

# The box that changed the world



The first international shipping container arrived in Australia in 1969, bringing with it a new era in transport logistics - and ways to smuggle cargo. With Customs introducing new x-ray plants to scan whole containers, Ben Hickey looks at the impact the humble shipping container has had on world trade.

If we accept that the sailing ships of the Dutch and English East Indies companies pioneered long-distance maritime trade in the 1600s, and the engine revolutionised its speed of distribution in the 1900s, then it was a humble box in the 1960s that re-engineered the way we handle cargo.

For centuries, we transported conventional cargo in sacks, bags and cases.

Unloading a ship was a slow process. As recently as 40 years ago, it could take two weeks to achieve a turnaround, waterside workers using combinations of ropes, hooks and slings to move the cargo. Pallets and forklifts made things quicker, but it was still labour-intensive.

In hindsight, it is puzzling that this archaic form of cargo handling lasted so long. We invented flying machines before the container became commonplace. We engineered skyscrapers and built an atomic bomb before the container achieved widespread acceptance. We put people in space before we could agree on standardised dimensions for a shipping container.

The revolution called the container is a humble contraption. It is essentially a box that:

- encloses cargo
- is a uniform size
- allows for rapid movement by machine handling
- allows for easy stacking
- is strong and protective

- is weatherproof
- can be moved easily between ship, railway and road transport
- reduces rehandling
- reduces cost
- speeds transport.

It seems simple enough but, until the world agreed on need and a uniform size, it had few supporters.

That's not to say some shippers didn't see possibilities. In fact, the idea has been around since the 1830s when containers were used in pre-railway tramways of England, Silesia and America to transport ores, limestones and coals. In Australia, containers of different shapes and sizes started appearing in the late 1940s, and became more common in the 1950s when used for coastal shipping and interstate transport.

The marine containers we see today are usually traced to Malcolm Mclean, a North American truck operator, who hit on the idea of containers while watching goods being hoisted on to ships at a dock where he and his truck were waiting their turn to deliver goods. Mclean bought steamship companies in the 1950s and started experimenting with containers that could be loaded into 'cells' in a ship's hold.

However, the world could not agree until 1966 on a common size. That was the year the International Standard Organization reached agreement on containers of an eight-foot square external end area, with lengths in 10-foot multiples, and incorporating



standard fastening and lifting points. In short, it was a one-size-fits-all solution, which has become known as TEU (twenty-foot equivalent unit).

It was that agreement that unleashed an avalanche of containers on the world. Today there are an estimated seven million containers in the world and an estimated 7200 container ships. Containers became the forerunner to superships which transported more boxes and more quickly; the superships required bigger wharf areas and ports were upgraded or built anew to turn cargo around faster; the ports required updated transport logistics to move and pack the containers.

The container pushed maritime development into a never-ending process of change. It was like painting the Sydney Harbour Bridge: once you got to the end you needed to start again. Once faster handling was available, bigger ships could be used which required faster handling and better land transport.

For example, in the Port of Sydney the tonnage of cargo doubled in the first three years of containerisation once the first container ship, Encounter Bay, arrived in 1969. From zero containers, there were 735,000 containers landed in 1992-3. Last year there were more than one million shipped through Sydney.

For Customs, the era of superships and cargo containers presented practical challenges in the traditional roles of protecting the border and prevention of smuggling. More cargo, more goods and enclosed containers meant more ways to conceal goods that might be dutiable or prohibited.

Coping with the larger volume has required varying combinations of manpower challenges, logistics challenges and process challenges over the decades since containerisation.

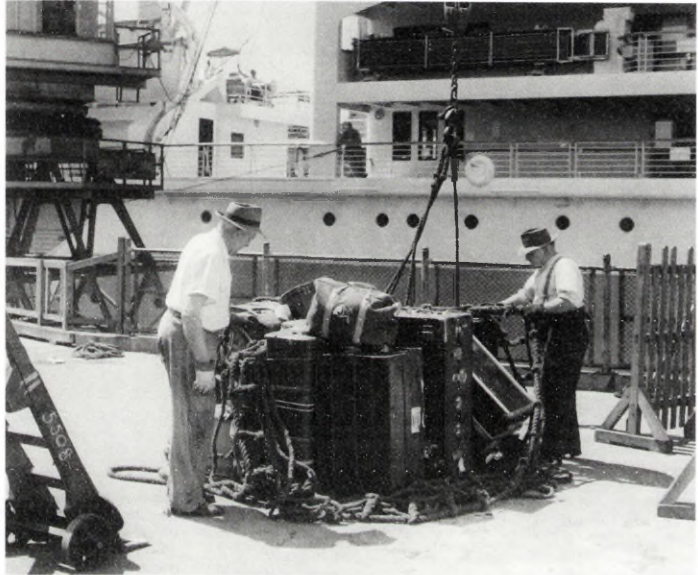
Customs overcame these challenges with upgrades of staff skills, use of computer technologies to assist manual approval of import entries, risk-management and intelligence-gathering skills, and new border technologies such as detector dogs.

But checking containers is a slow process: at times it can take up to eight person days to pack and unpack a container. Customs has sometimes been criticised for not inspecting enough containers (although critics overlook that those containers inspected have been screened and targeted for inspection because they are perceived as high risk).

However, technology is about to overhaul this inspection process with the introduction of container x-ray facilities in Sydney, Melbourne, Brisbane and Fremantle that will increase inspection rates by up to 100 containers a day per port.

The bigger ships also provide more areas to conceal goods. Customs is improving its ship-search techniques to ensure better protection against ship smuggling with its Border Search Training Centre that provides staff consistent, skilled and professional approaches to searches.

The container as a means to move cargo might have been slow to take off but its impact has been substantial in speeding the exchange of traded goods between countries, in reducing the cost of trade between countries, and indeed in making the world a smaller place. If only the pioneers of maritime trade back in the 1600s could see the progress in the trading world they created so long ago.



top: Unloading passenger baggage in Sydney in the mid 1950s.

bottom: A container ship enters Sydney in 2002.