



*Hamburg city hall, Germany via Shutterstock*



Panoramic view of the Alster By [IqRS, DooFi](#), [Public domain], via Wikimedia Commons





*Elbphilharmonie Credit: Bushra Makiya*



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# “The €500m concert hall that was only meant to cost €40m”



*Panorama of the Elbphilharmonie of Hamburg at night, with the view on to both sides of the building, the lake "elbe" and some ships via Shutterstock.*

## Article

Paterson, Tony. [“The €500m Concert Hall That Was Only Meant to Cost €40m.”](#) The Independent, Independent Digital News and Media, 4 Apr. 2010.



Baufortschritt Elbphilharmonie 17. Juli 2010. By [AG1965](#) (Own work) [[CC BY-SA 3.0](#) or [GFDL](#)], via Wikimedia Commons



Elbphilharmonie, Februar 2015. Teilansicht der Fassade mit Öffnungen. © [Raimond Spekking](#) / CC BY-SA 4.0 (via Wikimedia Commons).



# Elbphilharmonie Details & Facts

**Opened** January 2017  
**Start of construction** April 2007

<b>Total floor area of the entire building</b>	approx. 120,000m <sup>2</sup> <i>(approx. 17 football fields)</i>
<b>Total weight of the building</b>	approx. 200,000 tonnes
<b>Amount of steel used</b>	18,000 tonnes
<b>Amount of cement used</b>	63,000 m <sup>2</sup>
<b>Total surface area of glass facade</b>	21,000 m <sup>2</sup>
<b>Glass panels</b>	2,200
<b>Highest point in the west</b>	110m
<b>Highest point in the east</b>	88m
<b>No. of seats Grand Hall</b>	2,100
<b>No. of seats Recital Hall</b>	550
<b>No. of seats Kaistudio</b>	150
<b>Architects</b>	Herzog & de Meuron
<b>Construction</b>	Hochtief Solutions AG



*The concert hall "Elbphilharmonie" reflecting the evening sun at sundown with the city flag of Hamburg via Shutterstock.*





*Window cleaner and maintenance on the outside of a skyscraper via Shutterstock.*

# The Skyscraper Problem

The skyscraper is 50 stories high and is going to be covered entirely by windows on all four sides. Each floor will have 38 windows. Once a year, all the windows will need to be washed. The cost for washing the windows is \$2.00 for each first-floor window, \$2.50 for each second-floor window, \$3.00 for each third-floor window, and so on.

Floor	Cost per window
1	\$2.00
2	\$2.50
3	\$3.00
...	...