

CASE STUDY

EDITORIAL
INFOGRAPHICS AT *SOUTH
CHINA MORNING POST*
BY KEITH TAM

Interviewers at
Hong Kong Design Institute

Keith Tam
Head of
Communication Design

Patrick Chan
Student

Praise Kan
Student

Henry Yip
Student

Interviewees at
South China Morning Post

Darren Long
Creative Director

Adolfo Arranz
Deputy Head of
Graphics and Illustration

Marcelo Duhalde
Senior Infographic Designer

Pablo Robles
Senior Infographic Designer



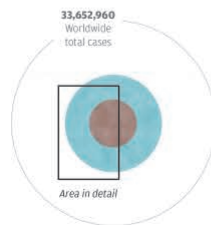
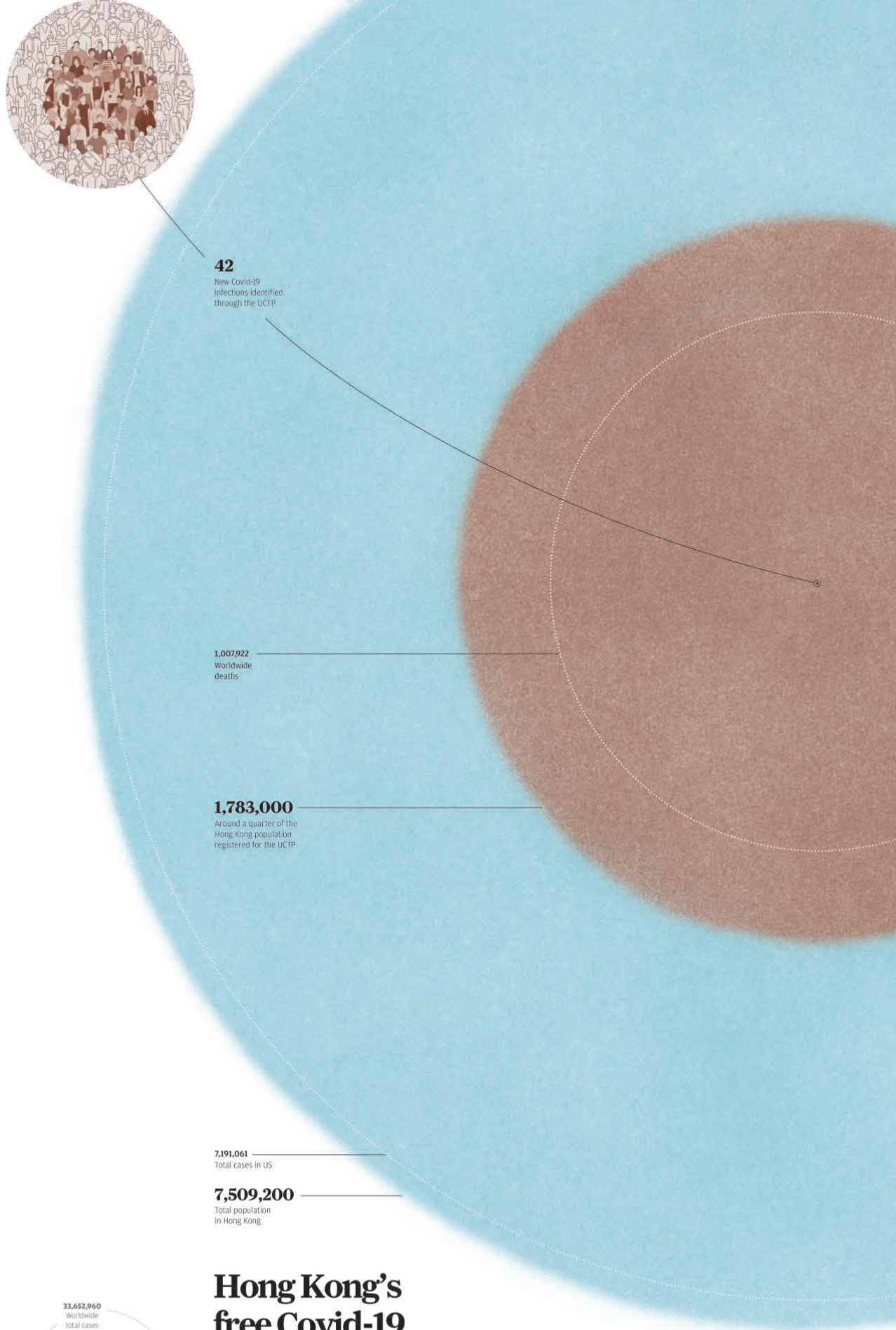
Digital version

Hong Kong launched its one-off voluntary Universal Community Testing Programme (UCTP) on September 1, 2020. The fortnight plan was a bid to cut off silent chains of transmission. Logistically complex and expensive, UCTP only uncovered a few positive cases.

Hong Kong's Free Covid-19 Mass Test in Context
South China Morning Post (2020)

Kalix Lee, Gigi Choy, Dennis Wong, Darren Long

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Hong Kong's free Covid-19 mass test in context

Hong Kong launched its one-off voluntary Universal Community Testing Programme (UCTP) on September 1, 2020. The scheme was a bid to cut off silent chains of transmission, and participation was free for residents. It ran for a fortnight and cost the authorities about HK\$530 million.

By **Kalix Lee** kalix.lee@scmp.com

Source: Government figures, Johns Hopkins University

Note: Worldwide and US figures as of September 30, 2020

Kalix Lee, Dennis Wong, Gigi Choy and Darren Long / SOUTH CHINA MORNING POST

EDITORIAL INFOGRAPHICS AT SOUTH CHINA MORNING POST

Keith Tam

As Hong Kong's English-language newspaper of record, *South China Morning Post's* origins date back to the Qing Dynasty with 117 years of history. Founded by Tse Hsan Tai and Alfred Cunningham, the first issue of *the South China Morning Post (SCMP)* was published on 6 November 1903.

The use of infographics at *SCMP* began in 2011. In just nine years, large-scale infographics have gained prominence in the newspaper's journalistic approach, from the use of graphics as a supplementary aid to help readers understand select aspects of news stories, to the use of singular full-page or full-spread infographics-driven stories. This has blurred the boundaries between traditional journalism and graphic design. The role of the infographics team evolved from an "art department" in the conventional sense to a *bona fide* "visual journalism" team, not only taking charge of the production of graphics, but integrating the research, writing, editing, design, production as well as technical implementation in their workflow. Indeed, *SCMP's* infographic designers share

the same status as journalists, credited and featured prominently in news articles. The outstanding work of the international, multi-skilled team has garnered a multitude of prestigious international awards for their visual journalism.

The diversity of backgrounds among *SCMP's* infographics team is manifested in the diversity of styles that one can see in *SCMP's* visual journalism. Instead of a fixed "house style" that is usually apparent in many major international newspapers such as *The New York Times*, *SCMP* celebrates the diverse approaches and constantly reinvents itself based on the nature and communication needs of a given article. Sometimes editorial illustration and data-driven graphics become indistinguishable. The common goal here is to tell a story, pulling in whatever media and techniques needed to communicate to the readers.

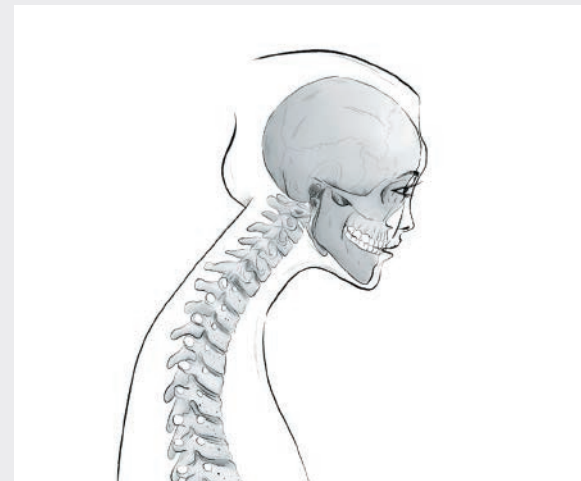
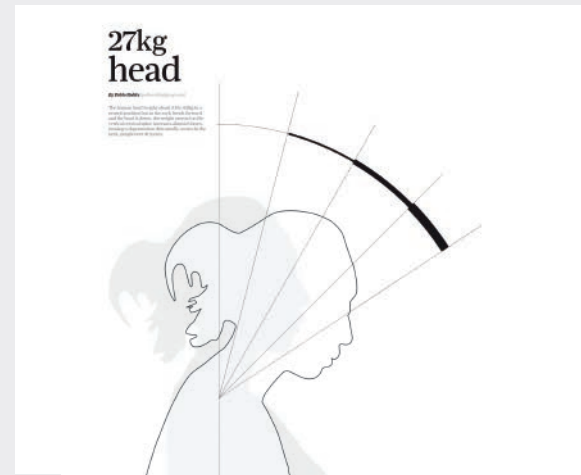
Since the proliferation of smartphones in 2007, the way in which news is experienced by readers has shifted tremendously, and so has the use of infographics. *SCMP* adopts a hybrid publishing approach, integrating print, desktop, and mobile user experiences. Infographics are produced to respond to the characteristics of these environments, taking into account reading behaviour, viewport size, resolution, as well as interactive potential. The shift from the static display of information on a printed page with an ample canvas to the dynamic display of constantly updated data in a small viewport is gaining traction at *SCMP*, particularly with reporting situations that are constantly evolving, such as the Covid-19 pandemic. The addition of developers to the infographics team enables the seamless integration of dynamic data feeds into the display of information in a timely manner.

In June 2020, Keith Tam and three information design students from the Hong Kong Design Institute met with *SCMP's* infographics team to find out about their approach to editorial infographics, particularly in the use of graphic language for storytelling, their design process, as well as the interplay between print, digital, static, and dynamic formats for editorial infographics.

On visual language

01 Are there any trends in infographics? Has it evolved over the years?

Adolfo Arranz (AA) I feel that the relevance and the reach of our work have been getting a different status. I remember around 10 years ago when I started working in infographics, we used to solve immediate problems with small solutions such as simple maps or bar charts without really getting to the content. We were just using graphics to show data but not really committed to the content. But now, we feel that we are visual journalists where we are using both content and graphics to tell stories. So, it is kind of a different profession right now. We have to add many more skills



to our original arsenal that we acquired from university so that we can communicate in an understandable way.

02 Do you see any differences between an editorial illustration and an infographic? Is there a boundary between the two?

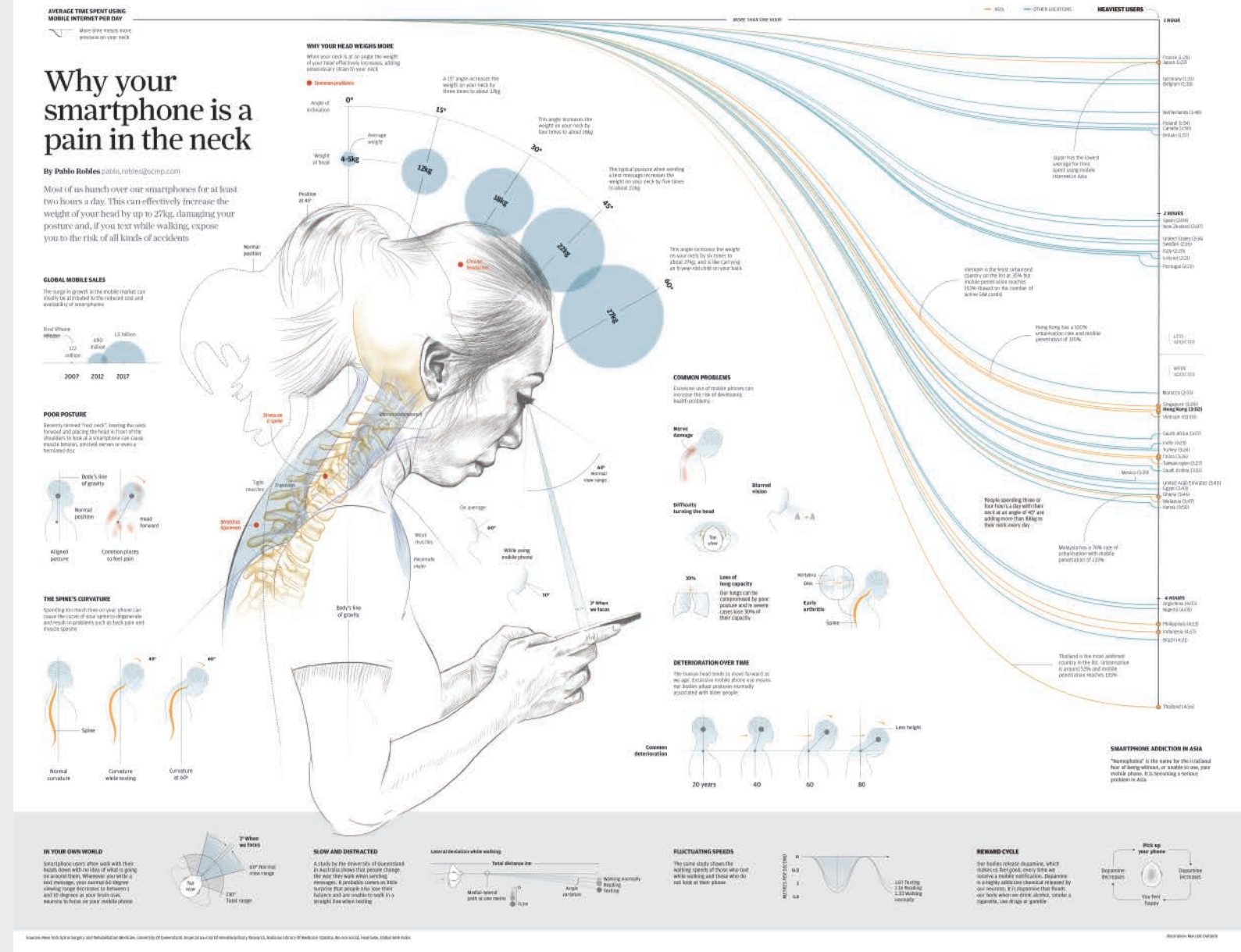
Marcelo Duhalde (MD) Whether to use an illustration or an infographic depends on the need that has to be fulfilled. Illustrations are explanatory—for example, a cover illustration is a way to summarise information in one shot. We have developed a sensibility to represent the concept that we are trying to convey by choosing a suitable method—be it an image, an illustration, or an infographic—so that a story can be told effectively.

We know very clearly that we do not immediately have a solution in mind when approaching a story. We always keep reinventing, exploring, experimenting with, and combining different techniques. Maybe because we are a small team, we are able to manage our way to express our ideas. But still, people recognise that we have some sort of style, which is very interesting because we don't work solely with templates. We use templates only as a reference, but normally our visual explanations and assets are related with the subject matter—we try not to limit ourselves.

03 So you value differences, new inventions, and innovations here more than consistency?

Darren Long (DL) It's interesting because there is sort of a house style and yet everyone in the team is different. Pablo is a digital native. For the "Text Neck" story, for instance, he went out and shot videos. He approached it from a technical point of view, much more technology-related. Photos, diagrams, and things people can interact with. I would say this is a typical Pablo.

Marcelo, on the other hand, has a scientific mentality. He's very incisive and uses lots of data. He has a very analytical mind and he goes straight to the essence of something. So, there'd be lots of very clear, precise ways of visualising figures through abstractions, shapes, and maps.



And Adolfo is like a Picasso, fine art style. It's very much about the beautiful drawings. I always love it when Adolfo manages to find ways of extracting data on something through his drawings. I'm always surprised at how he justifies an illustration as data visualisation.

So, there are three completely different styles, but they all work together somehow. These three examples were led by each of these guys, but everyone worked together, so the approaches meshed together. We've also

got on the team Han Huang, Denis Wong, and Kaliz Lee who have very individual styles. I think that's actually something that makes SCMP unique. When you look at *The New York Times*, for example, they have a single style for their infographics that they rarely deviate from. Whereas for SCMP, we've got the illustrations, the photography, or videos and they all somehow connect without looking like a dog's dinner.



The many stages of Cantonese opera

Chinese opera is considered to have begun in the Tang dynasty under Emperor Ming Huang (712-755) who founded Pearl Garden, the first operational troupe in China. The exact origins of Cantonese opera are open to debate but the general consensus is that the art form migrated from the north to the southern province of Canton (Guangdong) during the Song dynasty (1179-1276 AD). Here is a brief history of its staging and characters. **By Marcelo Duhalde** marcelo.duhalde@scmp.com

HISTORY

Ming dynasty (1368-1644)

Thatched stage
Timber, bamboo poles and canvas
Temporary, simple stage built on open ground.

1658, Qing dynasty

Temple stage
First specific performing stage for Cantonese opera

Mid-19th century

Temporary shed theatre
Built for large-scale religious celebrations with Cantonese opera showcased for a few days

Mid-19th to 20th century

The red boat
The theatre business was developing rapidly as Chinese communities showed a demand for entertainment. Purpose-built theatres provided more entertainment choices

Late 19th century to present

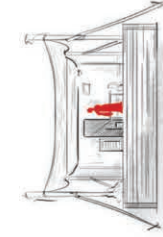
Purpose-built theatres
Built for a brief span to house the plays, the theatres are open venues featuring a vague boundary between audience and performers

Contemporary

Bamboo shed theatres

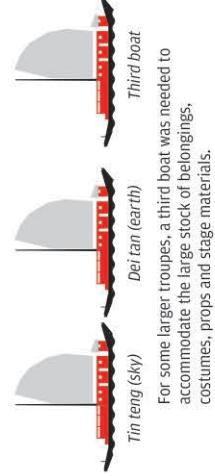
THE RED BOAT

Itinerant troupes performed along the Pearl River Delta from the 19th century to the early 20th century. The groups lived on boats painted red which were able to transport the entertainers to various temple festivals during the performance season, usually starting in July.



The plays were presented on stages temporarily erected near temple festivals. The temples offered presentations to the local gods and raised funds that were used to pay the actors. Entire communities turned out to watch the shows.

Two red boats usually carried an entire troupe and crew members.

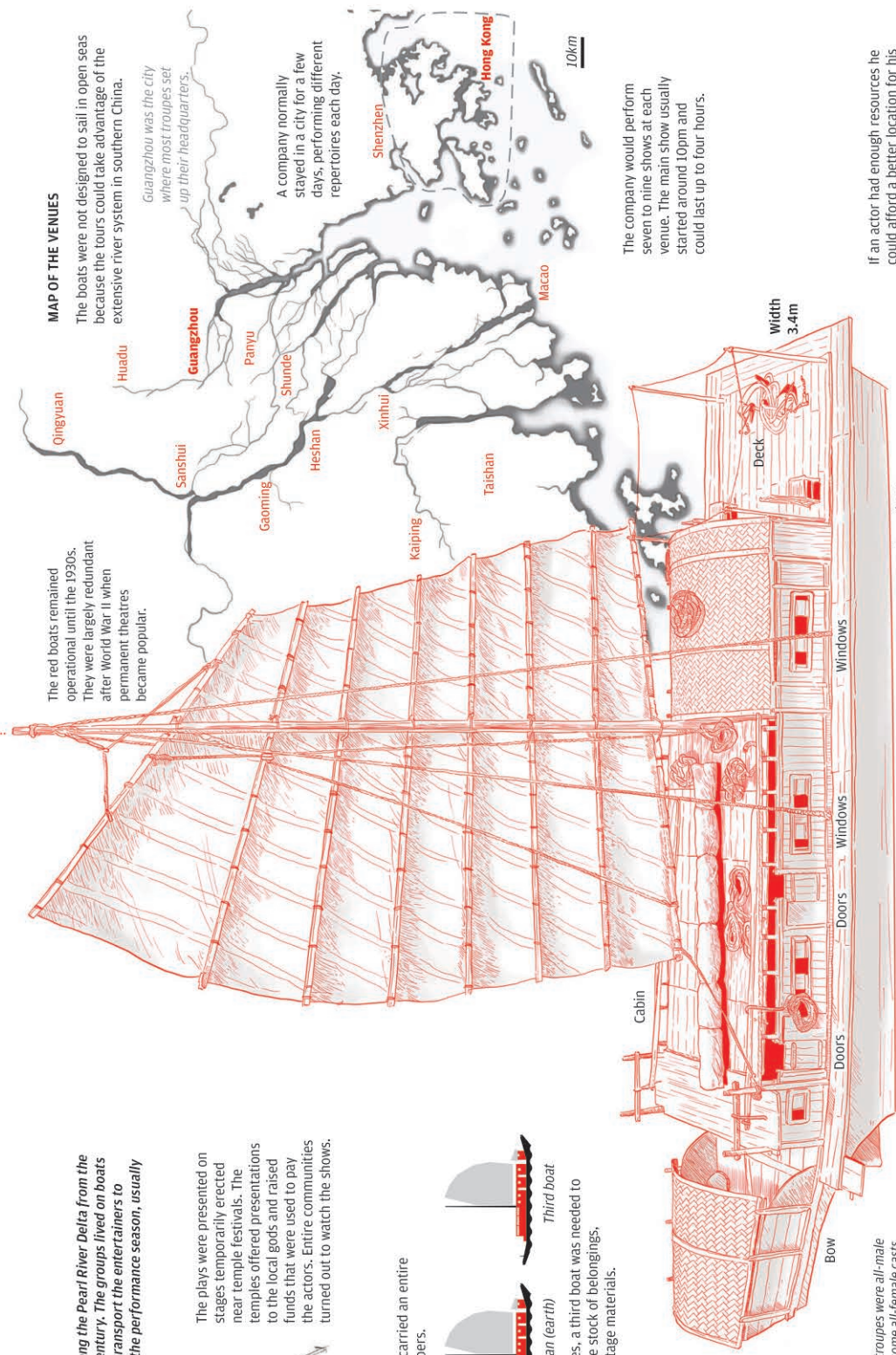


COMPOSITION OF A RED BOAT OPERA CREW

The red boat troupes were highly organised societies. There were 36 opera troupes in total and each full troupe had a staff of 140 to 160 people.

- 62 actors
- 12 musicians
- 12 "boatmen"
- 11 administrators
- 10 property handlers
- 9 "costume man"
- 7 cooks
- 4 professional guards
- 4 laundrymen
- 2 barbers

Also a ship's doctor, the captain and other officers



THE INTERIOR

Only the performers and musicians could use the beds

THE BEST PLACES TO SLEEP

were near windows

With the exception of the captain and the ship's doctor, the crew and officers did not have any place below decks. They worked and lived on the vessel's deck, rolling out blankets to sleep on the floor at night.

If an actor had enough resources he could afford a better location for his bed and introduce glass windows to protect himself from the elements.

The company would perform seven to nine shows at each venue. The main show usually started around 10pm and could last up to four hours.

MAP OF THE VENUES
The boats were not designed to sail in open seas because the tours could take advantage of the extensive river system in southern China.

Guangzhou was the city where most troupes set up their headquarters.

A company normally stayed in a city for a few days, performing different repertoires each day.

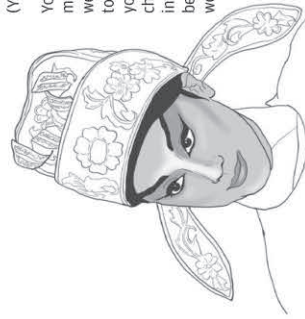
THE CHARACTERS

Initially, Cantonese opera's Xingdang system, which refers to the different roles according to gender, status and personalities, was similar to other genres. Before the 1930s, there were 10 major roles but by the 1950s, *liuzhuzhi*, the six-pillar system, became firmly established. Each opera features six major characters:



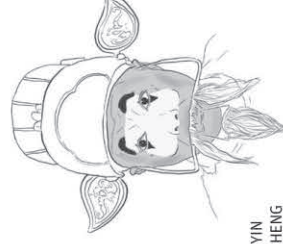
WENWUSHENG

Sheng, is a male character who appears in operas of all historical periods. He is a civilised martial man, portrayed as a clean-shaven scholar-warrior.



XIAOSHENG (YOUNG SCHOLAR)

Young, beardless male character. He wears a paler make-up to represent his youth. These characters are often involved with beautiful young women.



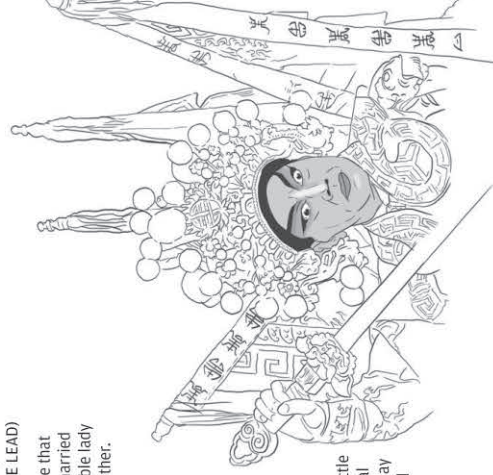
ZHENG YIN HUADAN

Hua Dan (Young Belle) is a vivacious maiden; a young woman with a frank and open personality or a woman of questionable character.



ERBANG HUADAN (SECOND FEMALE LEAD)

A supporting role that could be an unmarried girl, an honourable lady or an elderly mother.



ZHENG YIN CHOU SHENG

The Chou (clown) is always a wise, funny and chivalrous man, and is sometimes of low social status. Sometimes he is portrayed as warm-hearted and sincere while on other occasions he can be sinister and mean.

ZHENG YIN WUSHENG

Wusheng are male military characters who appear in battle scenes. A high level of martial arts skills are necessary to play this role, employing powerful waist and leg movements.

MAKE-UP

One of the most common styles is the "white and red face". The face is covered in white foundation with red eyes fading down the cheeks. The eyebrows are long and the lipstick is usually bright red

Heavy make-up also helps males to be more convincing in female roles



The hair is covered up



Tape is used to angle the eyebrows



A creamy foundation is spread on the cheeks and forehead



Blusher is applied to the cheeks, eyelids and both sides of the nose



The eyebrows are darkened and eye-lines and eye-shadows are drawn



Hairpieces are pasted around the face to create an oval shape

Accessories are used to symbolise the identity of the character

Sources: Hong Kong Heritage Museum, introduction to Cantonese Opera by Dr Tai Suk-yam, Sau Y. Chan (2005) Performance Context as a Molding Force; Photographic Documentation of Cantonese Opera in Hong Kong, Amusing the gods and the people: the bamboo shed theatre of the Taping Qingjiao festival in Sheung Shui Wai by Ho, Wing-see, Red boat troupes and Cantonese opera by Loretta Siuling Yeung, Understanding the Red Boats of the Cantonese Opera (Chinese, Martial Studies, Southern China, Wing Chun), Foshan museum.



How MMA's roots are in Hong Kong

A group of sports administrators, martial arts teachers, street fighters and local law enforcement officers began to mix martial arts disciplines in Hong Kong long before the idea took root elsewhere. These contests captured the imagination of the Hong Kong public and became part of the city's cultural fabric

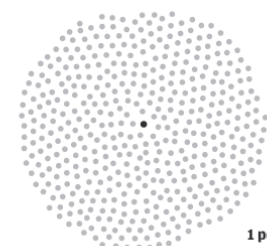
By Pablo Robles, Adolfo Arranz and Dennis Wong

EVERYBODY WAS KUNG FU FIGHTING ...

Large numbers of immigrants from China's Mainland came to Hong Kong SAR seeking refuge in the early 20th century. Some were prominent martial artists and many people turned to them to learn self-defence techniques in response to the colonial city's high crime rates and limited police manpower

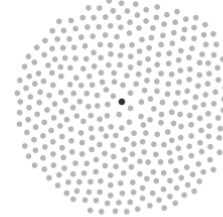


1953
1 police officer per 452 civilians



1967
1 police officer per 355 civilians

1994
1 police officer per 156 civilians



HONG KONG'S FORGOTTEN FIGHT CLUB

In the early 1980s, Hong Kong developed its own unique fight club. The brains behind the Full Contact Boxing Association were local sports administrator Wai Kee-shun, policeman James Elms and fighter Kong Fu-tak

- KONG FU-TAK VS BILLY CHOW**
Hong Kong
- BRUCE LEE VS GARY ELMS**
Hong Kong
- WU GONGYI VS CHEN KEFU**
Macao

BRUCE LEE, THE GRANDFATHER OF MMA

Today, MMA fighters do not worry about whether a specific move corresponds to classical disciplines or styles. They use any method they want to express themselves. This is also the philosophy behind the martial arts form Jeet Kune Do, founded by Bruce Lee almost a quarter of a century before the first UFC contest in 1993

ROOFTOP FIGHTS

An early form of MMA was practised on the streets and more often, rooftops of Hong Kong long before Rorion Gracie, Art Davie and John Milius organised a formal competition between various combat disciplines which they called the Ultimate Fighting Championship, or UFC

As a teenager, **Bruce Lee** regularly watches and takes part in street fights. He begins to cherry-pick techniques from different schools and combines them into his own style

Ip Man, the legendary wing chun master – whose most famous student is Bruce Lee – encourages his students to look beyond the classroom to hone their skills

Wing chun practising

Traditional southern Chinese kung fu style. It is a form of self-defence specialising in close range combat and uses striking and grappling

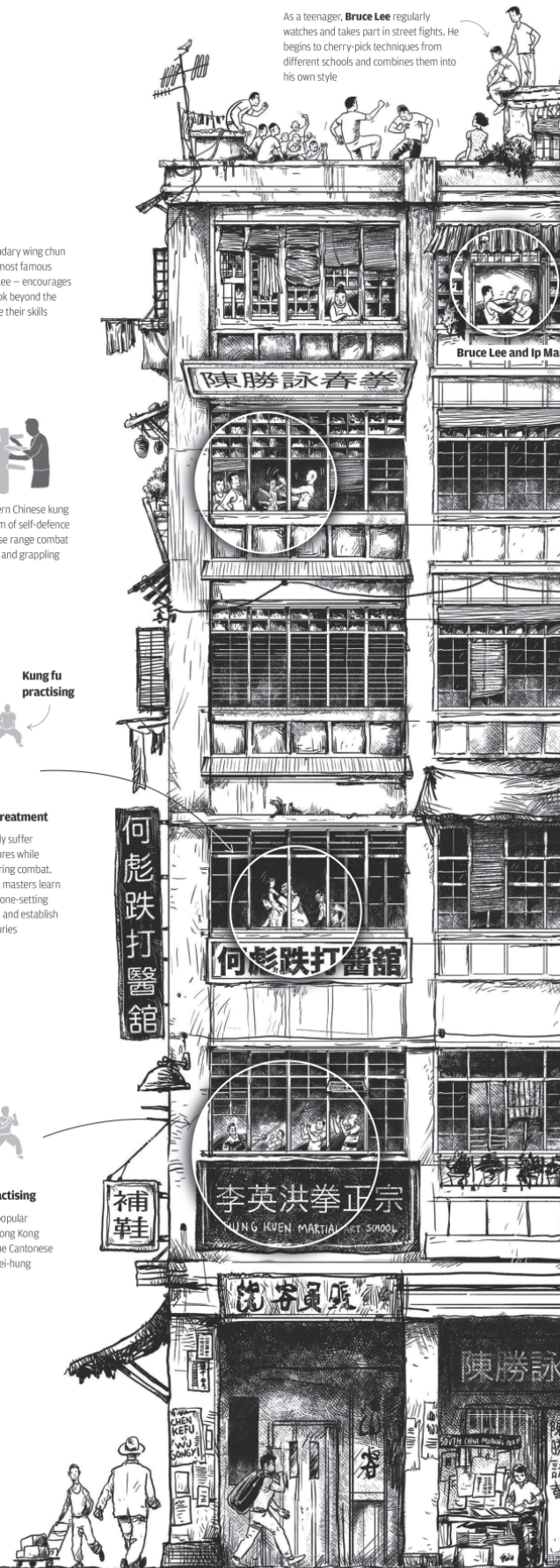
Kung fu practising

Bone-setting treatment

Fighters frequently suffer sprains and fractures while practising and during combat. Many martial arts masters learn ancient Chinese bone-setting skills (osteopathy) and establish clinics to treat injuries

Hung kuen practising

Well-known and popular fighting style in Hong Kong associated with the Cantonese folk hero, Wong Fei-hung



04

How do you decide on what visual language to use for a particular story? For example, when to use infographics and not just words, what aspects to highlight, and what visualisation methods to use? What is the decision-making process like?

MD

When we start on a project, our goal is to offer our particular approach to a subject, which is hard to find elsewhere. We do not try to explain something that has already been explained by others. The research is focused on specific aspects without trying to cover it all from the beginning like an encyclopaedia. We try to lend an interesting angle to things that have not yet been explained, depending on the moment, our own research, or our own conversations. That forces us to approach a story with fresh ideas and to offer new information. We interpret the research and try to come with our own unique solution for different subjects.

The decision on the use of visual language depends on our own preferences and styles as we don't have the same skills. We have different approaches to infographics and we have our own favourite ways to solve visual problems. That's why I find it very difficult to get into software that automatically generates visualisations. I always try to find other ways to solve it. We all have our own limitations, but we are very collaborative.

DL

People who have a data analyst background tend to start off with a conclusion, then use the data to get to the conclusion. For us, we want to tell a story. We use data to inform us as to what the conclusion should be. Well, actually, we don't even have a conclusion. We usually leave the conclusion for the reader, let them make up their own mind. Whereas, data analysts and traditional journalists tend to drive you to agree with them at the end. That desire to tell a story is what sets our team apart. Our team comes from Hong Kong SAR, China's Mainland, Costa Rica, Chile, Spain, and Britain. When we sit down in a room, we have very different points of view and we've all got our own biases, our own cultural baggage. What's a benefit to us is that we're not data analysts, we're not specialists. That means that we've got to make it really simple for us to understand first and then we know the reader will.

Most of our infographic-driven stories are about visualising the data. And data tend to be numbers, facts, and figures, which is not very sexy if you're not into that. For the average reader, it might be a turn-off. The way we use infographics—the visual side of things—is very warm, engaging, and human. We try to get readers in there so that they can relate to it. It takes away the dryness of the numbers.

AA

I think the most important part is to first understand. How can you explain it to the readers if you cannot understand it?

05

Do you get into content a lot more now than before?

AA

Yes and investing more time in research, too. Before, I used to spend more time in the design process, thinking about colour, aesthetics, etc. But now, our process demands us to dedicate half of the time or maybe even more to research—working through information, making comparisons, working with big data, and so on—different processes that I learned on the job. I was trained as a graphic designer. Originally, my big interests were illustration and graphic design, instead of politics or economics. I have to make my interests more diverse.

DL

To me, the trends in infographics are set by the way technology evolves. Ten or even five years ago, designers were very specialised, for example, in Illustrator, Photoshop, or InDesign. In the past, I would design and lay out a magazine, but I was never expected to print it as well. But as technology evolved, one person can do more. With the new technology, you are in complete control of everything. That's why designers like us are no longer just designers anymore. We're journalists or multimedia artists. So, the team does a lot of their own reporting, researching, and editing. And then comes the design. I almost think that, in a way, what we do is "anti-design." It's about communicating an idea, first and foremost. If it looks nice in the end, that's a bonus.

AA

Never in my life did I think that I would work in a newspaper. It's crazy. Of course, we're working in the media. Twenty-five years ago, I didn't study to become a journalist. I studied illustration and graphic design. I don't know. Maybe I'm a journalist, after all!

How MMA's Roots Are in Hong Kong

South China Morning Post (2019)

Dennis Wong, Pablo Robles, Mathew Scott, Adolfo Arranz, Darren Long

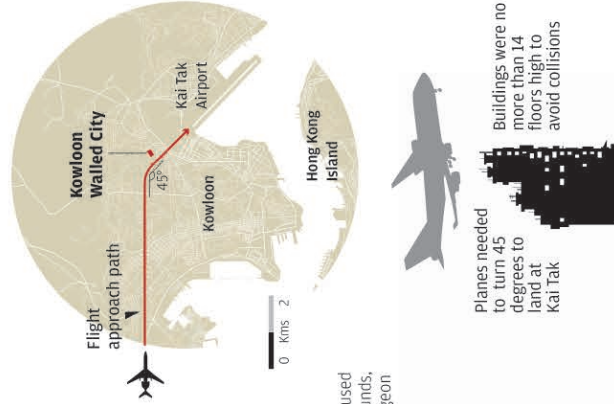
This graphic depicts the cultures and developments of martial arts in Hong Kong. Martial artist Bruce Lee's philosophy Jeet Kune Do continues to influence today's mixed martial arts (MMA) athletes.



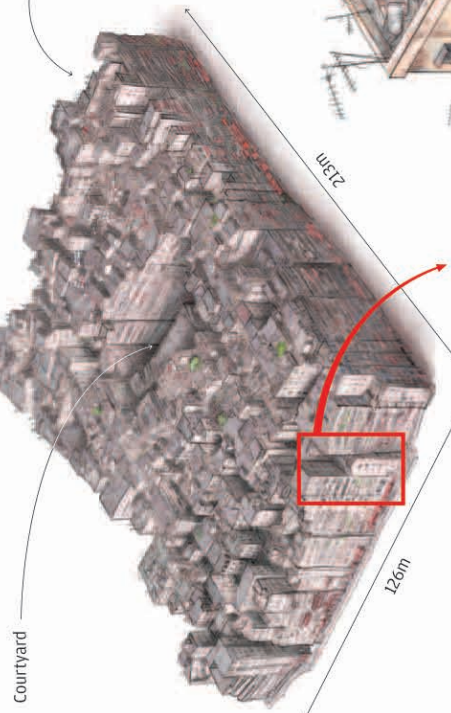
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City of anarchy

Kowloon Walled City, located not far from the former Kai Tak Airport, was a remarkable high-rise squatter camp that by the 1980s had 50,000 residents. A historical accident of colonial Hong Kong, it existed in a lawless vacuum until it became an embarrassment for Britain. This month marks the 20th anniversary of its demolition.



500
Buildings built into 2.7 hectares



Without municipal services, there was no rubbish collection. Old television sets, broken furniture, discarded mattresses and other bulky items were hauled to the roof and abandoned

Other rooftops were used for exercise, playgrounds, relaxing and even pigeon racing

Planes needed to turn 45 degrees to land at Kai Tak



Buildings were no more than 14 floors high to avoid collisions

There were 77 wells inside the city some 90 metres deep. Electric pumps delivered water to big tanks on rooftops. From there, water was funnelled through narrow pipes to the homes

40sq ft
per person

The area's interconnected high-rise towers were built without architects and engineers, and ungoverned by Hong Kong's building and sanitation regulations

There were several schools and kindergartens, some of them run by organisations such as the Salvation Army

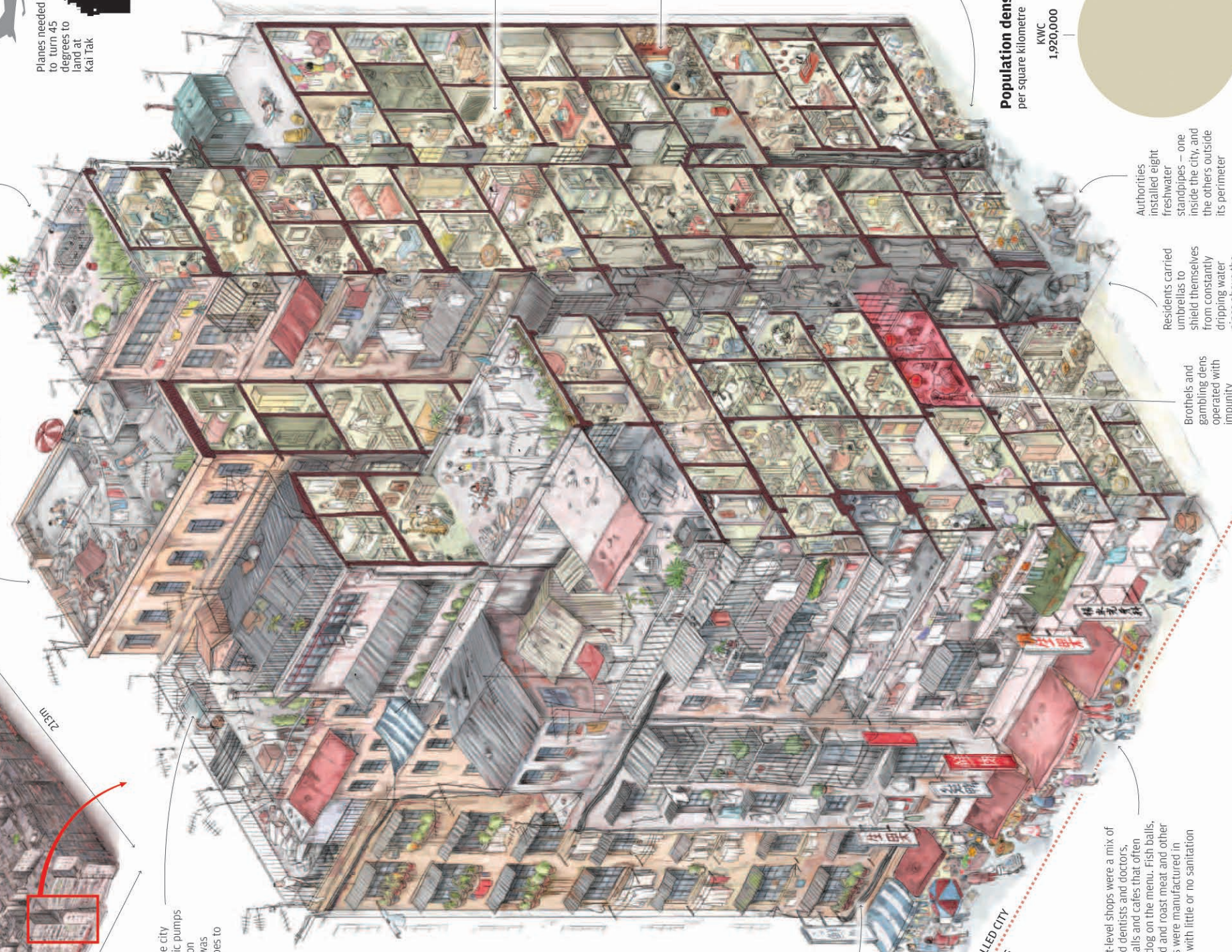
Despite its daunting, squalid appearance and reputation for lawlessness, many of Kowloon Walled City's former residents remember it fondly. It may have been the City of Darkness to outsiders, but to thousands who called it home, it was a friendly, tight-knit community that was poor but generally happy

HK\$35
monthly room rent

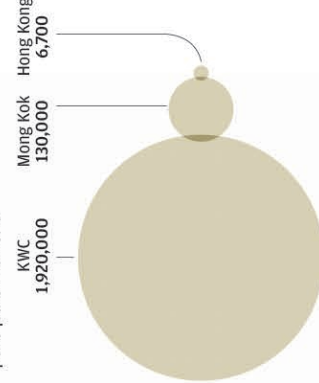
The street-level shops were a mix of unlicensed dentists and doctors, market stalls and cafes that often included dog on the menu. Fish balls, barbecued and roast meat and other foodstuffs were manufactured in premises with little or no sanitation

Electric wires were placed outdoors to prevent fires

KOWLOON WALLED CITY
HONG KONG



Population density
per square kilometre



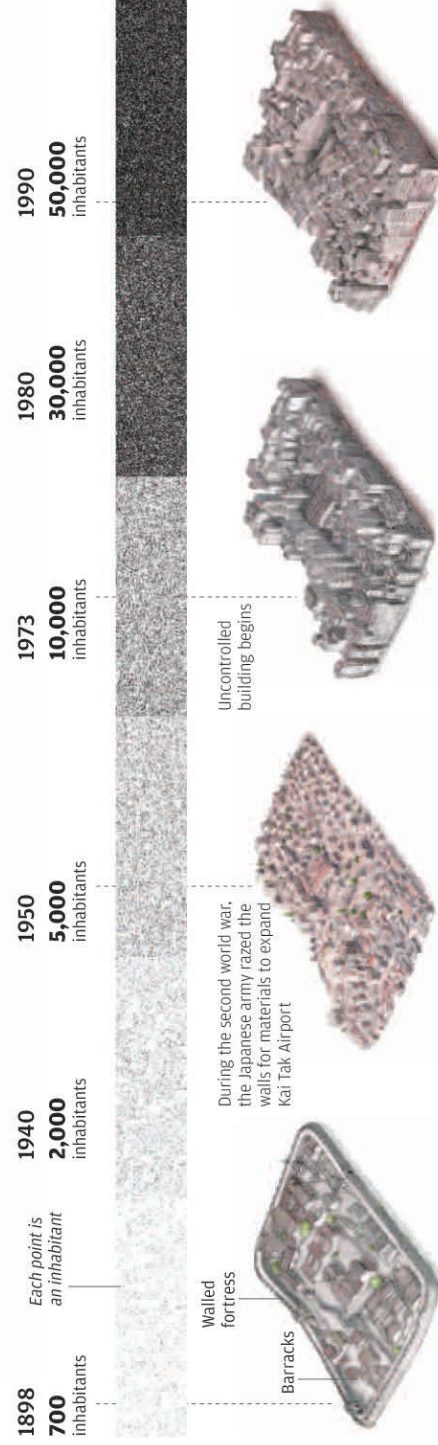
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Residents carried umbrellas to shield themselves from constantly dripping water pipes above the narrow alleys

Brothels and gambling dens operated with impunity

Authorities installed eight freshwater standpipes – one inside the city, and the others outside its perimeter

From fortress to park
The Walled City underwent a dramatic transformation in the final decades of the 20th century



Fresh start
In March 1993, the settlement was demolished and a park that looked like a typical Chinese garden was built in its place. But it kept a few original elements from the Walled City, such as old cannons and remnants of the South Gate and its entrance plaques



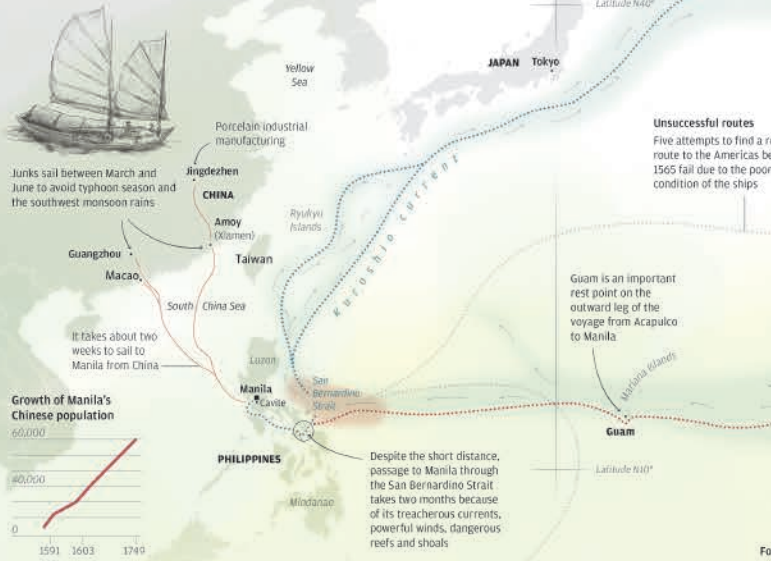


known as the *Tornaviaje*. With this route mapped, Spanish merchant galleons in the Philippines started shipping and trading exotic goods like silks and porcelain from China to the Americas. These galleons were known as China ships, navigating along this route for more than 250 years.

This graphic shows the discovery of the roundtrip and the beginning of globalisation. Globalisation is thought to have taken shape in the early 16th century when the Spanish silver coin became the currency of reference for world trade. Spanish navigators in the Philippines established a circular shipping route between Asia and the Americas,

The China Ship
South China Morning Post (2018)
Adolfo Arranz

The round trip (1565-1815)
Manila is ideally located for a major trading port of Chinese goods, which are highly coveted in Europe and America. The Chinese community in Manila grows exponentially to keep pace with this trade boom. Manila also provides respite for sailors before the long and arduous journey to Acapulco, the Spanish base where galleons trade their goods for silver coins.



The China ship

It is the mid-16th century and the beginning of modern-day globalisation with trade networks being forged across Asia, Europe and the Americas. The Spanish, who have discovered vast silver deposits in the Americas, are flush with cash while China is in the midst of a currency shortage. As sailing routes are mapped across the Pacific, Spanish merchant galleons, like the one illustrated here, start shipping and trading exotic goods. These galleons, called Manila and China ships, travel between Acapulco and the Philippines. Most of the goods they pick up, such as silks and porcelain from China, have been brought to Manila by junks. And as the silver dollar spreads across Asian markets, so too does a new wave of prosperity.

By Adolfo Arranz adolfo.rranz@scmp.com

A harrowing journey ...

Scurvy symptoms

- Sunken eyes
- Pale skin
- Tooth loss

If the trip lasts more than three months, sanitation deteriorates rapidly, and it becomes common for passengers and crew to die from scurvy and other diseases.

Insects, such as weevils, start to overrun bread, meat and even travellers' bodies, causing wretched discomfort and disease.

Contaminated food: Bread, dry meat, Worms, Weevils.

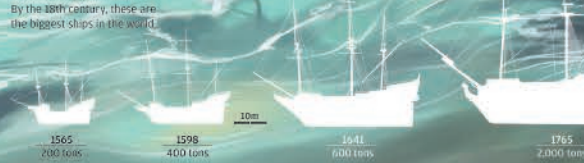
The abject conditions of these give rise to disputes among the crew, which easily blow out of proportion. The ship's captain will often use harsh and exemplary punishment. A common punishment is to be shackled in bilboes all day on deck.

... but a great reward

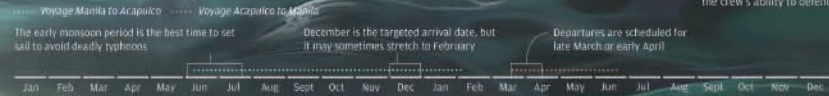
Crew receive 350 silver coins, divided into two payments: 75 coins for the outward leg and the rest upon returning to Manila.

Cargo profits could be massive. Some estimates place returns at 200 per cent of the original value.

Evolution of the China ship

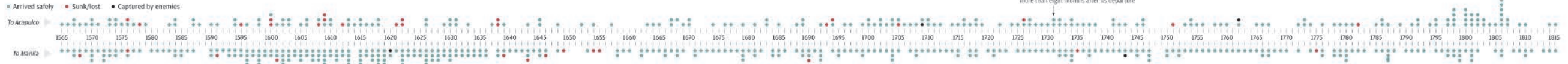


Shipping completion time



The longest regular shipping line: 250 years

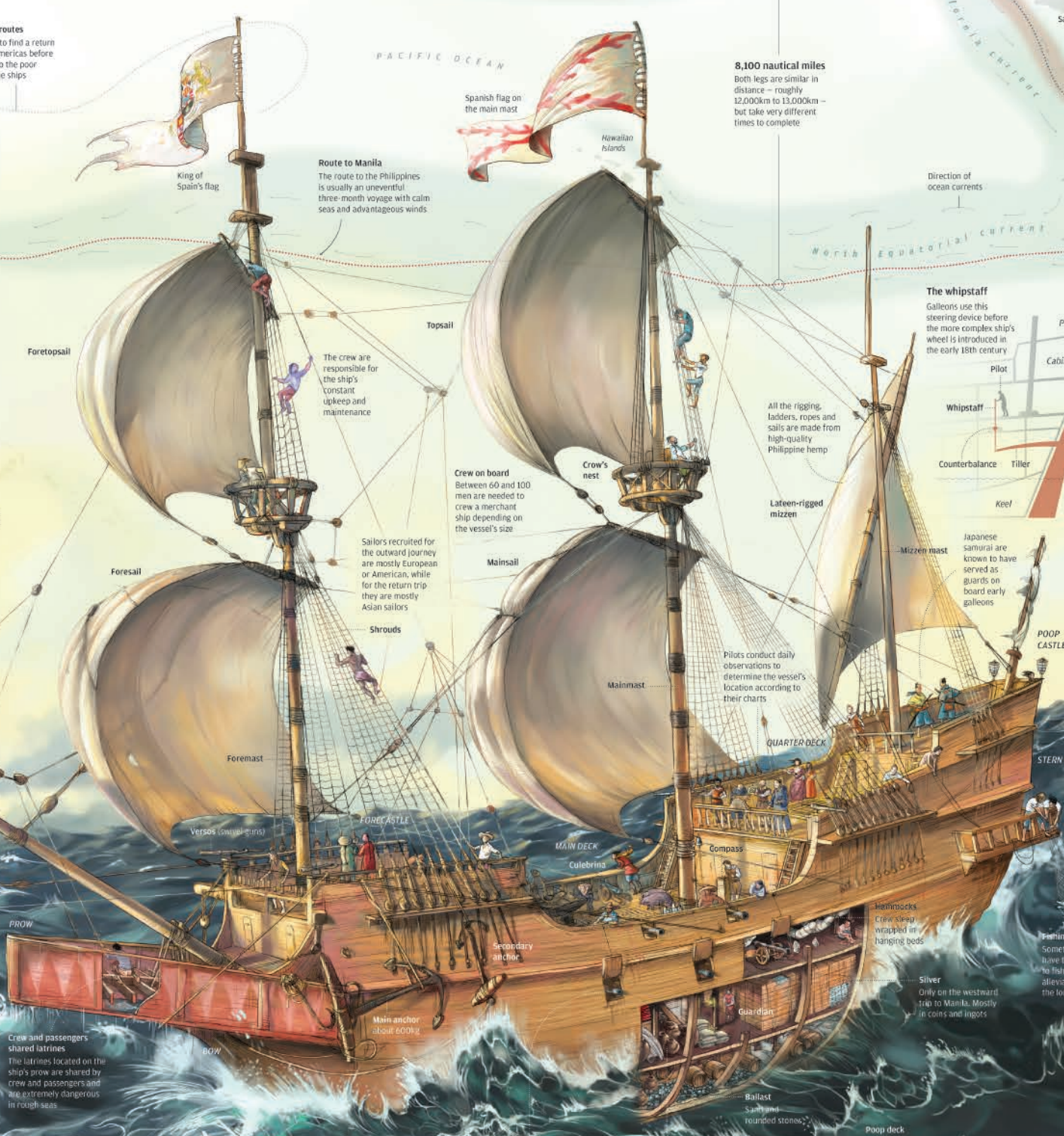
In terms of operating years and distances covered, galleons pined the longest regular line in history. This table estimates the number of ships to make the voyage and whether they survived



Sources: The Silver Way—Peter Gordon and Juan José Morales; The Manila-Acapulco Galleons: The Treasure Ships of the Pacific—Stefany Fish; Spanish Galleon 1580-1690—Angus Konstam; University of Notre Dame; Sakata Naikita; The Metropolitan Museum of Art

Andres de Urdaneta (1498-1568)

An Augustinian friar, Spaniard Andres de Urdaneta, was also a sailor and author who developed into one of the Pacific Ocean's most knowledgeable European navigators. His greatest achievement was discovering the *tornaviaje*, the return maritime route from the Philippines to the Americas in 1565. Most importantly, he made the odyssey through the Pacific, possible by writing navigation charts.



Unsuccessful routes
Five attempts to find a return route to the Americas before 1565 fail due to the poor condition of the ships.

Route to Manila
The route to the Philippines is usually an uneventful three-month voyage with calm seas and advantageous winds.

Route to Acapulco
Returning to Acapulco from Asia is more hazardous than the outward voyage. More than 20 galleons are lost on this journey over 250 years.

8,100 nautical miles
Both legs are similar in distance — roughly 12,000km to 13,000km — but take very different times to complete.

The whipstaff
Galleons use this steering device before the more complex ship's wheel is introduced in the early 18th century.

The first global currency
The expansion of trade routes using Manila as a hub, linking Asia to the rest of the world, stimulates international economic growth. China's acceptance of silver in exchange for commodities such as tea, silks and ceramics results in Spanish minted dollar coins evolving into the world's first common currency.

1537-1869: Spanish silver dollar
Millions of coins are minted, spreading through Spain, the Americas and Southeast Asia. The consistent weight and purity set the standard around the world.

1794: US dollar
The first coin to be based on the measure and value of the Spanish dollar. Both currencies circulate in America until 1857.

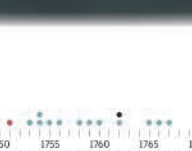
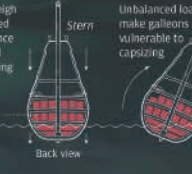
1863: Mexican dollar / peso
The Mexican peso gains common acceptance in China after the fall of the Spanish Empire.

1866: Hong Kong dollar
The British government starts issuing the currency for use in Hong Kong, with the same value as the Spanish dollar and Mexican peso, after attempts to introduce the pound fail.

1871: Japanese yen
Japan starts issuing its own currency using coin-making machines bought from the British government in Hong Kong. It has the same value as the Spanish dollar and Mexican peso, and similar characteristics.

1899: Silver dragon
Starts to be used in China at the same time as the Spanish dollar and the Mexican peso, and with the same characteristics.

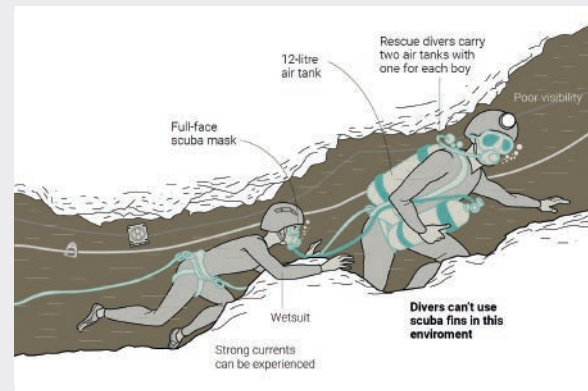
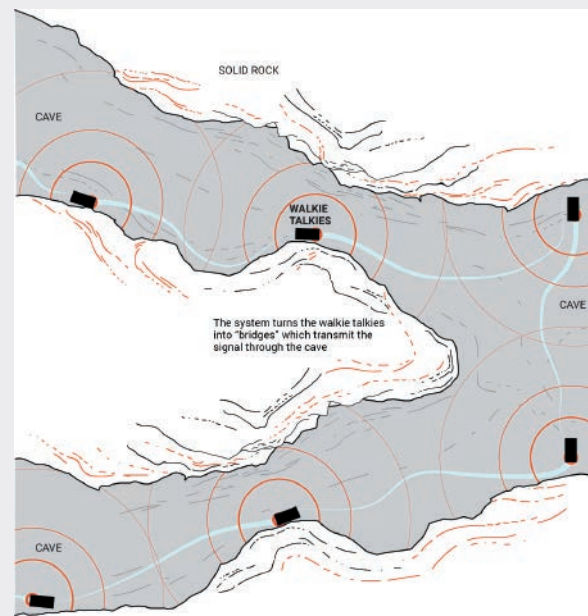
1902: Korean won
Korea also starts to mint its own coin based on the same characteristics as the global currency.



On processes and methods

01 Can you tell us more about the process at SCMP? How do you initiate a project, how you source raw material, and how do you work with the editorial team?

AA Here at SCMP, we can decide what we can and cannot do, which might not be true at other organisations where strict instructions are given by editors. We can decide not to go ahead with a particular project because there is insufficient information, for example.



Above: The team inside the cave established a series of walkie-talkies connected to each other over four kilometres. The system turned the walkie-talkies into "bridges" transmitting the signal through the cave.

Below: The rescue team assisted the boys to scuba dive.

MD Almost all of our projects are initiated by our team. On most occasions, the topics are explored individually and then proposed to the group with reliable content and visual resources. Once approved, we get to work individually or collectively.

02 So, there's no editor breathing down your neck saying "you need to do this?"

DL Well, there is, but my role in the team is a buffer. They would explain to me why we can't do something, I then go to the editors to explain and they'll listen. But there are times when it isn't like that.

03 Do the editors come to you saying, "We'll cover such-and-such topic next week. Could you produce something?"

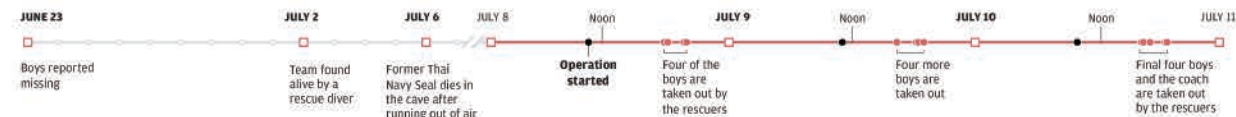
DL Yeah, our executive editor, Chung Yan Chow. We tend to have two meetings a day. During these meetings, I find out what the news is for that particular day, but I also get a heads-up on upcoming projects. Occasionally, there'll be ideas like "Made in China 2025." The editorial team will say they're doing a series on a particular topic and the infographics team will look for visual solutions. I'd go back to the team and figure out how to do something worthwhile with the editorial team's idea. It can be a long process.

04 How much time typically? And how about time-sensitive topics?

DL There is no typical timeline. "Life Inside the Forbidden City" took us three years. Other stories that look like they are very developed could have been done in a day. The fastest would be done in a day, like "Saving the Wild Boars." The whole team came together and ran around like crazy. Adolfo divided the research amongst everyone and then put it all together.

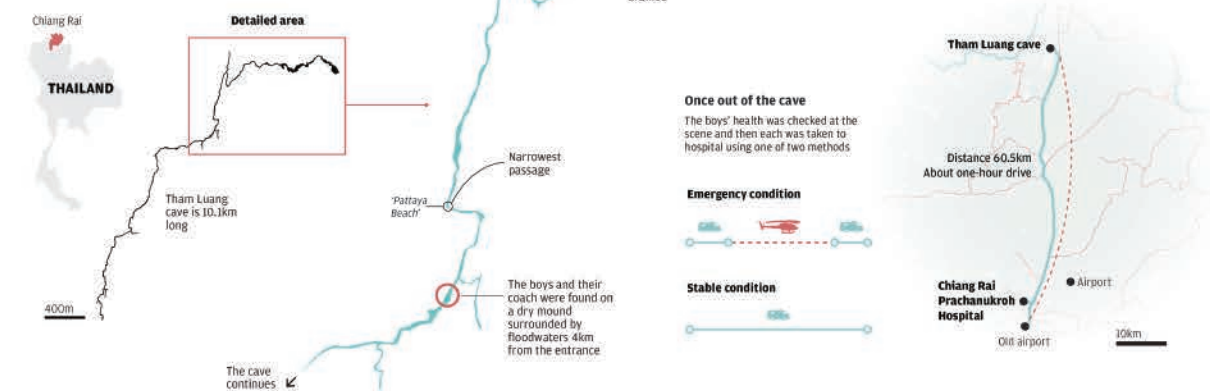
AA For this one, we worked very fast on the illustrations. We worked like a factory. First, I did a rough sketch for that. And then it was passed onto Marcello. He finished it in Adobe Illustrator. For me, hand sketching is a very important process.

MD You see that this story is all static. We wanted to include more information and interactivity, but there was just not enough time.



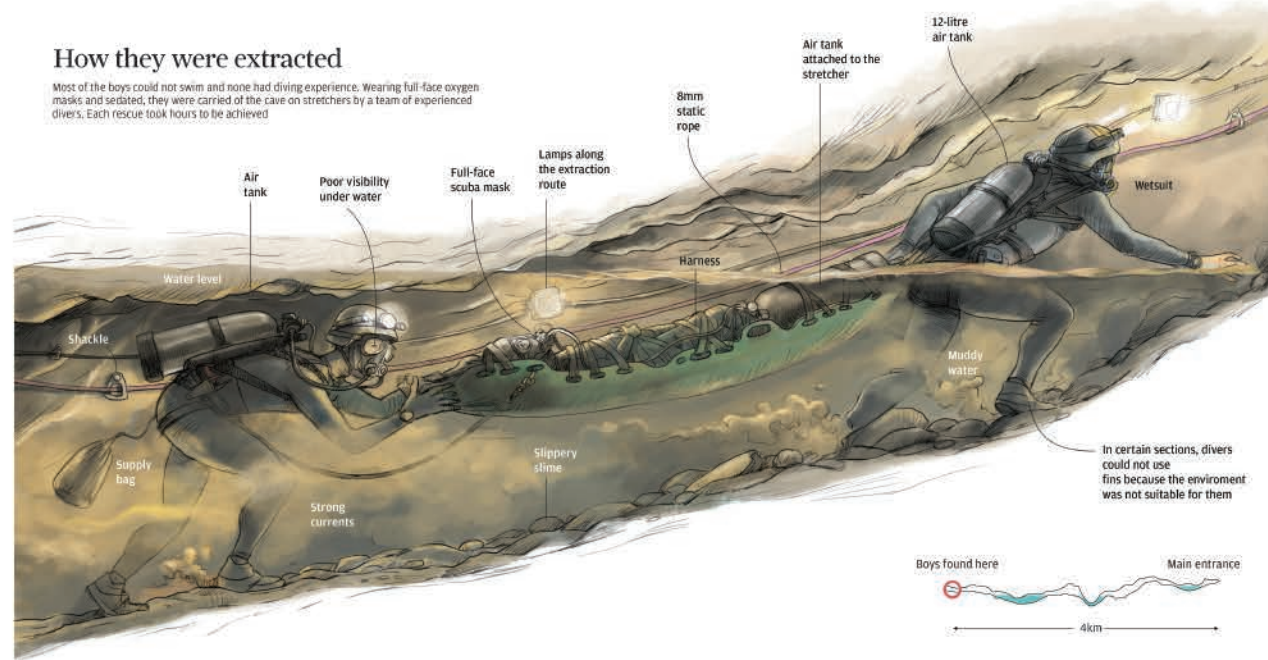
Saving the Wild Boars

On June 23, a group of 12 boys from a local soccer team known as the Wild Boars and their coach went missing in a cave complex in northern Thailand. The world followed their rescue as it unfolded.



How they were extracted

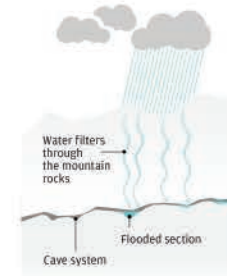
Most of the boys could not swim and none had diving experience. Wearing full-face oxygen masks and sedated, they were carried of the cave on stretchers by a team of experienced divers. Each rescue took hours to be achieved



Why it was so complicated

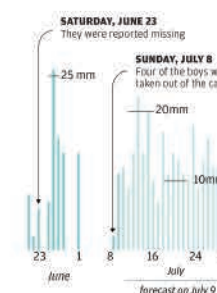
How rain floods the cave

Storms in the area caused the caves to flood easily because the rock is permeable and the water can pass through the gaps



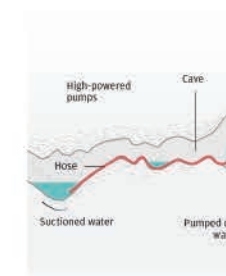
Race against the rain

Rainfall in the area increased after the boys entered. They were forced deeper into the caves as the passages flooded



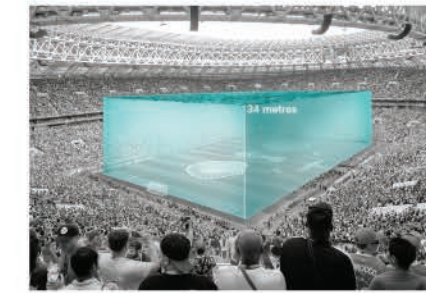
Draining the galleries

Workers drained the flooded cave with a system using hundreds of high-powered pumps



How much water?

About 243 million litres of water were pumped out before the first group of boys was rescued on Sunday, July 8. That would be enough water to fill a swimming pool the size of the stadium for the World Cup final to a depth of 34 metres



Sources: British Cave Rescue Council, Pyrenean Speleology Association (France), Peace and Order Maintaining Centre, Boston University's School of Public Health, accuweather.com, CNN reports, Masted Networks website, News Agencies, Manual de Rescate y Salvamento (firefighters CES of Guadalajara, Spain)

Graphic by Adolfo Arranz, Marco Hernandez, Pablo Robles, Marcelo Duhalde and Darren Long



Women near the emperor

Concubines

Requirements to join the harem



- Beautiful enough to satisfy the emperor and his parents**
 - Physical health**
 - Training**
 - Serving the emperor's mother**
- Social background was no barrier and many emperors chose concubines from the general public. The empress was the one exception - she was always selected from the family of a high-ranking official.
- Less than 100 candidates would be selected to spend several nights with women who specialised in training and managing maids. Candidates' bodies were inspected for things like skin infections, body hair and body odour.
- The finalists were initiated into forms of acceptable behaviour and how to speak, gesture and walk. They also learned arts such as painting, reading, writing, chess and dancing.
- Finally, the standout candidates' last test was to spend several days taking care of the emperor's mother's daily needs.

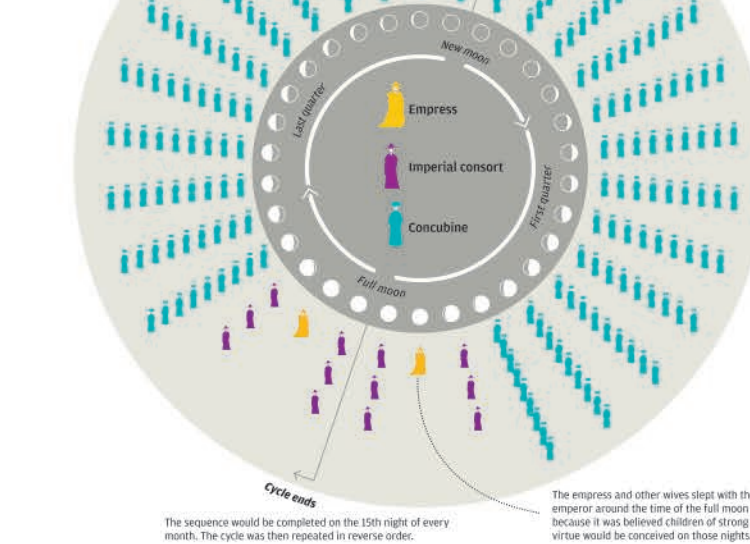


Forbidden City map

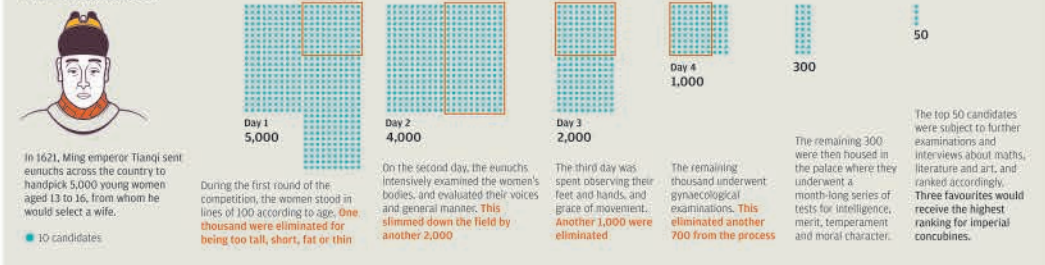
Moon cycle

In China, and some other Asian countries, age is determined from the moment of conception, not the moment of birth.

The imperial Chinese believed that women were most likely to conceive during the full moon, when the Yin, or female influence, was strong enough to match the Yang, or male force, of the emperor.



The Outstanding 50



Palace servants

The Qing palace maids

The female servants in the palace were ranked according to their families' social position and were recruited from the Eight Banners families that were mainly Manchurians and Mongolians.

They were chosen by the palace every three to five years and were not allowed any contact with the outside world. Even their parents were banned from visiting them until they turned 25 years old.

Maids could elect to leave the palace at the age of 25. Many stayed, but those who left were richly rewarded for their service.

- Maids assignation**
- The number of maids assigned to high-ranking women varied but were typically as follows:
- Empress dowager: 12
 - Empress: 10
 - Imperial consort: 8
 - Imperial concubine: 6
 - Concubine: 4
 - Low-rank concubine: 2

Wet nurses

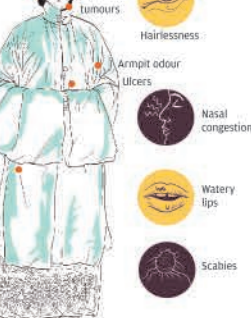
Imperial consorts and concubines wanted to mark their high status and spare themselves the physical challenges of breastfeeding. This resulted in wet nurses coming to high prominence during the Ming dynasty.

Between 20 and 40 lactating women were recruited every three months.

Health requirements

A doctor would determine if the woman was free of the following:

- Vertigo
- Neck tumours
- Hairiness
- Unpleasant odour
- Ulcers
- Nasal congestion
- Watery lips
- Scabies



Life inside the Forbidden City

This three-page package depicts daily life in Beijing's Forbidden City during the Ming and Qing dynasties. Emperors were surrounded by consorts, concubines, maids and an army of eunuchs whose mission was to ensure heaven's earthly representative sired a direct male heir to maintain harmony between heaven and earth.

By Marcelo Duhalde

For the emperor, life in the Forbidden City was not as opulent as one might imagine. While each dynasty claimed the emperor was heaven's earthly representative destined to drive the immense country forward, the emperor remained a link in a bureaucratic chain compelled to follow rigorous protocols dictated by tradition.

Palace of Heavenly Purity

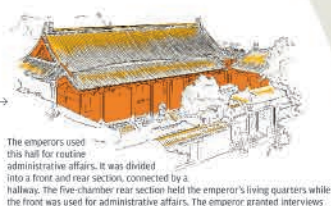


Built in 1420 and rebuilt in 1798 to repair fire damage, the Palace of Heavenly Purity was where the emperor read, and signed documents and interviewed ministers and envoys. Banquets and other ceremonies would occasionally be held here too.

The seats of power

The Ming dynasty established the Palace of Heavenly Purity as the residence of the emperor, a tradition followed by Qing emperors. When the Yongzheng Emperor (reign 1722-35) moved his home to the Hall of Mental Cultivation, he continued to hold court in the Palace of Heavenly Purity.

The Hall of Mental Cultivation

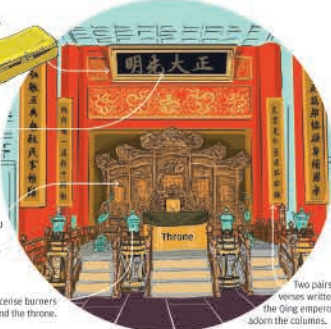


The emperors used this hall for routine administrative affairs. It was divided into a front and rear section, connected by a hallway. The five-chamber rear section held the emperor's living quarters while the front was used for administrative affairs. The emperor granted interviews to his officials in the central room where the throne was situated.

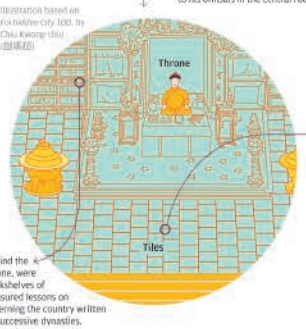
Succession

The box with the edict for the succession was placed behind a board hanging over the throne. This was closely related to the Qing system of designating the successor to the throne in secret.

A plaque engraved with four Chinese characters written by Emperor Yongzheng meaning "justice and brightness".



Behind the throne is a gilded wooden panel etched with dragons playing with pearls. Incense burners surround the throne. Two pairs of bookshelves of verses written by the Qing emperors adorn the columns.



Behind the throne, were bookshelves of verses written by the Qing emperors on governing the country written by successive dynasties.

Knocking the tiles

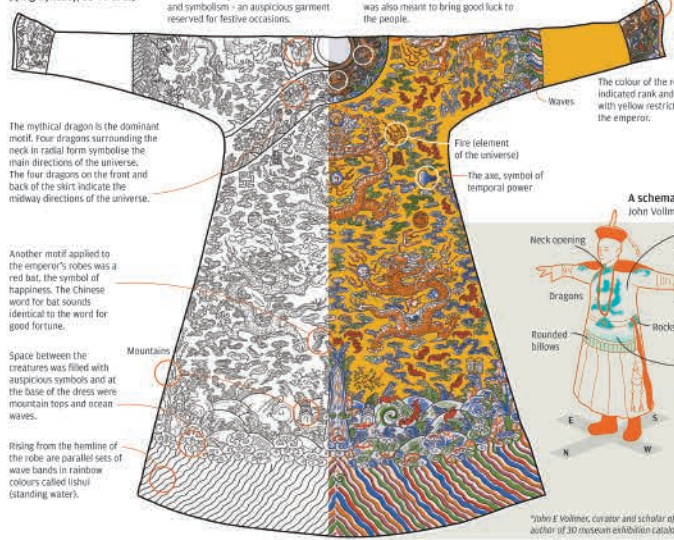
Inverted mud jars were placed under the floor tiles of the hall to create a special resonance or echo when certain tiles were struck.

Ministers who were given the honour of an audience with the emperor while kowtowing. When striking their foreheads against the floor the more resonant sounds were considered a sign of great respect for the emperor.

Dress codes

Ancient Chinese rulers imposed strict codes in each era, which were usually linked to their ethnic traditions and identity. Each dynasty had stipulations for the material, colour, decorative patterns and style of dress that distinguished royal, civil and military officials from commoners.

The dragon robe (Qing dynasty, 1644-1911)



This was the emperor's most remarkable item of clothing in terms of ornamentation and symbolism - an auspicious garment reserved for festive occasions.

The robe was not simply a means for the emperor to appear powerful; it was also meant to bring good luck to the people.

The robe was tight fitting with sleeves tapering into flared cuffs that resemble the hooves of a horse - a reference to the emperorian background of the Manchurians.

The colour of the robe indicated rank and lineage with yellow restricted to the emperor.

Five (element of the universe)

The axis, symbol of temporal power.

A schematic diagram of the universe John Volmer's interpretation*

Above is the cloud-filled firmament against which dragons (symbols of imperial authority) coil and twist.

At the four sides of the coat, which symbolise the cardinal points of the compass, five prism-shaped rocks symbolising the earth mountain.

The lower border of diagonal bands and rounded billows represent water.

The symbolism is complete only when the coat is worn. The human body becomes the world axis, the neck opening the gate of heaven or apex of the universe separates the material world of the coat from the realm of the spiritual represented by the wearer's head.

*John F. Volmer, curator and scholar of Asian art, textiles, costumes and design, is the author of 30 museum exhibition catalogues and multiple books and articles.

Clothing during the Ming dynasty (1368-1644)

During this period, clothing for men and women became more voluminous; long robes with wide sleeves for men and a shorter robe worn over a wide skirt for women.



The attire reflects the loose-fitting and elaborate style of the ancient ethnic Han people. Buttons became popular along with circular collars. Jackets became longer. Light colours were common, with the front of garments decorated with accessories made from gold, jade and pearls.

An emperor's day



Rise at 4am
The emperor was needed for the daily audience with his courtiers and then returned to his chamber to sleep until 7am.



7am
The emperor formally took breakfast at 7am in spring and winter, and 6am in summer and autumn. After breakfast, he opened and read a memorial, or report, presented by ministers and other officials.



NOON
There was a second audience at midday when the emperor's main duties were to read and write comments on local government reports. More than a hundred reports came every day from all over the empire.



1pm to 3pm
Lunchtime was followed by relaxation, when the emperor might unwind by composing poems or enjoying the garden.



3pm to 7pm
More reports. The papers were returned through the directorate of ceremonial office to the country administrative divisions after the emperor signed them off in red ink.



8pm
Light supper and snacks. At this time the emperor's duties were complete and he could retire to his chambers.



Digital version

05 **There's a lot of very detailed information here, about the geography, the rescue gear, etc. How was the research done?**

AA The essential thing was the research, for me, especially for breaking news. And it all had to be finished within one day. We needed to share our research and ideas and have quick meetings to try to put everything together and figure out what we could do.

MD We had to search every viable source. Every time you find a new fact, you need to change it and tell everyone in the team: "Hey, stop! Stop!" We're very connected as we work in the same space. We also have many communication channels like Slack, email, Google Docs, etc. We put everything that we discover or find in one place for everyone to see—it's pretty organised.

06 **How do you resolve disagreements or arguments in your team? How do you strike a balance between others' criticism and your own points of view?**

DL Because there's so much transparency, the arguments never become personal. A really special part of the culture here is that we send each other our work in progress and ask for feedback. Everyone is very honest. They won't just say it looks great for the sake of it, but they'll point out issues.

Having convictions in your beliefs is important. I think for everyone here, if they really believe in what they're doing, they'll fight for it. But I think a newsroom, in general, breeds this type of culture. Every journalist will fight their corner. If you believe that your case has logic, you can make a case and sell it. But there comes a certain time when an editor will say no and stand firm to their decision.

AA But maybe we have been lucky. I can say that 90–95 percent of our work doesn't require any changes.

DL But I think that we're very conscious of our working progress as well, because we keep the rest of the newsroom informed of what we're doing, so that there are no nasty surprises.

07 **When do you consider a piece of work "finished?" Is it the deadline? With digital work, there's more flexibility, isn't there? Unless it's breaking news?**

MD You cannot keep polishing a piece of work when it's already published because you'll have to work on other projects. But if new information comes up, we are able to update the data or add more assets to that piece of work—a great advantage that we don't have in a printed infographic.

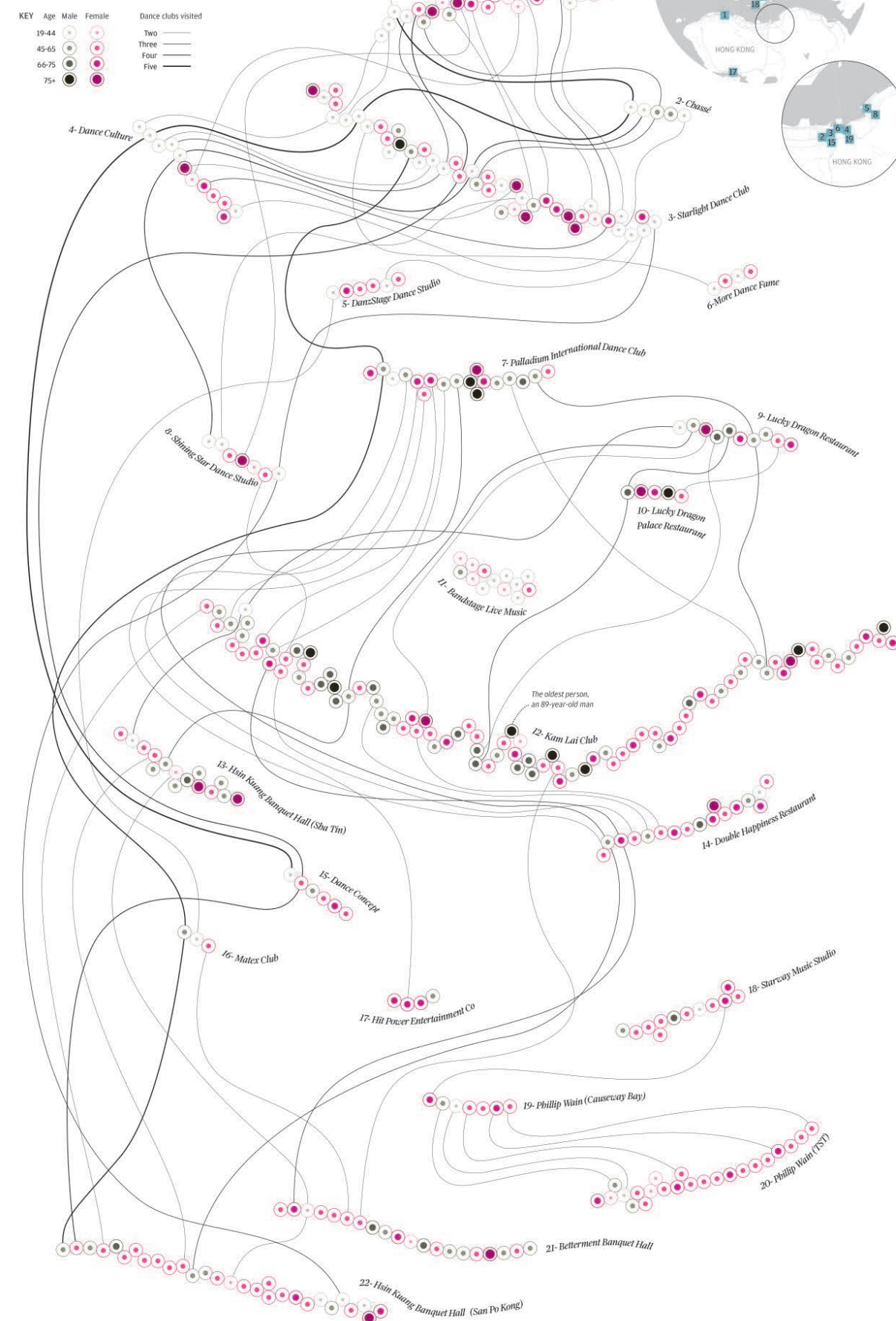
DL My answer to this would be when they get tired of me nagging them. But, interestingly, we've published a couple of projects recently, knowing that they are not finished. I suspect we'll do that more often. We get it out there, and then we can keep developing it and making it better. "The Coronavirus Explainer" is a good example of that.

When China announced that the coronavirus was transmitted from human to human, we realised that there was a big story there and it was going to spread around the world. So, we jumped on it and we wanted to get it out really fast. We knew we were ahead of other publications. The first version only had a few elements in it. Now, it's just huge.

Pandemic dance

Hong Kong's fourth wave of Covid-19 infections had its main source in the city's dance clubs, creating what the government defined as a "super-spreader" event. The graphic shows how people from different age groups spread the virus through visits to various dance venues over 15 days.

By Marcelo Duhalde marcelo.duhalde@scmp.com



Sources: Centre for Health Protection

Marcelo Duhalde SOUTH CHINA MORNING POST



Digital version

Food supply chain

The process of delivering food, from farm to table, includes production, processing, distribution, consumption and waste. The food moves along a chain, with the money consumers, say filtering back down. Each link in this chain uses human and natural resources.



Top 5 food exporters
US\$ billion, 2017

US	72.7
Germany	34.7
Britain	29.5
China	25.1
France	24.1

There is a knock-on effect throughout the cycle manifesting as changes in the price of food.

Disrupting the supply chain

The coronavirus is putting the global food supply chain under immense strain. Marine transport is a particularly vulnerable link, where delays and increased costs will cause food shortages and price increases and could even result in famine and humanitarian crisis.

By **Marcelo Duhalde**
marcelo.duhalde@scmp.com

Ports handling goods transported in containers of 20-foot equivalent units (TEUs) operate day and night, seven days a week

A TEU is a standard-sized metal container easily transferable between ships, trucks or trains.



Internal volume	33.1m ³
Maximum load	28.2 tonnes
Maximum gross weight	30.4 tonnes
Empty weight	2.2 tonnes

New Panamax and Post-Panamax vessels can transport up to 15,000 TEUs.



Stevedores work round-the-clock shifts loading and unloading cargo to and from ships.

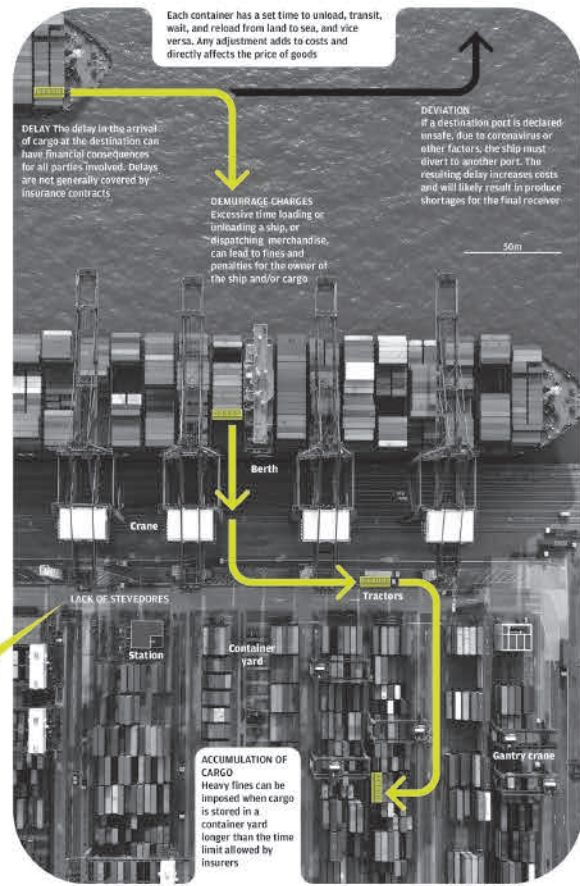
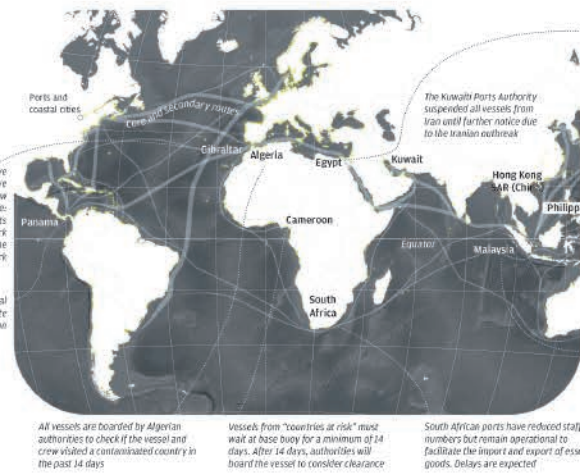


Photo: Hoy Asia (SCMP)

New port regulations

The coronavirus leaves ports vulnerable to temporary closure should dock workers test positive for Covid-19. There are threats of strike action amid fears of contagion, and in some countries, roads have been blockaded to stop free movement of trucks with many workers part of the gig economy and many livelihoods are at stake.



Conditions to be applied to vessels that have transited through China in the last 15 days, have personnel from Covid-19-affected countries or crew members suffering from symptoms, include:
- Remote pilotage requirements
- No crew members will be allowed to disembark
- Any shore personnel embarking or attending the vessel will not be allowed to disembark.

Panama Canal continues to operate without interruption.

All vessels are boarded by Algerian authorities to check if the vessel and crew visited a contaminated country in the past 14 days.

Vessels from "tourism at risk" must wait at base buoy for a minimum of 14 days. After 14 days, authorities will board the vessel to consider clearance.

South African ports have reduced staff numbers but remain operational to facilitate the import and export of essential goods. Delays are expected.

All vessels arriving for Suez Canal transit or entering Egyptian ports are subject to examination by the authorities. If cases are detected, or suspected, the vessel will not be allowed to transit the canal or enter the ports.

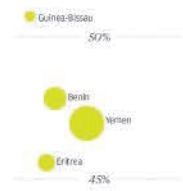
Services to Hong Kong-registered ships will continue as normal.

All vessels that have sailed from China's mainland, Macao or Hong Kong in the past 14 days must dock at the quarantine anchorage, hoist the yellow flag and immediately inform the quarantine station. No embarkation or disembarkation is allowed.

All vessels arriving in Malaysia are subject to quarantine clearance, irrespective of their last port of call. No crew changes permitted for foreign nationals.

Sources: International Maritime Organization, worldshipping.com, Lockheed Companies

In collaboration with Denise Long / SOUTH CHINA MORNING POST



Countries most dependent on imported food
Percentage of total merchandise imports



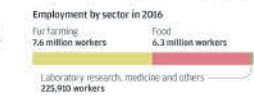
China's wildlife trade

China has traded and consumed wildlife for centuries, using the animals for everything from traditional Chinese medicine to laboratory research, and fur to food. Since the coronavirus epidemic began, the National Forestry and Grassland Administration has confiscated 39,000 wild animals and "cleaned up" more than 350,000 sites such as restaurants and markets where the animals are traded. Here, we take a look at the major wild animals used in various industrial sectors.

By **Adolfo Arranz** adolfo.arranz@scmp.com

Use of wild animals in China's breeding industry

Fur farming Medicine Food Laboratory research



Sources: Chinese Academy of Engineering, China Leather Industry Association

Adolfo Arranz, Hen Huang, Denise Long / SOUTH CHINA MORNING POST



Digital version



Digital version

On digital infographics

01 When shaping a story, do you think in a medium-specific way or do you conceive the idea as a whole first and then try to adapt it to other media and formats?

AA It depends on the project. But, for me and I'm pretty sure for Marcello as well, our background is in print and we only started to design online graphics three years ago. Before we were mainly designing for the back page of the printed paper. Every time we started a project, my mind would immediately think of it as a back-page infographic. And now we need to have several points of view: a print version and three or four online versions. For the mobile version, you need to take out many aspects or rethink the design because it doesn't work in a vertical format.

02 What do you need to consider when you work on the printed version versus the screen versions for desktop and mobile?

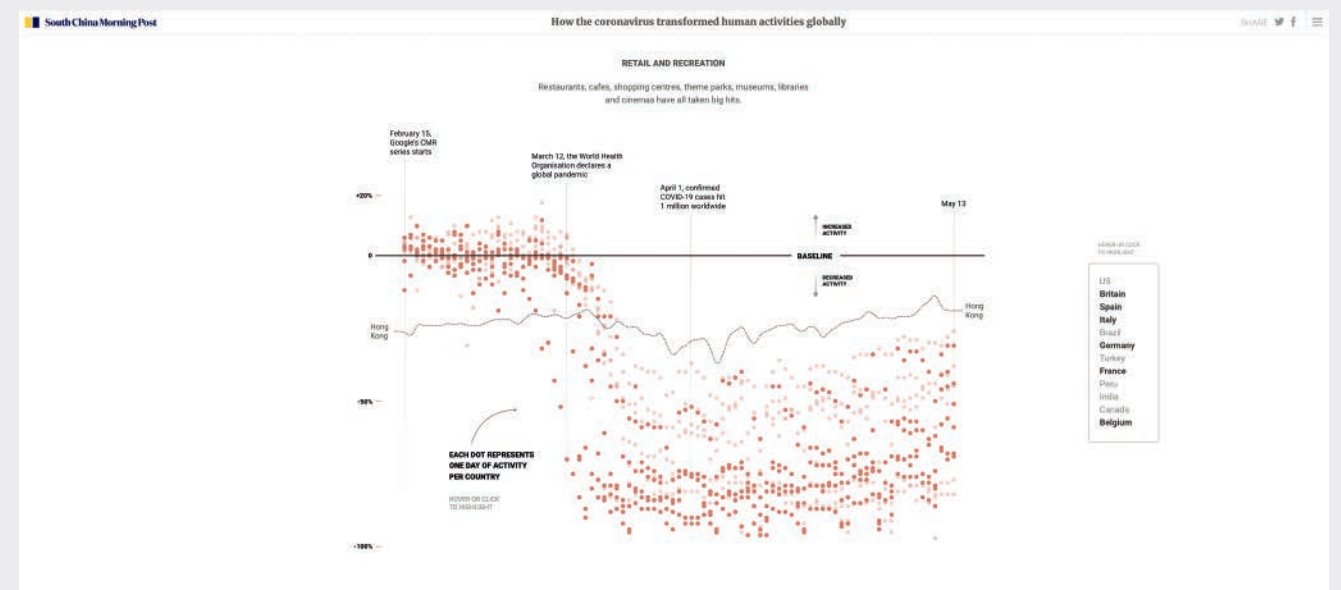
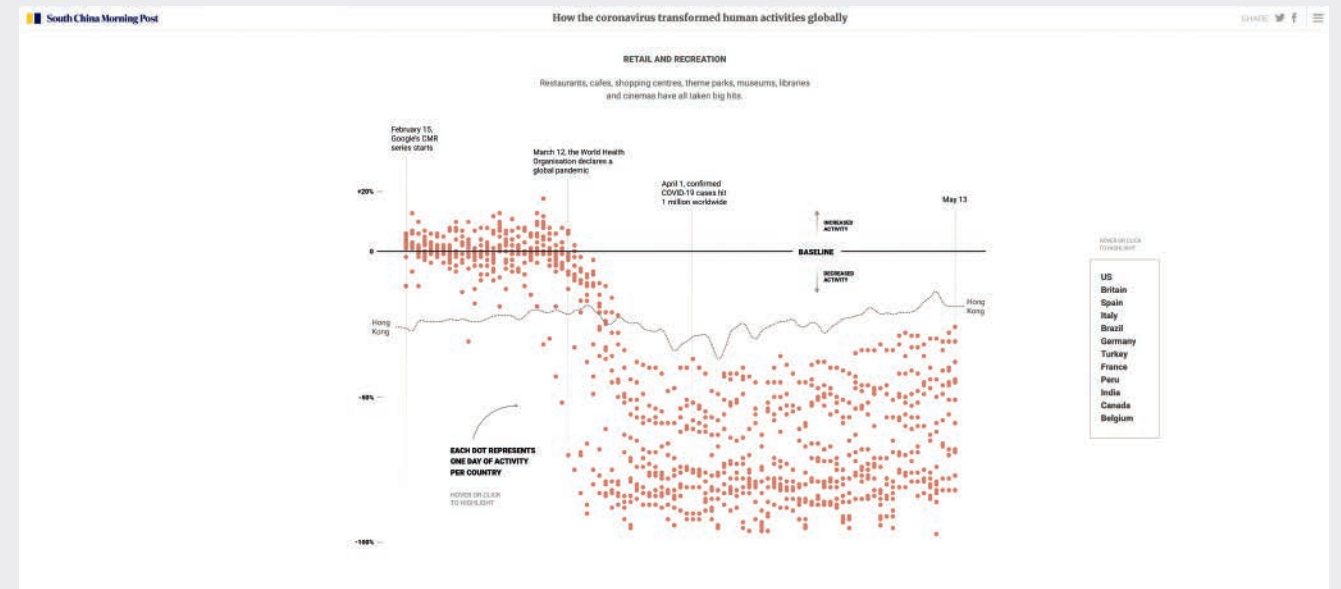
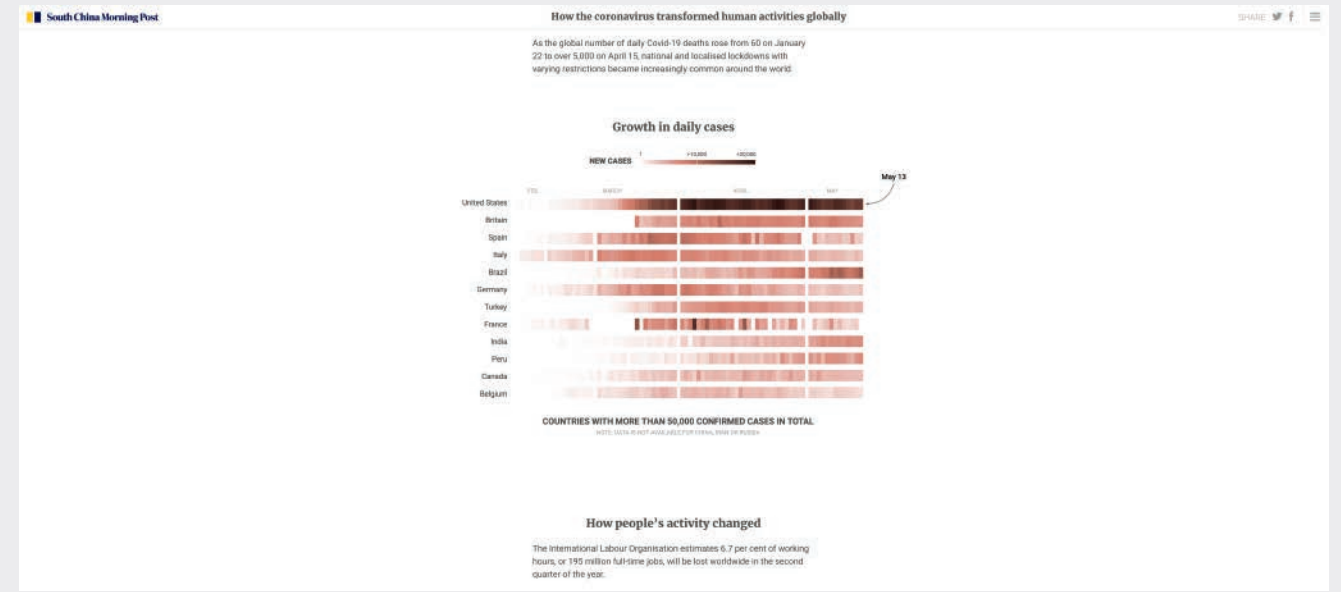
DL When we design for print—say for the back page—after we've finished it, we'd hand it over to what we call the backbench. That's sort of the last line of defence in the newspapers. They fact-check and make sure that it makes sense. The response would be very immediate: "I don't understand it." Here is the headline, the subhead, the image, and here are the captions. Presumably, that's how readers would read it as well. Over time, we get fewer corrections as we get better at doing it in a way that people understand straight away and readers have become more educated to read them, as well. We then have to go through a similar process with the online versions. Something that works on the desktop doesn't necessarily work on the mobile. For the mobile version, it's a case of stripping things out and simplifying it further. You just have to accept that you can't have all the same information there.

From our analysis, we find that the average reading time for our infographic stories is five minutes, which is considered very high for SCMP articles. The average is two to three minutes. So, we've doubled the average.

03 Is the idea of "getting people to click on something" one of the considerations? For a printed infographic, the reader needs to spend time to engage with it, rather than something you can grasp instantly. Whereas in an online environment, readers need to first of all click on it before they can even start engaging with it. What are the considerations there?

DL That took us a long time to learn. Four years ago, we were just sticking a PDF of the print version online thinking that we had done a great job, but we hadn't. We couldn't understand why page views were so low. It was a whole series of trial and error. Then there was one infographic that our former colleague, Alberto Lucas López, did that we were very happy with—"The Sum of the Parts." On the desktop version, when you click on each of the triangles, it takes you to the SCMP story—it's brilliant. On the mobile version, you couldn't see the triangles and couldn't click on them, so we went back to the drawing board. And then Marco Hernandez started writing the code and everything changed.

"The Five Main Projects of the Belt and Road Initiative" was the first one that was made digital. The print version came after. That was when our mindsets completely changed. Every one of us got involved and started writing our own code. Before that, we all preferred print because it's so immediate. It was a discipline that distilled everything down to a single image. But, suddenly, we discovered interactive infographics, which you could keep drilling down and down to discover more.



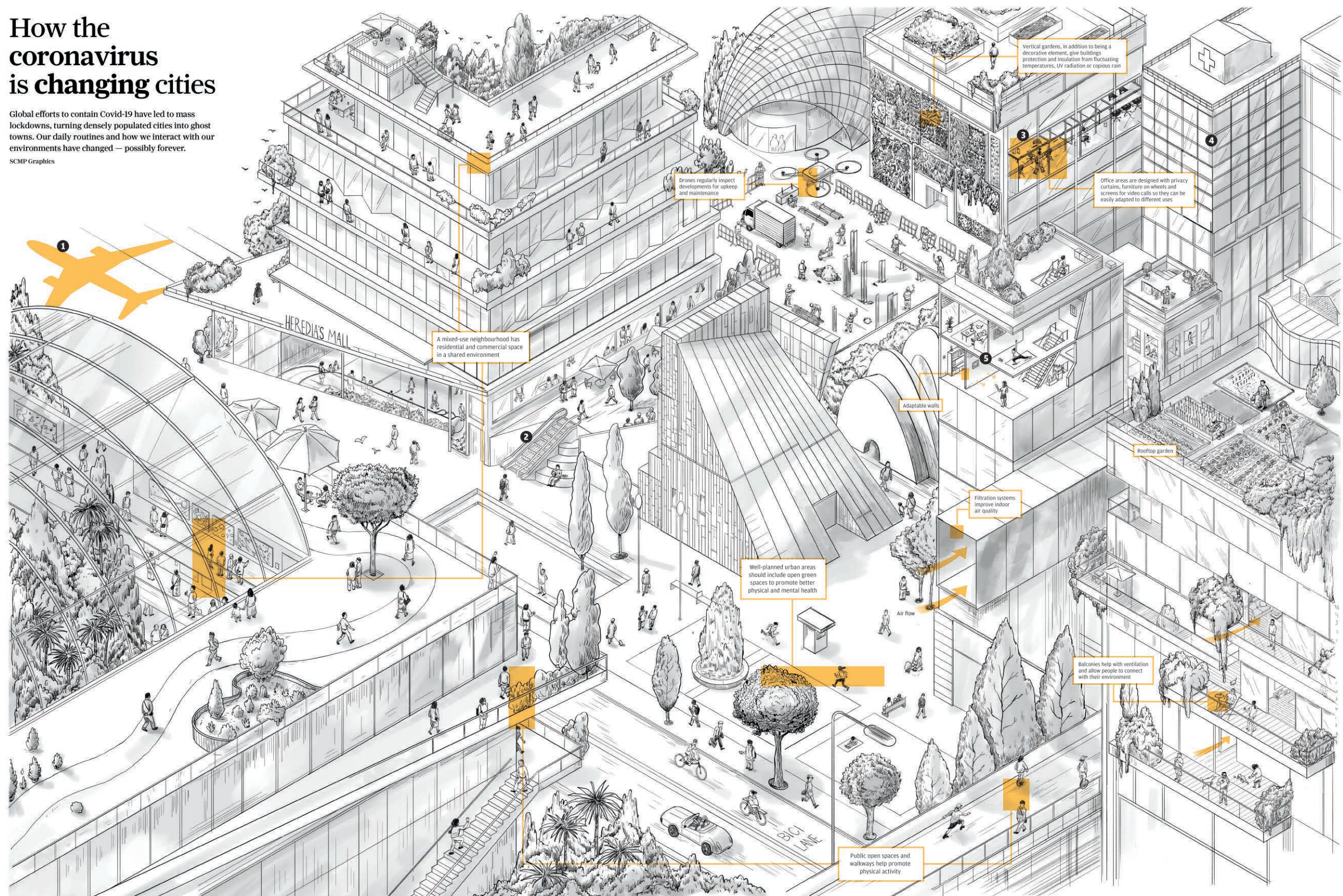


Digital version

How the coronavirus is changing cities

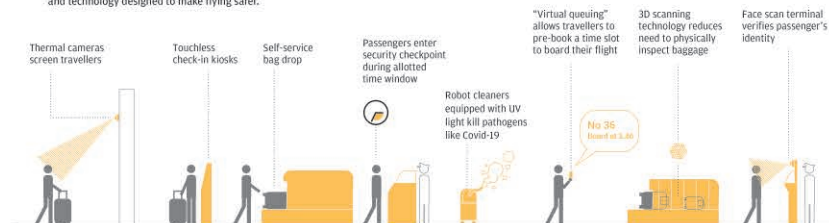
Global efforts to contain Covid-19 have led to mass lockdowns, turning densely populated cities into ghost towns. Our daily routines and how we interact with our environments have changed — possibly forever. Our daily routines and how we interact with our environments have changed — possibly forever.

SCMP Graphics



1 Airports

The coronavirus pandemic has been the biggest disrupter of air travel in aviation history. Airport operators have been rolling out enhanced security measures, new boarding protocols and technology designed to make flying safer.



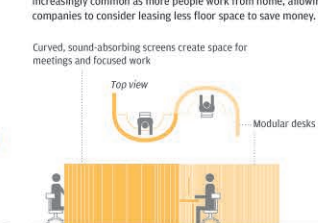
2 Technology

Automatic doors have been around for years, but they have been especially important in the pandemic, like other touchless technologies. Scientists have been studying ways to improve the safety of ultraviolet germicidal irradiation (UVGI) technology that can disinfect rooms.



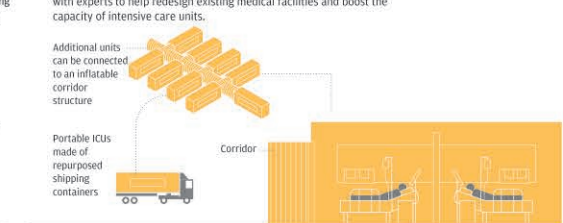
3 At work

The coronavirus pandemic is also changing the way we work. Offices with flexible seating arrangements have become increasingly common as more people work from home, allowing companies to consider leasing less floor space to save money. Curved, sound-absorbing screens create space for meetings and focused work.



4 Hospitals

Many hospitals have struggled because of shortages of protective gear, ventilators and beds in special isolated rooms. Operators are consulting with experts to help redesign existing medical facilities and boost the capacity of intensive care units.



5 At home

Homes can be conveniently reconfigured by incorporating moving walls for different purposes. A moveable partition can open up a space or create more rooms.



Sources: Migration data portal, UN Refugee Agency

Pablo Robles, Brian Wang, Dennis Wong, Darren Long, Adolfo Arranz, Andrew London / SOUTH CHINA MORNING POST

Global efforts to contain Covid-19 have led to mass lockdowns, turning densely populated cities into ghost towns. Our daily routines and how we interact with our environments have changed — possibly forever. Architects and urban designers are finding ways to adapt the spaces we live and work amid the coronavirus pandemic.

How the Coronavirus Is Changing Cities
South China Morning Post (2021)
Pablo Robles, Darren Long, Dennis Wong, Brian Wang, Adolfo Arranz