

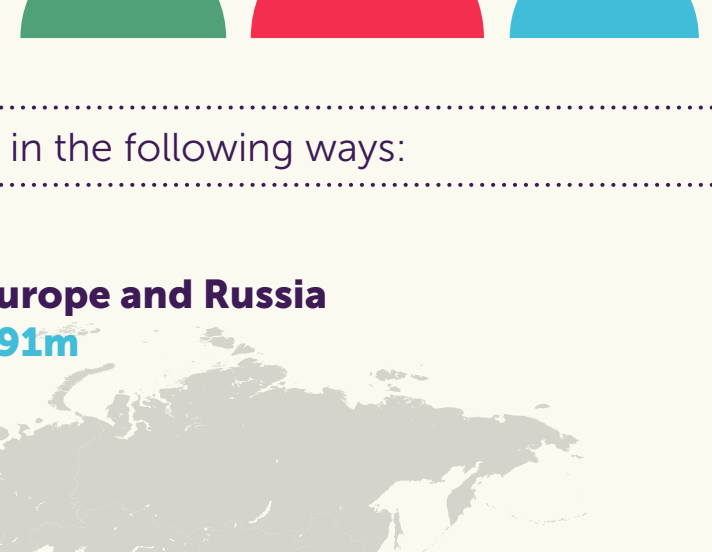


Number of children, cost and weight of toys

Children in the world:



32.8%
of the world's
population is aged 0-17,
giving us a total of
2.43 billion children^{1, 2, 3}



They are split up across the world in the following ways:

North America
190m

Europe and Russia
291m

Africa
399m

**East Asia
and Oceania**
988m⁴

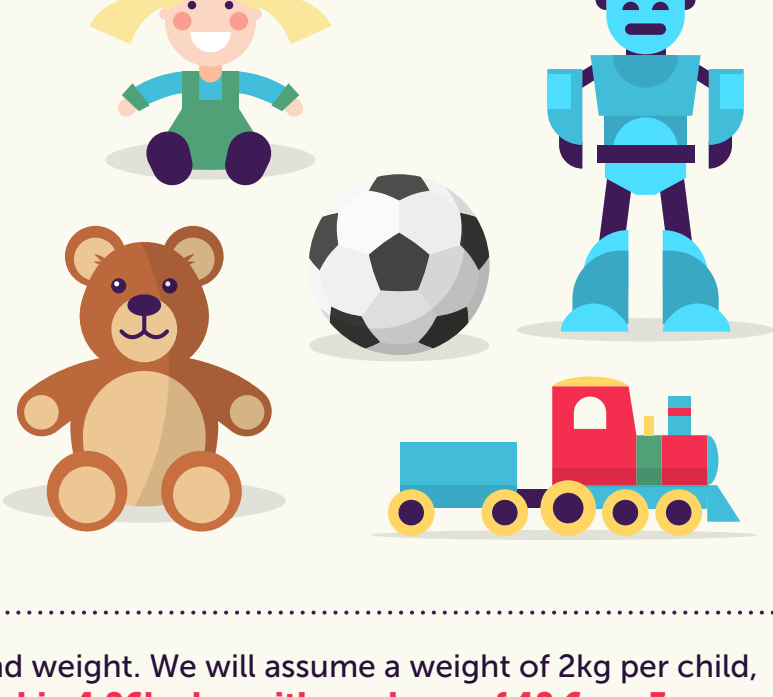
South America
139m

India
411m

To produce a toy for each child in the world, we must first assign a budget. One McDonald's Happy Meal toy costs 43 cents to produce⁵, so we can comfortably assume a **\$10 budget per child** to cover manufacturing, packaging and wrapping paper and producing a nice toy for each child.

The total cost to manufacture a single, packaged and wrapped toy for each child would be

\$24.3 billion



In order to ship the toys, we need to know the volume and weight. We will assume a weight of 2kg per child, and a volume of 0.01 m³. **In total then, we need to ship 4.86bn kg, with a volume of 48.6m m³.**

Manufacturing headquarters

Although Santa lives in the North Pole (or Finland, or Alaska, depending on who you ask), setting up the required **manufacturing operation in these locations isn't feasible**.

Therefore the most sensible location for a modern headquarters would be China, specifically **Shenzhen**⁶. This will be our origin for all shipping calculations.

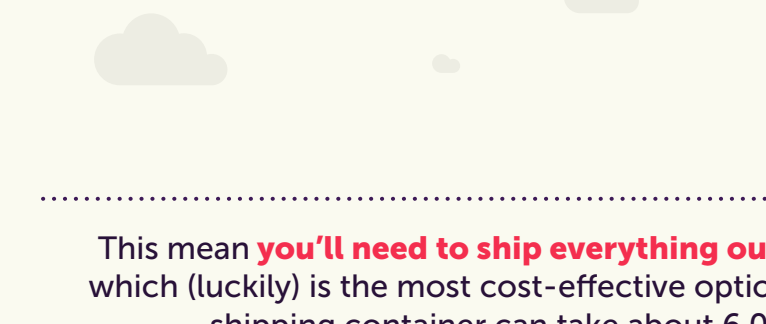


Shipping the toys

As much as you might want to take to the skies on your reindeer powered sleigh, becoming Santa will unfortunately mean a **more realistic approach**. This means you'll need to ship the toys to the world's children, and there's only two ways of doing that – **by air or by road and ocean**.



By air isn't possible, as there simply isn't enough planes available. Modern cargo aircraft range in capacity from around 39,780 kg⁷ to 134,200 kg⁸. If we were to take the average of 80,000 kg per plane, we would need 60,750 long-haul flights, plus the same again in short-haul flights. The world has approximately 20,000 civilian aircraft⁹ and 20,000 military aircraft¹⁰, most of which are not capable of long-haul flights.



This means **you'll need to ship everything out by ocean and road**, which (luckily) is the most cost-effective option. A standard 40-foot shipping container can take about 6,000 presents¹¹, meaning **we'll need 405,000 containers**.

The world's largest container ships can carry about 9,000 containers¹², so **we'll only need 45 ships** to carry all of the presents.



To ship from China to each area will cost (worked out as cost / container x number of containers)¹³:

North America
Hong Kong to Los Angeles
\$1400 x 31,667 = \$44.3m

Europe and Russia
Hong Kong to Rotterdam
\$750 x 48,500 = \$36.4m

Asia
Hong Kong to Shanghai
\$400 x 507,167 = \$39.5m

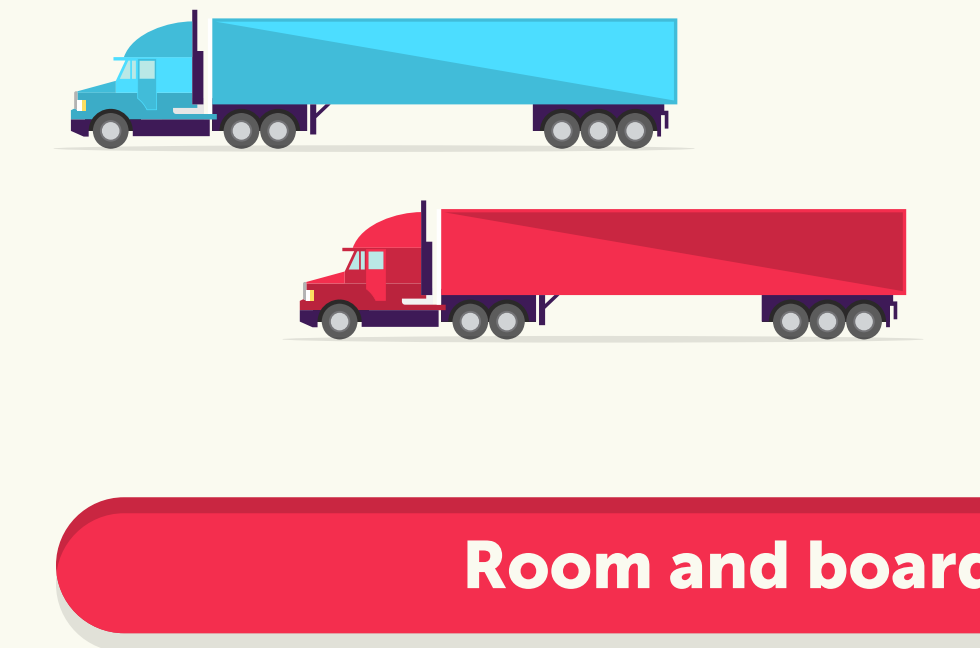


South America
Hong Kong to Panama
\$1450 x 23,167 = \$33.6m

Africa
Hong Kong to Egypt
\$625 x 66,500 = \$41.6m

India
Hong Kong to Mumbai
\$600 x 68,500 = \$41.1m

The presents will then need to be transported by road to their end destinations. The only way to work this out is to take an average distance – in this case, we'll use 3,853km (about the distance from California to Philadelphia)¹⁴. This would cost around **\$1100 per container** in the USA, so using this as the **overall cost we get a total of \$446m**.

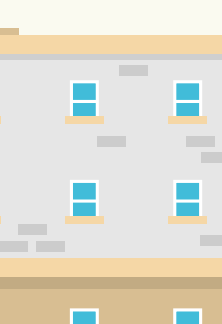


Total ocean shipping cost = \$236m

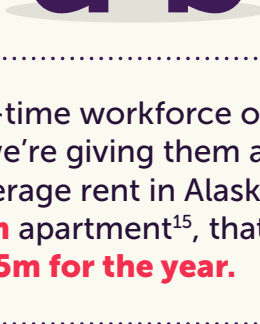
Total shipping cost (ocean and road) =

\$683m

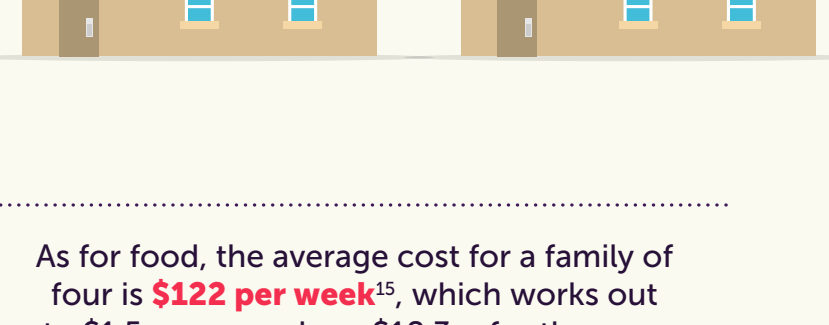
Room and board for your Elves



Once Christmas is over, you'll need to relocate your elves back to the North Pole or Alaska, where presumably they'll undergo intensive product development, prototyping and research for next Christmas, as well as welcoming visitors to your year-round Christmas wonderland.



Let's assume you have a full-time workforce of around **50,000 elves**, and we're giving them a bedroom each. Using the average rent in Alaska of **\$1,050 for a two-bedroom apartment**¹⁵, that's \$2.6m per month, or **\$31.5m for the year**.



As for food, the average cost for a family of four is **\$122 per week**¹⁶, which works out to \$1.5m per week, or \$18.3m for the year.

Total food and board costs =

\$49.8m

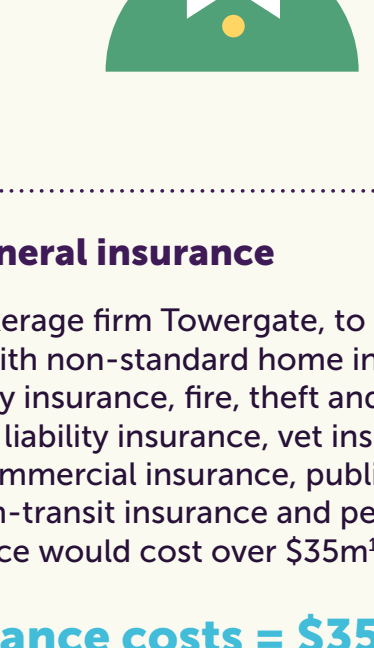


Other costs

Health insurance for elves

You want to be a good employer, and if we're assuming the elves live in Alaska most of the year, you will need to provide them with adequate health insurance. The average annual health insurance cost per person in Alaska is \$5,112¹⁶.

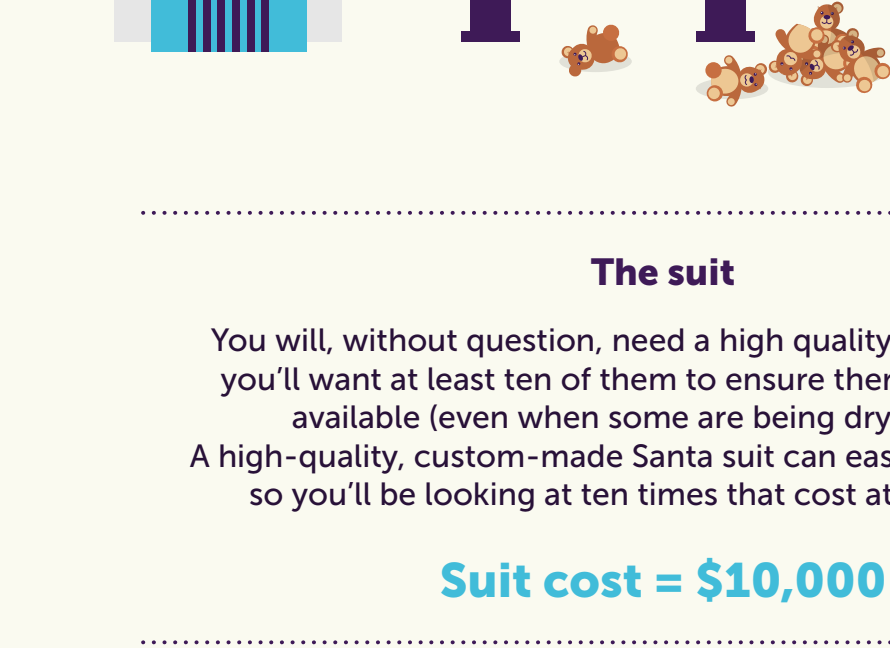
Total health insurance for elves = \$255.6m



General insurance

According to brokerage firm Towergate, to provide Father Christmas with non-standard home insurance, commercial property insurance, fire, theft and flooding cover, employer's liability insurance, vet insurance, travel insurance, commercial insurance, public liability insurance, goods-in-transit insurance and performing arts insurance would cost over \$35m¹⁷.

Total insurance costs = \$35.8m



The suit

You will, without question, need a high quality Santa suit, and you'll want at least ten of them to ensure there's always one available (even when some are being dry cleaned). A high-quality, custom-made Santa suit can easily cost \$1,000¹⁸, so you'll be looking at ten times that cost at a minimum.

Suit cost = \$10,000



TOTAL COST TO BE SANTA (FOR A YEAR) =

\$25,334.2m (\$25.3bn)

SOURCES

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