

Table 2 – Cost calculations with sources – put this at the end**Damage to soft goods**

Item	Notes on basis of calculation	Source/s of cost information
Carpets	Average 325 sf /room, useful life of 7 years, accelerated depreciation of 2 percent	caldwellcarpet.com/guest-room-carpet
Curtains	2 per room, useful life of 7 years, accelerated depreciation of 2 percent	https://www.americanblinds.com ; https://www.amazon.com/draperies-curtains/b?ie=UTF8&node=3736141
Mattresses	1.5 per room, useful life of 4 years, accelerated depreciation of 4 percent	https://www.us-mattress.com/hotel-mattress.html?mattress_size=52 , https://www.wayfair.com/shop-mattresses , https://casper.com/mattresses/casper-original
Mattress pads	1.5 per room, useful life of 4 years, accelerated depreciation of 5 percent	https://www.wayfair.com/bed-bath/sb1/mattress-pad-mattress-pads-toppers-c414923-a123842~390517.html
Sheets	3 per room, useful life of 2 years, accelerated depreciation of 10 percent	https://www.americanhotel.com/bed-and-bath-linens/sheets/c/A1BBB16 , https://www.amazon.com/Hotel-Bedding/s?k=Hotel+Bedding
Blankets	1.5 per room, useful life of 4 years, accelerated depreciated of 10 percent	https://www.ebay.com/itm/223477024139 , https://www.amazon.com/Hotel-Bedding/s?k=Hotel+Bedding , https://www.nathosp.com/category/hotel_blankets
Towels	5 per room, useful life of 2 years, accelerated depreciation of 10 percent	from https://www.nathosp.com/category/hotel_towels , https://www.amazon.com/hotel-towels/s?k=hotel+towels
Pillows	6 per room, useful life of 2 years, accelerated depreciation of 10 years	https://sleepwelltips.com/cost-of-hotel-pillow/ ,

Damage to hard goods

Furniture	Standard set, useful life of 12.5 years, accelerated depreciation of 1 percent	https://blog.artonemfg.com/blog/hotel-construction-costs-furniture
Lighting	Standard set of 2 table lamps and 1 floor lamp, useful life of 12.5 years, accelerated depreciation of 1 percent	https://www.lampsusa.com/collections/hotel-and-guest-room-lamps , https://www.luxurylighting.co.uk/hotel-table-lamps-1655-c.asp
Televisions	1.1 per room, useful life of 8.5 years, accelerated depreciation of .5 percent	https://www.amazon.com/tvs/b?ie=UTF8&node=172659

Damage to walls

Wall paint	325 square feet/room, useful life of 14 years, accelerated depreciation of	https://www.paintersinc.net/commercial-painting-cost , www.homedepot.com/paint
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	1 percent; does not include labor costs of repainting walls	
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Loss from fire

Fire loss	Total damage to hotels from uncontained fires started by smoking in 2015 was US \$12,775,000	https://www.usfa.fema.gov/downloads/pdf/statistics/v19i4.pdf
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Additional costs

Additional cleaning costs from smoking are derived from adding calculations related to time and wages. This does not include additional cleaning costs or water used to turn over a smoked-in room:

Labor costs for additional time spent in room	Additional time spent cleaning a room	https://www.bls.gov/oes/2018/may/oes372012.htm , Payscale.com; Salary.com
Supply costs		https://lodgingmagazine.com/what-are-your-true-variable-costs-per-occupied-room/ , https://howmuch.net/costs/drape-clean
Water costs		https://lodgingmagazine.com/outsourced-hotel-laundries-the-value-of-certification

Revenue considerations

Cost of lost room revenue	Average occupancy rate x average hotel ADR x likelihood room is taken OOO	https://str.com/press-release/us-hotel-industry-posts-record-levels-2019-lowest-growth-recession , https://www.statista.com/statistics/200161/us-annual-accomodation-and-lodging-occupancy-rate/ , https://www.costar.com/article/1585498132 , FAS study data
(Minus) Revenue collected from cleaning fees	Instances where hotel attempts to charge x instances where hotel does not lose chargeback – bank fee for processing chargeback	FAS study data from 6,000+ hotel surveys
Cost of labor in processing cleaning fees	Time spent investigating smoking and gathering evidence + time spent processing fee + time spent preparing defense of chargeback X hourly rate for staff	https://www.salary.com/research/salary/posting/live-in-housekeeper-hourly-wages , https://www.payscale.com/research/US/Job=Housekeeper/Hourly_Rate , https://www.payscale.com/research/US/Industry=Hotel_Management/Hourly_Rate , FAS study data
Direct costs for relocating guests	Total room-nights in US in 2019 x instances where guests check into a room affected by smoking x instances where guest complains to front-desk x likelihood of relocating a guest who complains of smell in room	AHLA, VA_Hospitality_US-Lodging-Overview_Feb2020_final_optimized.pdf, https://draemedia.com/single-negative-review-cost , https://www.slideshare.net/ekolsky/cx-for-executives ,
Direct costs for satisfying guests	Additional costs, rebates, comped meals or other services x the percentage of instances where the hotel offers such discounts	https://www.marriott.com/loyalty/member-benefits/guarantee.mi , FAS study data

Effect of bad reviews and lower NPS scores on hotels future business

Smell or odor remains the third most cited complaint in the check-in process, which is the most important driver of NPS for hotels. Our calculation was based on how frequently a new guest checks into a room that smells from previous smoking, the likelihood that guest leaves a negative review online OR otherwise chooses not to leave a positive review, and the loss of future business from each scenario. We calculated the effect of unauthorized smoking on a hotel's reputation as follows:

- How frequently does a guest check into a room that smells like smoke? Number of rooms smoked in per day x the percentage where smoking is fully remediated and leaves no evidence. Source is FAS study data.
- How frequently are smell related bad reviews left online? Number of instances where guests check into rooms that smell from smoke x the likelihood that guest leaves a review. Sources include gatherup.com, http://cdn.zendesk.com/resources/whitepapers/Zendesk_WP_Customer_Service_and_Business_Results.pdf, and Google surveys
- What is the cost in lost business from a bad review online? Average length of stay for a guest x the hotel's ADR x the gross number of lost future guests from the bad review – the percentage of lost business that can be recouped from replying to a bad review online x the frequency with which hotels reply to bad reviews. Sources are <https://draemedia.com/single-negative-review-cost>, (references several studies), Convergys Corp, <https://www.htrends.com/trends-detail-sid-108810.html>, <https://www.businesstravelnews.com/Lodging/Average-US-Hotel-Booking-Window-Length-of-Stay-Compress-in-November>, <https://ignitionone.com/wp-content/uploads/2019/02/2018-Q4-Hospitality-Report.pdf#:~:text=Length%20of%20stay%20shows%20a,%20stay%20of%20almost%204.5%20days>
- What is the cost of lost business from a guest who checks into a smoked in room and doesn't leave a positive review online, and otherwise would have? Total rooms nights in the US x the percentage of room nights where guest checks into a smoked in/smoky room x the percentage of room stays that result in positive reviews x (1 - the percentage of guests who check into smelly rooms and still leave positive reviews) x Benefit (in dollars) of a positive review online. This number is divided by the total number of hotels rooms in the US to get the per room cost of lost business from not receiving a positive room online. Sources include AHLA, VA_Hospitality_US-Lodging-Overview_Feb2020_final_optimized.pdf, <https://gatherup.com/blog/willing-consumers-leave-reviews/>, http://cdn.zendesk.com/resources/whitepapers/Zendesk_WP_Customer_Service_and_Business_Results.pdf, <https://www.reputationdefender.com/blog/online-reviews/20-stats-about-online-reviews-that-hoteliars-need-to-know> HBS , American Hotel and Lodging Association.

Miscellaneous costs

- Cost of second-hand smoke exposure to hotel work force, per room, per year. This is calculated as the total cost of sick time of employees from being exposed to second-hand (SHS) and third-hand smoke (THS) + the cost in additional health care premiums of employees due to SHS and THS exposure) * the accommodations sector of the hospitality industry's share of these expenses. This was then divided by the number of hotel rooms in the US to arrive at the average hotel room's share of SHS and THS related employment costs. Sources include American Nonsmoker's Rights Foundation, the Society of Actuaries, the Bureau of Labor Statistics' 'New American Economy' report for 2020, Statista.com, and the American Hotel & Lodging Association.