market environment.

(5) Local people's government. Responsible for the implementation of local responsibilities for the detection and preventive comprehensive disinfection of imported cold chain foods in the region. According to the actual situation in the region, organize relevant departments and enterprises to take effective measures to do preventive comprehensive disinfection, clarify the division of responsibilities of relevant departments, and strengthen Supervise and inspect to ensure that the responsibilities and measures for disinfection of imported cold chain food are implemented.

(6) Relevant production and business units. Production, processing, storage, sales and other production and business units organize or entrust a qualified disinfection unit to perform disinfection. The carrier is responsible for organizing or entrusting a qualified disinfection unit to organize the disinfection of imported cold chain food loading and transportation vehicles before and after shipment. The disinfection unit shall carry out specific disinfection operations in accordance with relevant disinfection technical specifications to ensure the disinfection effect. Import companies are responsible for truthfully reporting imported product



information, cooperating with various production and business units to carry out disinfection work, and making good sales records and flow records of imported cold chain foods.

### 3. Work content

#### (1) Basic requirements.

Summarize the good experience and practices in the detection and disinfection of imported cold-chain foods for new coronaviruses, without changing the existing overall prevention and control arrangements in various regions, and according to the logistics characteristics of imported cold-chain foods, complete the new coronavirus detection and sampling work as required. Afterwards, preventive and comprehensive disinfection treatments were implemented in the links of port inspection, transportation, boxing and warehousing, wholesale and retail, and before the first contact of imported cold chain food with people in China. Strengthen the coordination of departments. In principle, only one preventive and comprehensive disinfection of imported cold chain food loading and transportation tools and packaging is carried out, avoiding repeated disinfection, preventing the implementation of boxing and packing for disinfection operations, and avoiding unnecessary operation links and costs, Affecting logistics and market supply. The disinfection implementation unit shall record the disinfection work in detail, including disinfection date, personnel, location, disinfection object, disinfectant name, concentration and action time, etc. Relevant data and records shall be kept for at least 2 years.

#### (2) Workflow

1. Port link. Import companies truthfully declare relevant information about imported cold chain foods, and the customs department will strengthen the inspection of imported cold chain foods in accordance with the risk monitoring plan formulated. If the test result is positive, it shall be returned or destroyed according to regulations. If the test result is negative, the customs department organizes, guides and urges the inspection site operator or import company to disinfect the inner wall of the container and the outer packaging of the imported cold chain food. After the disinfection is completed, the disinfection unit shall issue a certificate that the batch of goods has been disinfected. Imported cold chain foods that have not been disinfected at the port link will be disinfected in the follow-up link after they are released in accordance with regulations.

2. Cold chain transportation and in and out links. When imported cold chain food is unloaded from a container and reloaded into a domestic transportation tool, the owner or his agent shall disinfect the packaging of the goods. During the transportation of imported cold-chain food, the carrier must not open the container. The transportation management department in the domestic transportation section shall supervise and guide the cold-chain logistics enterprise to strictly inspect the customs clearance documents, implement the disinfection of the loading and transportation equipment such as transportation vehicles and ships, and the personal front-line staff. Measures such as protection. When the cold storage accepts imported cold chain food, it should truthfully record and check the container number and lead seal number, and make good records of the goods in and out of the warehouse. The relevant data and records should be kept for at least 2 years.

3. The circulation link. For imported cold chain food released from the port, the relevant production and business units shall check the disinfection certificate attached to the goods in the social cold storage or the enterprise cold storage before they are overturned and stored in the warehouse. If they are not disinfected, they will be the inner wall of the container and the outer packaging of the goods shall be disinfected. After the

disinfection is completed, the disinfection unit shall issue a certificate that the batch of goods has been disinfected. The production and business unit shall disinfect the inner packaging of the goods that need to be opened.

4. Market link. The imported cold chain food sales market should strengthen management, standardize the market sanitation environment, and do a good job of daily disinfection of sales places. It is necessary to strictly implement the prevention and control requirements, strengthen the relevant certification inspection work of whether imported cold chain foods are disinfected, and prevent imported cold chain foods that have not undergone comprehensive preventive disinfection treatment from entering the market. Further improve the traceability management, so that all imported cold chain foods entering the market can be traced to the source and whereabouts.

#### Four, disinfection method

The port disinfection method for imported cold chain food is determined by the customs, and the disinfection method for imported cold chain food after entry is determined by the local people's government in accordance with the "Technical Guidelines for the Prevention and Control of New Coronavirus in Cold Chain Food Production and Operation Process" and related regulations.

## 进口冷链食品预防性全面消毒工作方案

### 一、目标和原则

#### (一) 工作目标

扎实推进新冠肺炎疫情防控工作，在做好进口冷链食品新冠病毒检测工作的基础上，充分发挥消毒对新冠病毒的杀灭作用，有效防范新冠肺炎疫情通过进口冷链食品（含食用农产品，下同）输入风险，实现“安全、有效、快速、经济”目标，在确保进口冷链食品安全的同时，提升口岸通关效率，避免货物积压滞港，保障产业链供应链稳定。

#### (二) 实施依据。

《中华人民共和国传染病防治法》及其实施办法、《中华人民共和国国境卫生检疫法》及其实施细则、《中华人民共和国食品安全法》及其实施条例等法律法规，国务院联防联控机制综合组《关于全面精准开展环境卫生和消毒工作的通知》（联防联控机制综发〔2020〕195号）、《关于加强冷链食品新冠病毒核酸检测等工作的紧急通知》（联防联控机制综发〔2020〕220号）、《关于印发新型冠状病毒肺炎防控方案（第七版）的通知》（联防联控机制综发〔2020〕229号）、《关于印发冷链食品生产经营新冠病毒防控技术指南和冷链食品生产经营过程新冠病毒防控消毒技术指南的通知》（联防联控机制综发〔2020〕245号）等有关规定及技术规范。

### (三) 消毒范围。

本方案适用于进口冷链食品的装载运输工具、产品内外包装的消毒。

### (四) 有关原则。

全面消杀，严防输入；政府牵头，部门协作；依法依规，各司其职；科学规范，安全有效；节约成本，快速经济。

## 二、工作分工

国务院相关部门按职责分工加强进口冷链食品预防性全面消毒工作的指导监督和协作配合，地方人民政府负责组织实施本地区预防性全面消毒工作，实现全流程闭环管控可追溯，最大程度降低新冠病毒通过进口冷链食品输入风险。

(一) 海关部门。负责按规定开展进口冷链食品新冠病毒监测检测，组织指导进口冷链食品进口商、海关查验场所经营单位做好口岸环节被抽中的进口冷链食品集装箱内壁和货物外包装的预防性全面消毒处理工作。

(二) 交通运输部门。负责督促指导进口冷链食品承运单位落实运输环节的主体责任并实施相应消毒处理措施，在国内运输段严格查验进口冷链食品海关通关单证，落实进口冷链食品运输工具消毒、一线工作人员个人防护等措施，配合检查进口冷链食品倒箱过车（从进口集装箱换装至国内运输车辆）过程中的消毒处理措施的落实情况。

(三) 卫生健康部门。负责汇总分析进口冷链食品新冠病毒核酸检测结果，对进口冷链食品新冠病毒传播风险进行研判，开展对预防性全面消毒措施的指导评估和检查。

(四) 市场监管部门。负责做好现场检查和索票索证工作，督促市场开办者、食品生产经营者索取消毒单位出具的进口冷链食品货物业经消毒的证明，凡是不能提供消毒证明的，一律不能上市销售。强化对食品生产经营企业进口冷链食品的追溯管理，对来源不明的进口冷链食品依法进行查处。与有关部门共同监督市场经营单位做好市场环境消毒工作。

(五) 地方人民政府。负责落实本地区进口冷链食品新冠病毒检测和预防性全面消毒工作属地责任，根据本地区实际情况，组织相关部门和企业采取切实有效措施做好预防性全面消毒工作，明确相关部门职责分工，加强督促检查，确保进口冷链食品消毒工作责任和措施落实到位。

(六) 相关生产经营单位。生产、加工、储存、销售等生产经营单位组织或委托有资质的消毒单位实施消毒。承运单位负责组织或委托有资质的消毒单位，对装运前后的进口冷链食品装载运输工具组织实施消

毒。消毒单位按照有关消毒技术规范开展具体的消毒作业，确保消毒效果。进口企业负责如实申报进口产品信息，配合各生产经营单位开展消毒工作，并做好进口冷链食品的销售记录和流向记录。

### 三、工作内容

#### (一) 基本要求。

总结进口冷链食品新冠病毒检测、消毒处理工作好的经验和做法，在不改变各地现有总体防控安排的前提下，根据进口冷链食品的物流特点，在按要求完成新冠病毒检测采样工作后，分别在口岸查验、交通运输、掏箱入库、批发零售等环节，在进口冷链食品首次与我境内人员接触前实施预防性全面消毒处理。加强部门协同配合，对进口冷链食品装载运输工具和包装原则上只进行一次预防性全面消毒，避免重复消毒，防止专为消毒作业实施掏箱、装箱，避免增加不必要的作业环节和成本，影响物流和市场供应。消毒实施单位应详细记录消毒工作情况，包括消毒日期、人员、地点、消毒对象、消毒剂名称、浓度及作用时间等内容，相关资料和记录应至少留存 2 年。

#### (二) 工作流程。

1.口岸环节。进口企业如实申报进口冷链食品的相关信息，海关部门根据制定的风险监测计划，加强对进口冷链食品的检测工作。检测结果为阳性的，按规定作退运或销毁处理。检测结果为阴性的，海关部门组织指导督促查验场地经营者或进口企业，对进口冷链食品的集装箱内壁、货物外包装实施消毒。消毒完成后，消毒单位出具该批货物业经消毒的证明。未在口岸环节消毒的进口冷链食品按规定放行后，在后续环节予以消毒。

2.冷链运输和出入库环节。进口冷链食品在从集装箱卸货换装至国内运输工具时，货主或其代理人对货物包装实施消毒。进口冷链食品运输过程中，承运企业不得开箱，在国内运输段交通运输管理部门要督促指导冷链物流企业严格查验海关通关单证，落实运输车辆船舶等装载运输装备消毒、一线工作人员个人防护等措施。冷库接受进口冷链食品时，应如实记录并核对集装箱号及铅封号，做好货物的出入库记录，相关资料和记录应至少留存 2 年。

3.流通环节。对从口岸放行的进口冷链食品，在社会冷库或企业冷库倒箱过车、入库存储前，相关生产经营单位查验货物所附的消毒证明，如未消毒，则在掏箱卸货时，对该批货物的集装箱内壁、货物外包装实施消毒。消毒完成后，消毒单位出具该批货物业经消毒的证明。生产经营单位对需打开外包装的货物的内包装实施消毒。

4.市场环节。进口冷链食品销售市场要加强管理，规范市场卫生环境，做好销售场所的日常消毒工作。要严格落实防控要求，加强进口冷链食品是否消毒的相关证明查验工作，防止未经过预防性全面消毒处理的进口冷链食品进入市场。进一步完善追溯管理，做到所有进入市场的进口冷链食品来源可查、去向可追。

#### 四、消毒方式

进口冷链食品的口岸消毒方式方法由海关确定，进口冷链食品入境后的消毒方式方法由地方人民政府按照《冷链食品生产经营过程新冠病毒防控消毒技术指南》及有关规定确定。

## AUTOMOTIVE PARTS IMPORT IN CHINA

### 中国汽车零部件进口

#### CCC Certificate: procedures and regulations for the import in China of Automotive Parts

#### 中国强制性产品认证：中国进口汽车零部件的程序和规定

Edited by: Mario Tasso

The goods import procedure differs from country to country, subject to import policy, statutory requirements and customs policies of each country [1]. The China Compulsory Certification (CCC) is Chinese conformity assessment system mark requested for the importation and sale of the goods in China.

在进口政策、法定要求和各国的海关政策的规定下，各国的货物进口程序不尽相同[1]。中国国家强制性产品认证（CCC）是在中国进口和销售货物必要的中国合格评定体系标志。

The import of auto parts may require complying with the CCC mark and the GB standards under the Chinese Certification and Accreditation Authority (CNAC) [2] and the Standardization Administration of the P.R.C. (SAC) [3].

进口汽车零部件可能需要符合CCC标志和中国认证认可监督管理委员会(CNAC)[2]和中国标准化管理委员会(SAC)的GB标准。

This document will provide a full overview of the process of CCC mark approval.

本文件将全面介绍CCC商标的审批过程。

#### CCC: GENERAL OVERVIEW

CCC" is the abbreviation of "China Compulsory Certification", more commonly known as "3C Certification" or "3C Certificate" in the Peoples' Republic of China.

It has been introduced by Dec. 2001, from the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ), and the Certification Accreditation Administration of the People's Republic of China, replacing the former CCIB (China Commodity Inspection Bureau), CCEE (China Commission for Conformity Certification of Electrical Equipment) and EMC (electro-magnetic compatibility).

The CCC is implemented by the China National Certification and Accreditation Administration (CNCA) [1] for the purpose of protection of national security, human health or safety, animal and plant life or health, and environment and prevention of deceptive practices.

#### CCC: 总概述

CCC "是"中国国家强制性产品认证"的简称，俗称"3C认证"或"中华人民共和国3C认证"。

3C认证从2001年12月开始实施，由中华人民共和国国家质量监督检验检疫总局（简称"国家质检总局"），以及中国国家认证认可监督管理委员会执行，这两者取代了原CCIB（中国商品检验局）、CCEE（中国电器产品合格认证委员会）和EMC（中国电器工业协会）。

CCC由中国国家认证认可监督管理委员会实施(CNCA) [1]，目的是保护国家安全、人类健康和动物、植物生命和健康、环境和防止欺诈行为。

#### CCC Mark mandatory product groups

The CCC marking applies to below product groups (totally 20, divided in 158 categories):

1. Electrical wires and cables

2. Circuit switches, electric devices for protection or connection
3. Low-voltage Electrical Apparatus
4. Low power motors
5. Electric tools
6. Welding machines
7. Household and similar electrical appliances
8. Audio and video apparatus (not including the audio apparatus for broadcasting service and automobiles)
9. Information technology equipment
10. Lighting apparatus (not including the lighting apparatus with the voltage lower than 36V)
11. Motor vehicles and safety accessories
12. Motor vehicle Tires
13. Safety Glasses
14. Agricultural Machinery
15. Telecommunication Terminal Products
16. Fire Fighting Equipment
17. Safety Protection Products
18. Wireless LAN products
19. Decoration Materials
20. Toys

CCC Mark mandatory products groups & categories - AUTOMOTIVE

12. Motor vehicles and safety parts/accessories (total 17 subcategories)
  - Automobiles: Motor vehicles categories M, N, O
  - Motorcycles: Motorcycles
  - Safety belts
  - Motorcycle engines
  - Horns
  - Retro reflectors
  - Retro-reflective vehicle markings
  - Brake hoses
  - Rearview mirrors
  - Interior trimming materials
  - Door lock and door retention components
  - Fuel tanks
  - Seat and Seat Headrests
  - Rearview mirror products
  - Odometers
  - External lighting and signaling products for vehicle/motorcycle (headlamp, turn-signal, position lamp, stop lamp, clearance lamp, fog lamp, reversing lamp, parking lamp, side marker lamp, lighting equipment for license plate).
13. Motor vehicle Tires (total 3 subcategories)
  - Automobile tires:
  - Passenger car tires: radial ply tires, diagonal tires
  - Truck tires: Ultra-light truck tires, Light truck tires, Medium/heavy truck tires
  - Motorcycle tires:

- Motorcycle tires
- 14. Safety Glasses (total 3 subcategories)
  - Safety Glasses for Motor Vehicle:
    - Laminated Glass A
    - Laminated Glass B
    - Zone-tempered Glass
    - Tempered Glass
- 15. Agricultural Machinery (total 1 subcategory)
  - Equipment for Crop Protection
  - Motorized or Manual Liquid Knapsack sprayers
  - Motorized or Manual Powder Knapsack sprayers
  - Motorized Liquid and Powder Knapsack sprayers
  - Wheeled tractors (single-cylinder diesel or multiple-cylinder diesel below 25HP).

All those product groups must adhere with the Chinese GB standards <sup>[4]</sup> - for more information consult the SAC website <sup>[5]</sup> -, need to obtain the necessary authorization and must not be sold, imported and used in sales activities until achieve related certificates with certificate marks.  
 The CCC was effective from May 1, 2003.

#### CCC: GENERAL PROCEDURES

If the auto parts to be imported in China requires to comply with the CCC regulation it needs to be followed the below steps, submitting all the necessaries information to be provided:

##### STEPS

1. Application
2. Testing
3. Inspection
4. Evaluation
5. Marking

##### DOCUMENTS & FORMS

1. CCC Certification Data Application Sheet
2. Product technical information (Product description, including materials lists, photos, EMC reports, warning labels, etc.)
3. 3C Certification Catalog Consulting System Entry Form
4. Out-of-list statement
5. Power of attorney

The auto parts testing will be performed in accredited Chinese Laboratory.

During the application period the Authority will perform on-site commodity inspection.

Following website allow for searching HS CODE, Declaration element, VAT & Duty, Special certification: <http://www.hscode.net/IntegrateQueries/QueryYS/> <sup>[6]</sup>

When it indicates “L”, the importer must provide 3C certification.

Whether it is 3C compulsory, or parts not listed, it is mandatory to pass the commodity inspection. As general rules, if the voltage of the commodity is under 36V or more than 1000V, it is possible to do the inspection entry check of the parts not submitting the CCC declaration. On the contrary the consignee must submit CCC certificate for import customs clearance in China or apply the CCC procedure to obtain it.



The customer is responsible for the application and the process will take around 3 months.

CCC: EXEMPTION REGULATION

Some products are not required the CCC certificate:

- Self-use commodities taken by diplomatic agents of foreign embassies and international organizations;
- Self-use commodities taken by agents of Hong Kong and Macau governmental agencies resided in China Mainland;
- Self-use commodities taken by people entering the PRC;
- Commodities as gifts or aids among governments.
- The products qualified any condition above, if covered by the CCC catalogue, are not necessary to pass through the CCC certification, also not necessary to be marked with CCC certificates.

Products qualified for CCC Waiver (or CCC Exemption Authentication):

- products imported for scientific research and test purposes;
- product parts imported for technology examination and production line introduction;
- products imported for end users' repair service directly;
- equipment/parts imported necessary to form a manufacturing production line, but the office equipment excluded;
- products imported for commercial exhibits only, not for selling;
- products imported temporarily and will be returned and shipped out of China, including the products for exhibitions;
- product parts imported in the regular trading method but for the purpose to export the whole system;
- product parts imported in the way of processing materials supplied by clients but for the purpose to export the whole system.

If product is qualified for the CCC exemption, the manufacturer, importer, dealer or agent can apply for the CCC Exemption Authentication, and submit the materials, like proof documents for qualifying exemption conditions, letter of responsibility guarantee, assertion of product conformance (including model test report), etc., to get approval of the Compulsory Product Certificate Exemption Authentication.

### “CCC 认证资料鉴定” 情况说明

致上海检验公司：

我公司申请“CCC 认证资料鉴定”，以确定本次进口产品是否属于“CCC 认证目录”。本次进口情况如下：

发票号：CD3321006930/CD3321006812

提单号：472902150

品名：人机界面

HS 编码：85371090.90

型号：EXTER K70 / IX T4A / IX T7A / IX T7A/AL

E1101

EXTER M70

本公司进口的上述产品工作原理，使用场所（如进口产品的零配件，则需说明所属整机的品名）：用于工厂、车间、生产流水线，起到数据监控作用，本公司对所提供的进口产品情况及所附技术资料真实性、合法性负责，愿意接受监督检查，并承担相应的法律后果。

北尔电子贸易（上海）有限公司

2013-3-19

Table 2. CCC Certification Data Application Sheet

CCC认证目录咨询系统录入单

经营单位	上海经贸物流有限公司			经营单位检验检疫备案登记号	3100713538		
收货单位	北尔电子贸易（上海）有限公司			发票号	CD3321005205/CD3321005377		
办理单位				提/运单号	165886454		
货物流向地	上海闵行区			贸易方式	一般贸易		
协议类型	<input checked="" type="checkbox"/> 一次性协议 <input type="checkbox"/> 中客户协议 <input type="checkbox"/> 客户协议						
联系人	倪征			电话	65950181		
商品名称	HS编码	规格/型号	原产国	数/重量	单位	货值	币种
工业嵌入式计算机	84714940.00	EXTER T70	台湾	300	个	111000	USD
工业嵌入式计算机	84714940.00	E1151	台湾	5	个	3320	USD

Table 3. 3C Certification Catalog Consulting System Entry Form

目录外产品咨询申请表

申请号	19x061681					
经营单位	上海威特力焊接设备制造股份有限公司	发票号	105-2019	联系人	5	
收货单位	上海威特力焊接设备制造股份有限公司	提/运单号	***	电话	13482482736	
办理单位	上海威特力焊接设备制造股份有限公司	贸易方式	一般贸易	经营单位检验检疫备案登记号	3100713310	
货物流向地	浦东地区	协议类型	一次性协议			

序号	商品名称	HS编码	规格/型号	原产国	数/重量	货值
1	电焊机	8515390000	INVERTER 300	中国	367台	56716.88美元

Table 4. Out-of-list statement



## 委 托 书

致上海检验公司：

我司\_\_\_\_\_（盖章公司）特委托\_\_\_\_\_（被委托公司）前来上海检验公司办理“ccc 认证资料鉴定”相关事宜，我司对所提供的进口产品相关技术资料的真实性，合法性承担相关法律责任，特此证明。

委托公司（盖章）：

日期：

Table 5. Power of attorney



Table 6. Example CCC certificate

- 
- [1] CNCA 国家认证认可监督管理委员会 (cnca.gov.cn) <http://www.cnca.gov.cn/>
- [2] SAC <http://www.sac.gov.cn/sacen/>
- [3] SAC Standards <http://www.sac.gov.cn/sacen/Standards/>
- [4] SAMR GB standards query 国家标准目录查询- 国家标准信息公共服务平台(samr.gov.cn) <http://std.samr.gov.cn/gb/gbQuery>
- [5] <http://www.hscode.net/IntegrateQueries/QueryYS/>
- [6] WTO/TBT-SPS Notification and Enquiry of China <http://english.tbtsps.com/page/ewto/Indexquery.action>
- [7] CQC <http://www.cqc.com.cn/>
- [8] GACC <http://english.customs.gov.cn/>

### CCC标志强制性产品组

CCC标志适用于以下产品类别（共20个，分为158个类别）。

1. 电线和电缆
2. 电路开关、保护或连接用的电气装置
3. 低压电器
4. 低功率电机
5. 电动工具
6. 焊接机
7. 家用电器和类似电器
8. 音频和视频设备（不包括用于广播服务和汽车的音频设备）。
9. 信息技术设备
10. 照明器具(不包括电压低于36V的照明器具)
11. 机动车和安全附件
12. 机动车轮胎
13. 安全眼镜
14. 农业机械
15. 电信终端产品
16. 消防设备
17. 安全保护产品
18. 无线局域网产品
19. 装饰材料
20. 玩具

### CCC标志强制性产品组&类别 -汽车

#### 12. 机动车和安全部件/配件(共17个小类)

- 汽车：M、N、O类机动车
- 摩托车：摩托车
- 安全带
- 摩托车发动机
- 喇叭
- 复古反射器
- 反光车标
- 制动软管
- 后视镜
- 室内装饰材料
- 门锁和门固定组件
- 燃料箱
- 座椅和座椅头枕
- 后视镜产品
- 测距仪
- 汽车/摩托车外部照明和信号产品（大灯、转向灯、位置灯、停车灯、间隙灯、雾灯、倒车灯、驻车灯、侧标灯、车牌的照明设备）。

#### 13. 机动车轮胎(共3个小类)

- 汽车轮胎
- 乘用车轮胎：子午线轮胎、对角线轮胎。
- 卡车轮胎：超轻型卡车轮胎，轻型卡车轮胎，中/重型卡车轮胎。
- 摩托车轮胎

- 摩托车轮胎

#### 14. 安全眼镜(共3个子类)

- 机动车安全玻璃。

- 夹层玻璃A

- 夹层玻璃B

- 中空玻璃

- 钢化玻璃

#### 15. 农业机械(共1个子类)

- 农作物保护设备

- 机动或手动液体背包喷雾器

- 机动或手动粉末背包式喷雾器

- 机动液体和粉末背包式喷雾器

- 轮式拖拉机（单缸柴油机或25HP以下多缸柴油机）。

所有这些产品组都必须遵守中国的GB标准[4]（更多信息请参考国资委网站[5]），且获得必要的授权，直至取得相关证书并取得证书标志前不得销售、进口和在销售活动中使用。

CCC自2003年5月1日起生效。

### CCC.总程序

如果要进口到中国的汽车零部件需要符合CCC法规，则需要遵循以下步骤，提交所有需要的信息。

#### 步骤

1. 应用
2. 测试
3. 检查
4. 评价
5. 标记

#### 文件和表格

1. CCC认证资料申请单
2. 产品技术资料（产品说明，包括材料清单、照片、EMC报告、警告标签等）
3. 3C认证目录咨询系统录入单
4. 目录外声明
5. 委托书

汽车零部件检测将在经认可的中国实验室进行。

在申请期间，权威机构将进行现场商品检验。

以下网站可以查询HS编码、申报要素、增值税和关税、特殊认证

<http://www.hscode.net/IntegrateQueries/QueryYS/> [6]

当注明"L"时，进口商必须提供3C证书。

不管是强制性的3C，还是未列出的部分，都必须通过商检。

一般来说，如果商品的电压在36V以下或1000V以上，可以对未提交CCC声明的部件进行检验录入检查。

反之收货人在中国进口报关时必须提交CCC证书或办理CCC手续才能获得。

客户负责申请，办理过程需要3个月左右。

### CCC: 豁免条例

部分产品不需要CCC证书。

- 外国使馆和国际组织的外交人员携带的自用商品。
- 在中国大陆居住的香港、澳门政府机构代理人携带的自用商品。
- 入境人员携带的自用商品。

- 政府间赠送或援助的商品。
- 符合以上任一条件的产品，如果涵盖在CCC目录中，都不需要通过CCC认证，也不需要标注CCC证书。符合CCC豁免（或CCC豁免认证）的产品。
- 为科学研究和试验目的而进口的产品。
- 为技术审查和生产线引进而进口的产品零部件。
- 直接用于最终用户维修服务的进口产品。
- 形成制造生产线所需的进口设备/部件，但办公室的设备/部件除外。
- 仅用于商业展览，不用于销售的进口产品。
- 临时进口并将被返还并运出中国的产品，包括参展的产品。
- 以常规贸易方式进口的产品部件，但目的是为了整体出口。
- 以客户提供的加工材料方式进口的产品部件，但目的是为了整个系统的出口。

如果产品符合CCC豁免的条件，制造商、进口商、经销商或代理商可以申请CCC豁免认证，并提交材料，如证明文件，用于符合的豁免条件、责任保证书、产品符合性声明（包括型号检测报告）等，获得《强制性产品证书》豁免审批的条件认证；

附件

#### “CCC 认证资料鉴定”情况说明

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型号：EXTER K70 / IX T4A / IX T7A / IX T7A/AL

E1101

EXTER M70

本公司进口的上述产品工作原理，使用场所（如进口产品的零配件，则需说明所属整机的品名）：用于工厂、车间、生产流水线，起到数据监控作用。本公司对所提供的进口产品情况及所附技术资料真实性、合法性负责，愿意接受监督检查，并承担相应的法律后果。

北尔电子贸易（上海）有限公司

2013-3-19

表2.CCC认证资料申请单



CCC认证目录咨询系统录入单

经营单位	上海经贸物流有限公司			经营单位检验检疫备案登记号	3100713538		
收货单位	北尔电子贸易(上海)有限公司			发票号	CD3321005205/CD3321005377		
办理单位				提/运单号	165886454		
货物流向地	上海闵行区			贸易方式	一般贸易		
协议类型	<input checked="" type="checkbox"/> 一次性协议 <input type="checkbox"/> 中客户协议 <input type="checkbox"/> 客户协议						
联系人	倪征			电话	65950181		
商品名称	HS编码	规格/型号	原产国	数/重量	单位	货值	币种
工业嵌入式计算机	84714940.00	EXTER T70	台湾	300	个	111000	USD
工业嵌入式计算机	84714940.00	E1151	台湾	5	个	3320	USD

表3.3C认证目录咨询系统录入单

目录外产品咨询申请表

申请号	19x061681					
经营单位	上海威特力焊接设备制造股份有限公司	发票号	105-2019	联系人	5	
收货单位	上海威特力焊接设备制造股份有限公司	提/运单号	***	电话	13482482736	
办理单位	上海威特力焊接设备制造股份有限公司	贸易方式	一般贸易	经营单位检验检疫备案登记号	3100713310	
货物流向地	浦东地区	协议类型	一次性协议			

序号	商品名称	HS编码	规格/型号	原产国	数/重量	货值
1	电焊机	8515390000	INVERTER 300	中国	367台	56776.88美元

表4. 目录外声明

## 委 托 书

致上海检验公司：

我司\_\_\_\_\_（盖章公司）特委托\_\_\_\_\_（被委托公司）前来上海检验公司办理“ccc 认证资料鉴定”相关事宜，我对所提供的进口产品相关技术资料的真实性，合法性承担相关法律责任，特此证明。

委托公司（盖章）：

日期：

表5. 委托书



表6. CCC证书示例

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- [1] CNCA 国家认证认可监督管理委员会 (cnca.gov.cn) <http://www.cnca.gov.cn/>  
 [2] SAC <http://www.sac.gov.cn/sacen/>  
 [3] SAC Standards <http://www.sac.gov.cn/sacen/Standards/>  
 [4] SAMR GB standards query 国家标准目录查询- 全国标准信息公共服务平台(samr.gov.cn)  
<http://std.samr.gov.cn/gb/gbQuery>  
 [5] <http://www.hscode.net/IntegrateQueries/QueryYS/>  
 [6] WTO/TBT-SPS Notification and Enquiry of China <http://english.tbtsps.com/page/ewto/Indexquery.action>  
 [7] CQC <http://www.cqc.com.cn/>  
 [8] GACC <http://english.customs.gov.cn/>