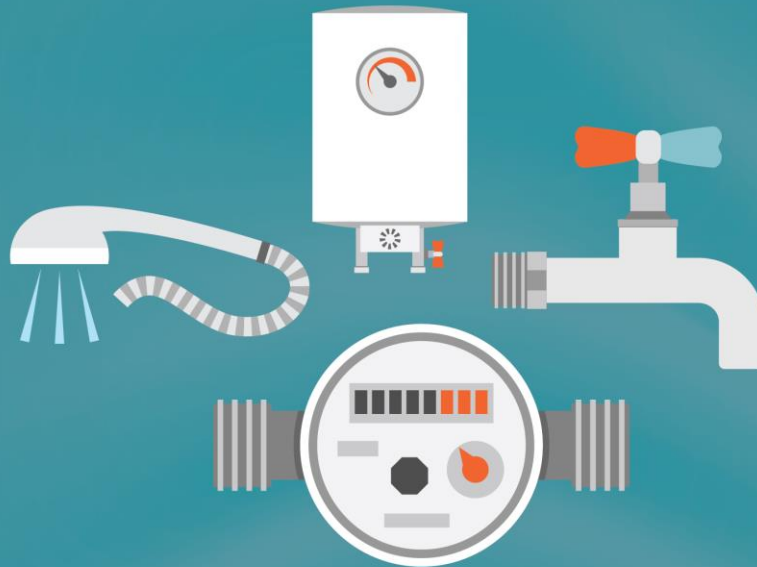


WATER



VALUE PROPOSITION

I expect safe and affordable drinking water available continuously and that my municipality is responsive to conservation, environmental and quality issues.

KEEP IN MIND:

Influencing Factors

Influencing factors can create variances in comparison data from year-to-year and from municipality-to-municipality.



Age of Infrastructure

Age, condition and type of pipe material and frequency of maintenance of the water distribution system



Conservation Programs

Extent of impact on water consumption



Provincial Standards

Municipal water quality requirements may exceed provincial regulations



Supply & Demand

Water source, treatment cost, size of geographic area and different supply areas impact demand



Treatment Plants

Number, size and complexity of the municipality's water treatment plants



Urban Density

Proximity of pipes to other utilities increases the cost for repair and replacement



Weather Conditions

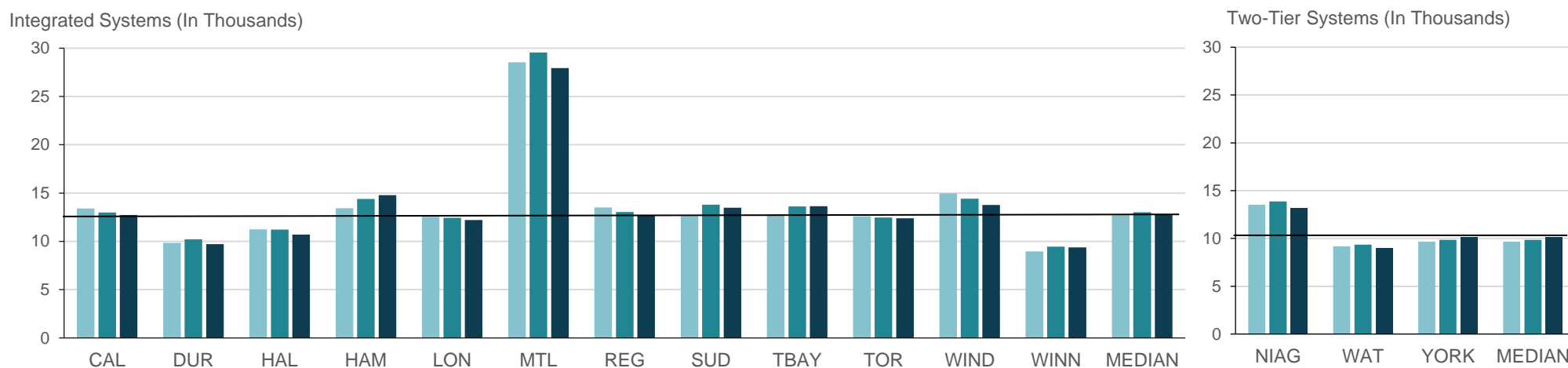
Negative impacts associated with more severe and frequent extreme weather events

For a full description of influencing factors, please go to: www.mbncanada.ca

Water

Figure 36.1 Megalitres of Treated Water per 100,000 Population

Integrated Systems: The term applies to municipalities that have full responsibility for all water activities including treatment, transmission, storage and local distribution. **Two-Tier Systems:** The term applies to municipalities that have responsibility for components of water activities such as treatment, transmission and major water storage facilities, whereas local municipalities are responsible for local distribution and/or storage facilities.



2017	13,397	9,843	11,251	13,434	12,540	28,540	13,510	12,613	12,819	12,609	14,964	8,962	12,716	13,526	9,167	9,662	9,662
2018	12,991	10,212	11,230	14,387	12,455	29,565	13,036	13,794	13,609	12,480	14,430	9,464	13,014	13,884	9,343	9,855	9,855
2019	12,724	9,701	10,711	14,794	12,206	27,941	12,711	13,478	13,643	12,379	13,777	9,363	12,718	13,164	8,985	10,150	10,150

Source: WWTR210 (Community Impact)

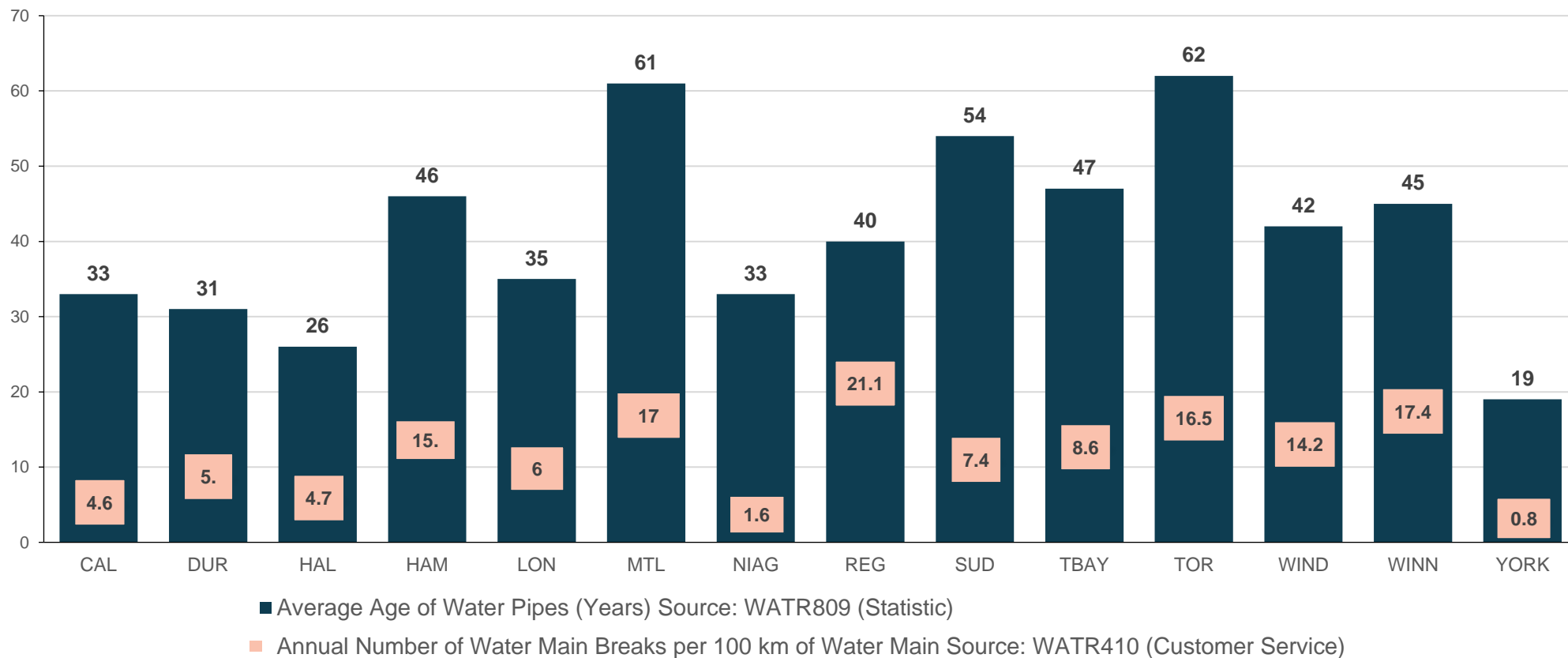
Montreal: The City must produce significant volumes of water to meet the needs of the ICI (Industrial, Commercial and Institutional) sectors which is a large proportion of the clientele served. In addition, the aging infrastructure causes a high rate of water loss, which has a significant impact on the volume of water produced by the City.

Water

Figure 36.2 Average Age of Water Pipe and Number of Water Main Breaks per 100 Km of Water Distribution Pipe

Age of Water Distribution Pipe: Old pipes are usually in poor condition as a result of pipe corrosion, pipe materials (susceptible to fractures), and leakage at pipe joints and service connections which contributes to an increased frequency of water main breaks relative to newer systems that do not have such deficiencies. The practice of relining pipes has caused inconsistent reporting on the age of the pipe.

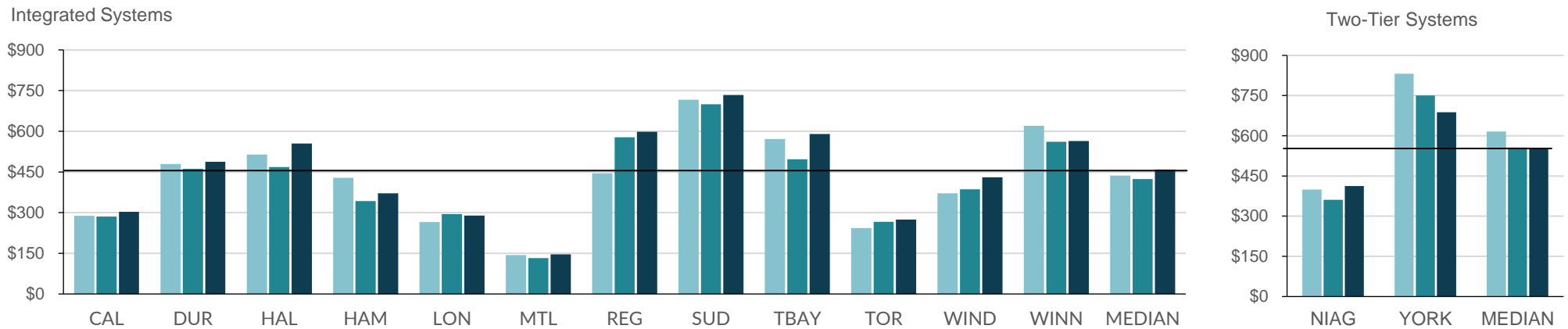
Number of Water Main Breaks: Excludes service connections and hydrant leads.



Water

Figure 36.3 Total Cost for the Treatment of Drinking Water per Megalitre of Drinking Water Treated Relative to the Number Water Treatment Plants

This measure reflects the total cost for the treatment of drinking water. Costs include operation and maintenance of treatment plants as well as quality assurance and laboratory testing to ensure compliance with regulations, and amortization which can vary from year to year depending on the type of infrastructure, capital fund expenditures, etc. Municipalities providing service over a broad geographic area generally have higher operating costs due to the number and type of water treatment facilities and wells operated. The distance between the individual systems has an impact on the daily operating costs for the treatment of drinking water. Refer to Figure 36.1 for description of Integrated and Two-Tier systems.



2017	\$288	\$479	\$514	\$428	\$265	\$143	\$445	\$716	\$571	\$243	\$371	\$620	\$437	\$399	\$832	\$616
2018	\$285	\$462	\$468	\$343	\$295	\$132	\$578	\$700	\$497	\$266	\$386	\$561	\$424	\$361	\$750	\$556
2019	\$303	\$487	\$555	\$371	\$289	\$146	\$598	\$734	\$590	\$274	\$430	\$564	\$459	\$412	\$688	\$550
Treatment Facilities 2019	2	29	12	5	0	6	1	21	1	4	1	2		6	26	

Source: WATR310T (Efficiency); WATR801 (Statistic)

Halton: Cost increases in 2019 mainly due to partial retirement related to projects as well as the PSAB adjustment related to TCA-no projects.

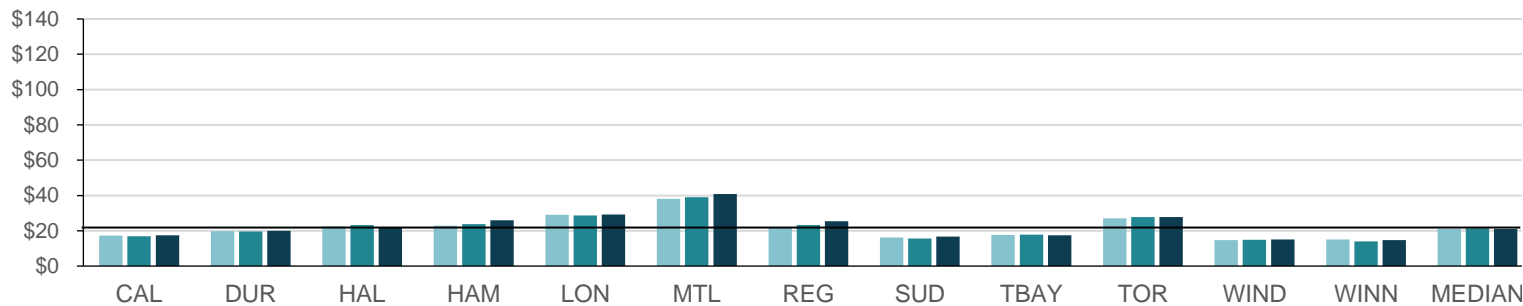
Waterloo: The Region's treatment and transmission infrastructure are fully integrated and cost components cannot be separated. See Figure 36.5 for total cost.

Water

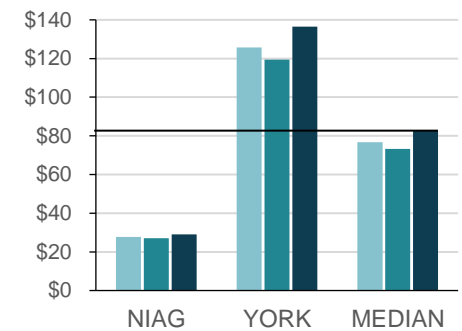
Figure 36.4 Total Cost for the Distribution/Transmission of Drinking Water per Km of Water Distribution Pipe Relative to the Number of Water Pumping Stations Operated

This measure reflects the total cost for the distribution and transmission of drinking water. Amortization is also included and can vary from year to year to year depending on the type of infrastructure, capital fund expenditures, etc. Municipalities providing service over a broad geographic area generally have higher operating costs due to the number and type of water treatment facilities and water pumping stations operated. The distance between the individual systems has an impact on the daily operating costs for both the distribution and transmission of drinking water. Refer to Figure 36.1 for description of Integrated and Two-Tier systems.

Integrated Systems (In Thousands)



Two-Tier Systems (In Thousands)



2017	\$17,269	\$19,736	\$22,565	\$22,930	\$29,088	\$38,057	\$22,197	\$16,164	\$17,665	\$27,116	\$14,737	\$15,068	\$20,967	\$27,719	\$125,681	\$76,700
2018	\$16,825	\$19,673	\$23,262	\$23,820	\$28,676	\$38,949	\$23,245	\$15,600	\$17,816	\$27,833	\$14,892	\$13,972	\$21,459	\$27,014	\$119,390	\$73,202
2019	\$17,465	\$19,912	\$22,085	\$25,990	\$29,180	\$40,810	\$25,326	\$16,678	\$17,444	\$27,846	\$14,983	\$14,701	\$20,999	\$29,097	\$136,576	\$82,837
Pumping Stations 2019	42	18	15	22	8	19	3	15	8	18	3	5		11	22	

Source: WATR305T; WATR808 (Statistic)

Waterloo: The Regions treatment and transmission infrastructure are fully integrated and the cost components cannot be separated. See Fig. 36.5 for total cost.

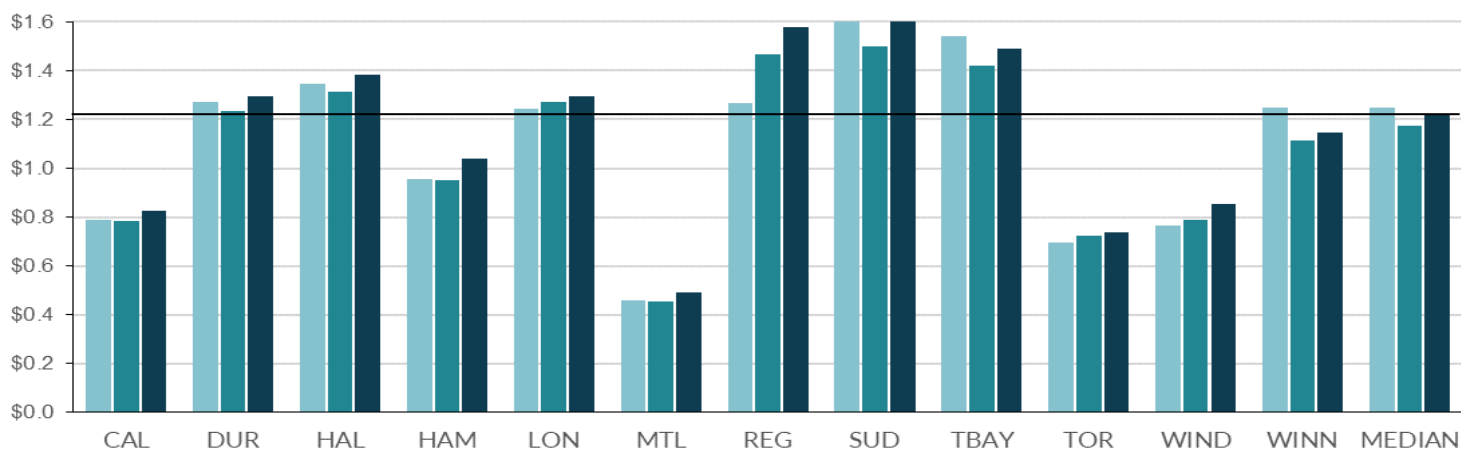
York: Drinking water distribution and transmission costs reflect contractual agreements with the City of Toronto and Peel Region to use their infrastructure to deliver water from Lake Ontario to York Region. The balance of York Region's drinking water is drawn directly from local wells and Lake Simcoe. Costs also include infrastructure repairs, maintenance and capital expenditures.

Water

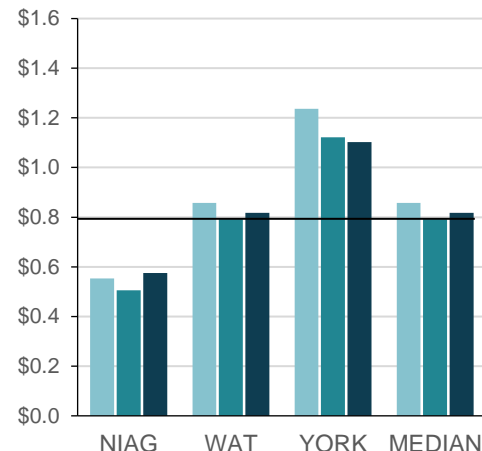
Figure 36.5 Total Cost for the Treatment and Distribution/Transmission of Drinking Water per Megalitre of Drinking Water Treated

This measure reflects the combined total cost for the treatment, distribution and transmission of drinking water. It includes amortization which can vary significantly from year to year depending on the type of infrastructure, capital fund expenditures, etc. Municipalities providing service over a broad geographic area generally have higher operating costs due to the number and type of water treatment facilities and water pumping stations operated. The distance between the individual systems has an impact on the daily operating costs for the treatment, distribution and transmission of drinking water. Refer to Figure 36.1 for description of Integrated and Two-Tier systems.

Integrated Systems (In Thousands)



Two-Tier Systems (In Thousands)



2017	\$788	\$1,271	\$1,346	\$958	\$1,246	\$461	\$1,266	\$1,619	\$1,543	\$698	\$764	\$1,250	\$1,248	\$553	\$857	\$1,236	\$857
2018	\$783	\$1,234	\$1,313	\$950	\$1,272	\$453	\$1,465	\$1,499	\$1,419	\$726	\$791	\$1,115	\$1,175	\$506	\$792	\$1,122	\$792
2019	\$824	\$1,293	\$1,383	\$1,041	\$1,294	\$493	\$1,577	\$1,601	\$1,492	\$736	\$852	\$1,147	\$1,120	\$575	\$817	\$1,102	\$817

Source: WATR315T (Efficiency)

York: Costs are higher because of a high asset base and depreciation/amortization costs.