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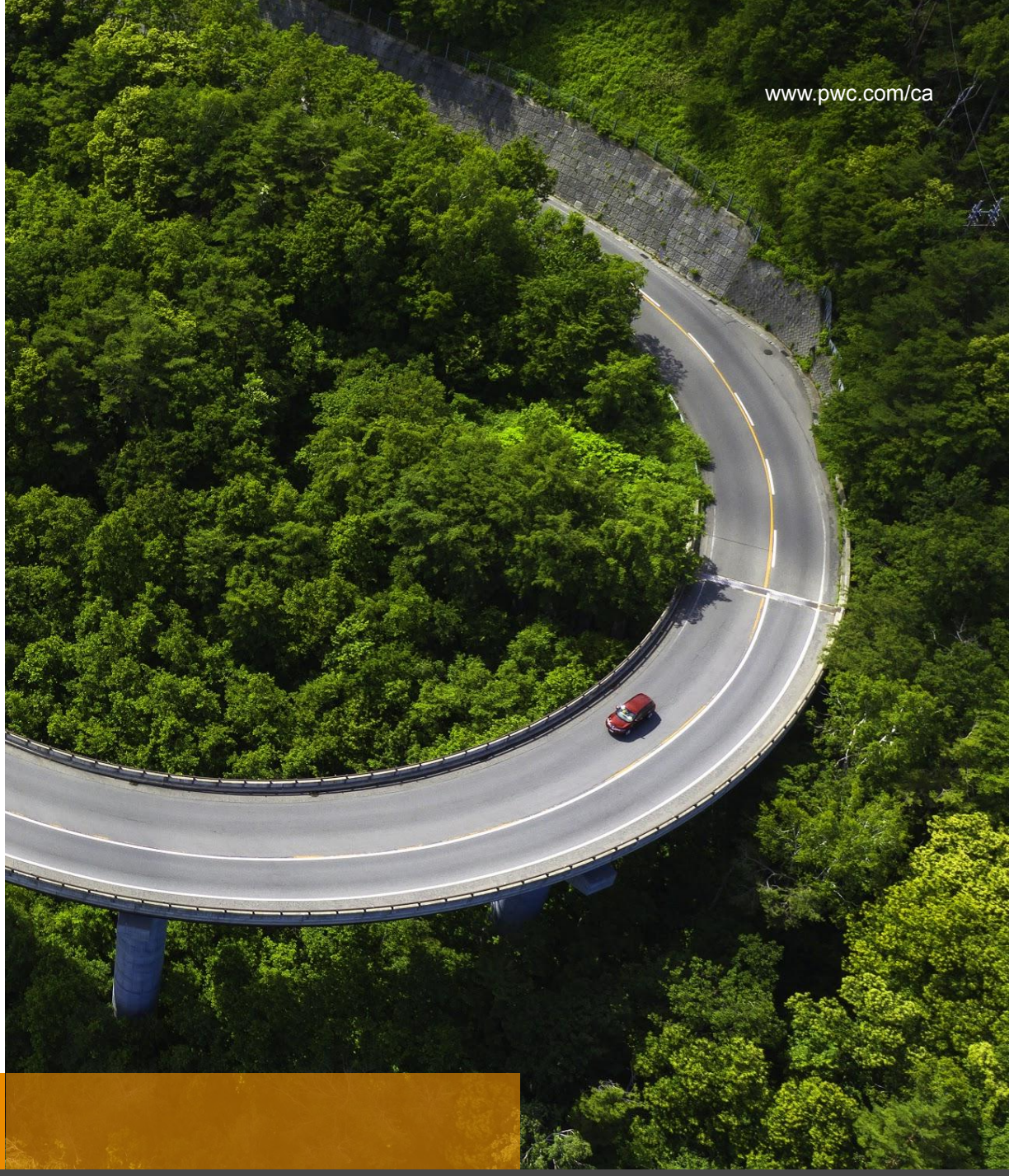


Collision & Glass Repair in BC *Post-Implementation Business Review (PIBR) of ICBC Suppliers*

Creating leaders, inspiring people and bringing perspectives together to achieve what matters most.

Contents

Please note that Executive Summary of this report has been organized to provide an overview of the analysis, key findings, and considerations for future industry reviews. Supporting information has been structured into two appendix sections for simplicity. Appendix 1 provides a description of the context behind PIBR, PwC's approach to data collection, a market overview of the Collision and Glass industries, and insights based on the survey and analysis conducted. Appendix 2 provides additional information and supporting analysis used to generate the report insights.

Glossary of terms 3

Notice to reader 5

Executive summary 6

- Introduction to PIBR Report 6
- Approach to Analysis & Structure of Observations 6
- Key findings: Collision & Dual Repair 14
- Note on Glass Repair Survey 15
- Impacts to the future of the Automotive Repair industry 16
- Looking ahead 17

Appendix 1: Context, Market, and Complete Findings 18

- Context behind the PIBR Report 21
- Data collection framework 26
- Market overview: Collision Repair 37
- Complete findings: Collision & Dual Repair 47
- Market overview: Auto Glass 73
- Automotive Repair Industry trends 79

Appendix 2: Supporting Survey Analysis 92

- Profitability analysis 94
- Correlation analysis 102
- Sentiment analysis 103
- Repair Industry Survey 106
- Key Performance Indicators 113
- Industry Working Group 116
- Validation Checks 117

Glossary of terms

Term	Description
ADAS	Refers to the Advanced Driver Assistance Systems included in newer vehicles to enhance driving. These systems are built with electronic sensors to help drivers navigate potential hazards on the road, such as blind spot detection and emergency braking.
Aftermarket Parts	Parts that are produced and distributed by manufacturers other than the vehicle's original manufacturer.
Alternative Transportation Service (ATS)	Transportation that is arranged by Collision Repair facilities for ICBC customers while their vehicle is repaired. This service is provided as part of the Collision Repair program and compensated to program participants when requirements have been met.
Average Key to Key Cycle Time	Efficiency metric used to measure the duration of a repair order. Cycle time is measured from the time a vehicle is dropped off for repair to the time it is picked up.
Basic Autoplan Insurance	ICBC Basic Autoplan is the mandatory coverage required for a vehicle in British Columbia. Basic Insurance includes third party liability coverage, accident benefits, underinsured motorist protection, hit-and-run coverage and inverse liability protection.
Calibration	A step in the repair process that is completed after safety system features, such as ADAS, have been repaired. Calibrations can be static, using tools available on the facility floor, or dynamic, using a mobile device to test features while the vehicle is moving.
Cash Market	Market where vehicle damage repairs are paid by customers out of pocket and not submitted to ICBC for compensation. This includes business to business (B2B) transactions.
Collision Repair Program	ICBC program that is used to support facilities that provide vehicle repair services to ICBC customers. The program accredits Collision Repair facilities that achieve and maintain standards for service and quality to ensure customers receive efficient, cost-effective repairs.
Deductible	Amount an ICBC customer needs to pay out of pocket in relation to a first party claim for vehicle damage.
Dual	Refers to a facility within the ICBC repair program where both Collision Repair and Auto Glass services are provided to customers.
Estimate	Summary of the work required to repair a damaged vehicle and the associated cost.
Facility	Refers to single location where Collision Repair and/or Auto Glass services are provided to customers, particularly related to ICBC program facilities.
FTE	Full Time Equivalent: Common unit of measurement used to indicate the workload of an employee.
Glass Repair Program	ICBC program that is used to support facilities that provide glass repair and replacement services to ICBC customers. The program accredits Auto Glass facilities that achieve and maintain standards for service and quality to ensure customers receive efficient, cost-effective repairs.
Insurance Market	Market where vehicle damage repairs are submitted to the customer's auto insurer for approval and reimbursement.

Glossary of terms

Term	Description
MAD	Refers to minor repairs that do not require structural work on the vehicle's frame. Minor accident damage (MAD) repairs are performed in both the cash and insurance market.
Major Collision	Refers to major repairs that require structural work on the vehicle's frame, such as panel replacements. Major repairs typically take several days to complete and often involve insurance carriers.
Material Damage	Services provided to ICBC customers related to damaged vehicles and repairs. These encompass Collision Repair, Auto Glass, Towing & Storage and Commercial Fleet services.
NAGS	National Auto Glass Specifications (NAGS) provides parts and labour information for Auto Glass parts and is published by Mitchell International.
OEM Parts	Parts that are produced and distributed by the vehicle's original manufacturer.
Optional	In addition to Basic Autoplan Insurance, drivers in British Columbia have the option to purchase Optional Insurance from ICBC or other private insurers. ICBC's Optional Insurance policies provide additional coverage beyond the Basic Autoplan Insurance policy for three primary products: extended third party liability, collision and comprehensive.
PIBR	Reference to the Post-Implementation Business Review (PIBR), commissioned by ICBC, to better understand the financial health and performance of the Collision and Glass Repair industries in BC.
Recycled Parts	Parts that are re-used from other vehicles, often selected due to their low costs and smaller environmental impact compared to OEM parts.
Scanning	A step in the repair process where a tool is connected to vehicle computers to display the vehicle's internal diagnostics.
Strata	Subsets of the ICBC supplier population that completed the survey Strata types were defined as region, facility ownership structure and size based on total reported revenue.
Sublet	Occurs when a repair facility does not perform the repair, or a portion of work associated with it, and sends the vehicle to a separate facility. The separate facility completes the repair order and receives compensation from the facility who sent them the work.
Supplement	Changes to an estimate after identifying further repair work, requiring additional reimbursement from the insurer. Supplemental estimates are created by the facility when the technician uncovers additional damage during the repair.

Notice to reader

This Report is issued by PricewaterhouseCoopers LLP ("PwC") for the exclusive use of the Insurance Corporation of British Columbia ("ICBC") in connection with PwC's role in the Post-Implementation Business Review ("PIBR"). PwC was hired by ICBC to perform an independent review of the Collision Repair and Auto Glass industries.

Our work did not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls nor attestation nor review services in accordance with the standards established by the Chartered Professional Accountants of Canada. Accordingly, we do not express an opinion nor any other form of assurance on the financial or other information, or operating internal controls, of Collision Repair and Auto Glass facilities or the industry as a whole.

We did not examine, compile or apply agreed upon procedures to satisfy the requirements of the Chartered Professional Accountants of Canada to the financial information used in this Report and we therefore are unable to express assurances on such information except where expressly stated in the Report to form part of the scope of our work.

Further this Report does not constitute an opinion as to legal matters, including the interpretation of the Insurance Corporation Act or any other similar matters.

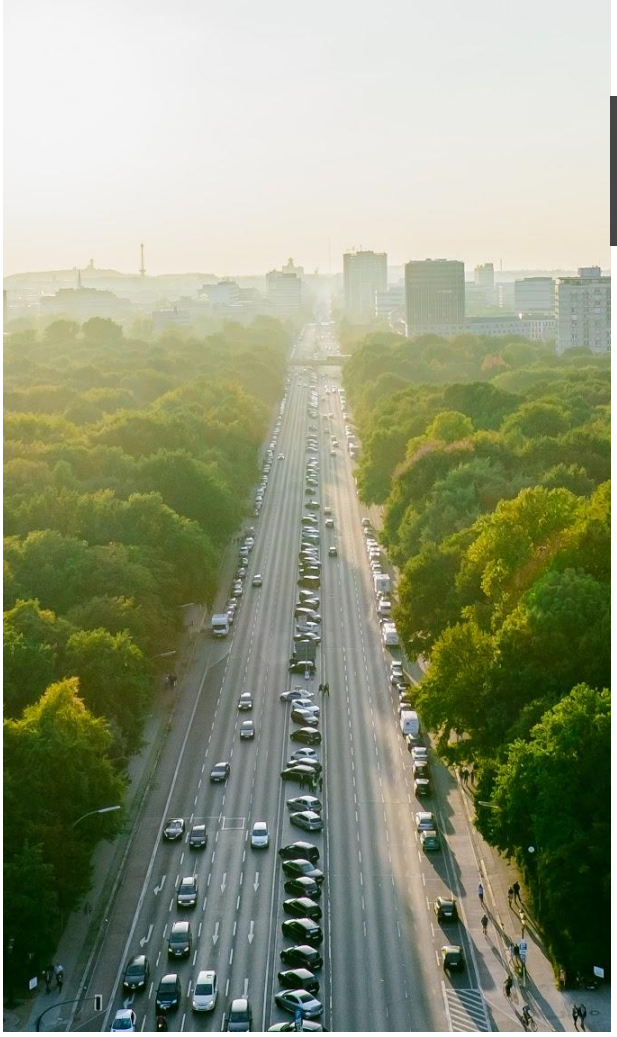
We fully complied to both the letter and the spirit of the federal Competition Act. Data collected was anonymized and aggregated before sharing with ICBC to maintain adherence to the Act. We chaired all meetings with industry representatives and did not permit discussion related to any anti-competitive activities that may contravene the Act, such as price-fixing or supply restrictions. Rules and obligations of all participants were read aloud prior to each meeting to ensure these discussions were avoided.

Our work is based primarily on the information and assumptions listed in the body of this Report. While we incorporated information from various sources we did not perform checking or verification procedures except where expressly stated in the Report to form part of the scope of our work. Our work and commentary is subject to assumptions, which may change with the benefit of further detailed information. We make no representation regarding the sufficiency of our work and had we been asked to perform additional work, additional matters may have come to our attention that would have been reported upon.

Some of the documents and figures we reviewed were produced by third parties. We did not corroborate or verify these documents and figures with these parties. It is outside the scope of our review to evaluate the methodology used to conduct independent studies; therefore, we have accepted the information as presented, including conclusions. Furthermore, ICBC established the scope of this review with feedback from the Industry Working Group and contemplated the need for us ("PwC") to incorporate information from third parties to perform analysis.

The outputs of the Report are intended to provide ICBC with a representation of the financial health and sustainability of the industry to assist in informing their decision-making process pertaining to their supplier programs. PwC accepts no liability in respect of any loss, damage or expense of whatsoever nature caused by any use the reader may choose to make of this Report, or which is otherwise consequent upon the gaining of access to the Report by the reader.

Our Report, including schedules and appendices, must be considered in its entirety by the reader. It may be misleading to select and rely on specific portions of the analyses, or consider factors in isolation.



Executive summary

The Post Implementation Business Review (PIBR) was commissioned by ICBC to better understand the financial health and performance of the Collision Repair and Auto Glass industries in BC, and identify trends that may impact their sustainability. As the sole provider of basic auto insurance in the province, ICBC relies on these two supplier groups to provide safe and effective repairs to the damaged vehicles of British Columbians.

PwC was chosen to conduct an independent, third-party analysis of the two industries' financial health and performance in order to generate insights on their future viability. The objectives of the review were to:

- Assess the Collision Repair and Auto Glass supplier industry in the province of British Columbia to understand current profitability, performance and service levels.
- Design a new, repeatable approach to assess industry that ensures long term financial sustainability for ICBC, suppliers, and service for customers.

Information gathered from suppliers was only shared with ICBC and the industry in aggregated, anonymized formats to maintain confidentiality and comply with the federal Competition Act.

Approach to Analysis & Structure of Observations

Please refer to Appendix 1 - Context behind the PIBR Report, Data collection framework

In consultation with ICBC and an Industry Working Group composed of suppliers across British Columbia and representatives of the Automotive Retailers Association (ARA), PwC completed the following steps as part of the PIBR:

1. Defining the scope of the analysis and data required to assess the range and average performance of the industries.
2. Identifying the data sources to collect the required information, including suppliers that work with ICBC, and benchmarks for Collision Repair or Auto Glass facilities across Canada, and third party reports.
3. Designing surveys to be sent to Collision, Glass, and Dual (those that provide both Collision and Auto Glass services) facilities in ICBC's supplier program. Consulting with ICBC and the Industry Working Group on the survey design, including the questions, response types, and timeline for completion.
4. Developing and executing the communication plan for contacting roughly 800 Collision, Glass and Dual facilities within ICBC's supplier program to inform them of the activity and encourage participation.
5. Assessing survey responses from the supplier community for completeness and accuracy by performing validation checks of the data submitted, issuing clarifications to individual suppliers, and removing outliers.
6. Analyzing results and comparing against benchmark data sources on a provincial and national level to develop hypotheses on financial health and performance.
7. Discussing survey results with the Industry Working Group, ICBC, and suppliers with a national footprint to validate trends and nuances by segments (regional, ownership type, revenue size) and generate findings..
8. Summarizing the findings and sharing with ICBC and the Industry Working Group.
9. Considering implications of these findings and developing a methodology for future annual data collection activities that will allow ICBC to assess the viability of the Collision Repair and Auto Glass industries.

Based on this analysis, PwC was able to provide observations on the market, profitability (e.g. revenues and costs), workforce, and efficiency of Collision and Dual facilities in BC. Relevant comparisons to Canadian benchmarks and other provinces have also been provided. PwC did not receive sufficient responses from Auto Glass facilities to report on the financial health of the industry in BC. However, a market overview pertaining to the Canadian and BC Auto Glass market has been provided. All findings are focused on the reporting years of 2017 - 2019 and should therefore be considered a retrospective view of these industries.

The following table summarizes the observations PwC has provided for Collision, Glass and Dual facilities:

Findings by facility type	Collision		Dual		Glass	
Market Overview	✓	*BC & Canada*		*Part of Collision*	✓	*BC & Canada*
Profitability	✓	*BC & Canada*	✓	*BC only*		*Not provided*
Workforce	✓	*BC & Canada*	✓	*BC only*		*Not provided*
Efficiency	✓	*BC & Canada*	✓	*BC only*		*Not provided*

A consolidated version of key findings for Collision and Dual Repair has been provided in this Executive Summary. A complete set of detailed findings pertaining to both these industries is contained in the supporting appendices. Please refer to *Appendix 1 - Complete findings: Collision & Dual Repair* for this information.

This Executive Summary also outlines the challenges with data collection from the Glass industry. A complete overview of the Auto Glass market in Canada and BC is contained in *Appendix 1 - Note on Glass Repair Survey.*

Findings: Collision Repair

Please refer to Appendix 1 - Market overview: Collision Repair, Complete findings: Collision & Dual Repair

While the industry had strong historical performance, and performs more efficiently on average compared to other provinces, recent decreases in profitability within the BC market have emerged.

Average profitability declined from a range of 9-13% in 2017 to a range of 5-8% in 2019, due to growing labour and administrative cost pressures. Despite this, some facilities have been able to maintain profitability through cost reduction activities and efficiency initiatives.

Market Overview

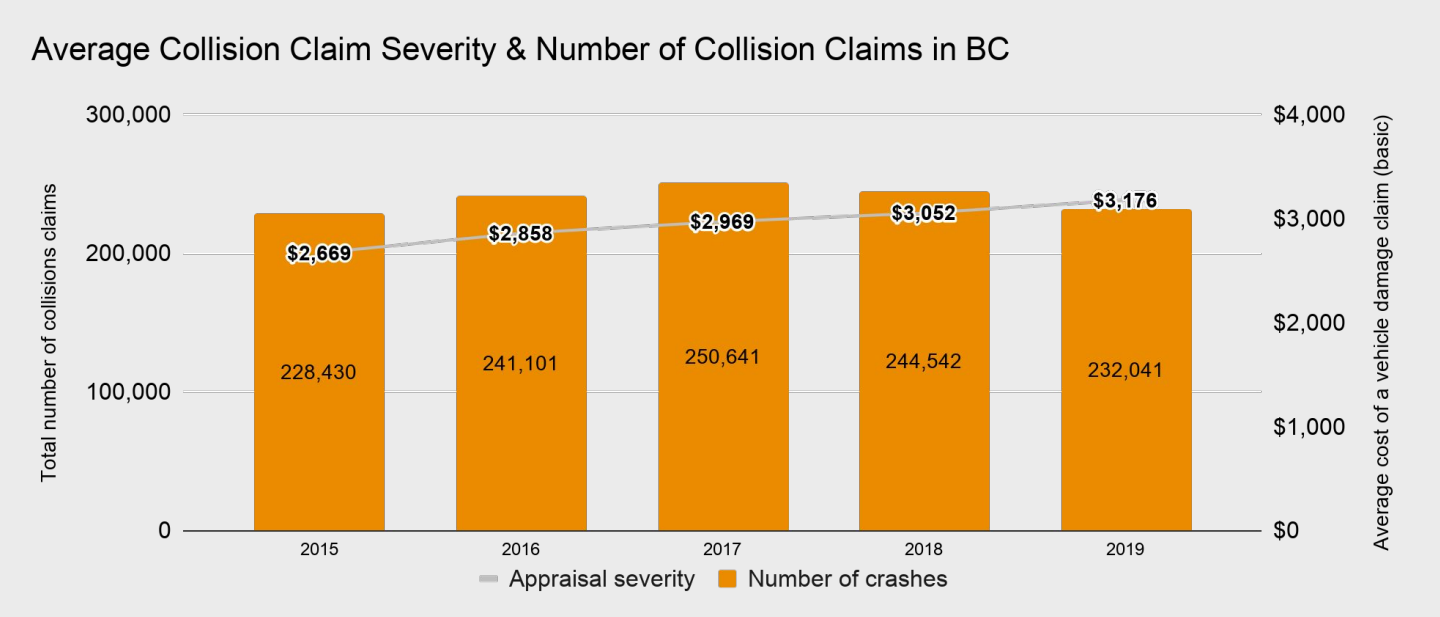
Canadian Collision Repair facilities provide a range of services to customers, with revenues driven by body repair and painting services. Many facilities also provide glass repair and replacement, upholstery and detailing services. There are four common types of facilities that exist in the Canadian market - Banner/Franchise, Multi-Shop Owner (MSO), Independent and Dealers. While each of these facilities provide similar services, their ownership structures differ, often creating differences in their back-end operations and workforce. The number of Collision Repair facilities grew steadily at 1% over the past 5 years, with just over 5,000 across Canada in 2019. The Canadian Collision Repair market grew by approximately 2% per year since 2012 to a total market size of roughly $4.3 billion.

There are over 100 auto insurers across Canada, with different regional dynamics between provinces that operate public and private insurance. In British Columbia, Saskatchewan and Manitoba, auto insurance is predominantly offered in a public system that is operated by their respective provincial governments. In these provinces, it is required to purchase a minimum level of auto insurance from these insurers (ICBC, Saskatchewan General Insurance, Manitoba Public Insurance). As a result, nearly all Collision Repair facilities operating in a province with public auto insurance have a relationship with the public insurer. All remaining provinces operate in a private system, where auto insurance is offered by a competing set of individual insurers.

Recent declines in collision claim frequency, rising severity

The total number of collision repair claims in BC have begun a downward trend as of 2017 when 250,641 collision repair claims were reported to ICBC and continued to decline in 2018 and 2019. This does not include glass claims. ICBC projects that COVID-19 will favourably influence this decline in frequency as fewer drivers are on the roads, signalling a sustained downward trend.

While frequency is declining, the costs associated with a collision repair claim are increasing. Average severity of a collision repair claim at ICBC increased by 4% per year between 2015 and 2019, to $3,176 in 2019. This suggests that the collision repair cost pressures facing ICBC are aligned with the broader trend of rising severity across Canada.

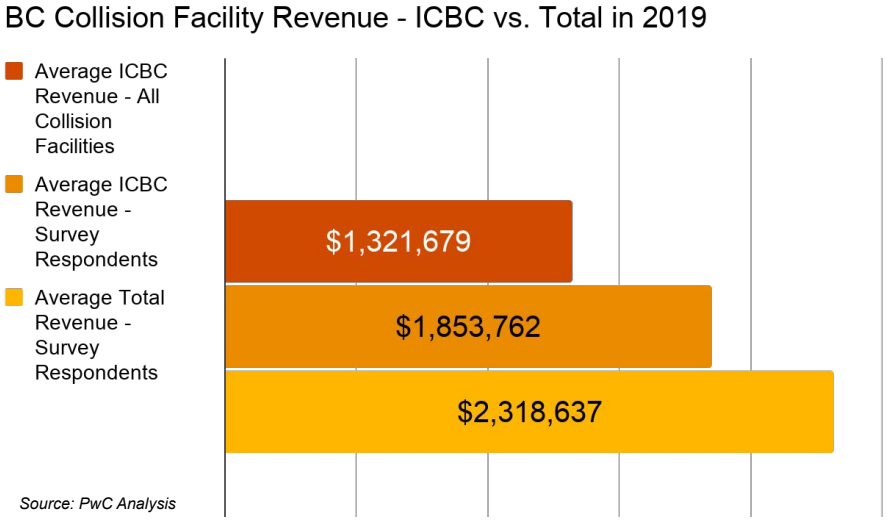


Majority of Collision Facility revenues come from ICBC

While Collision facilities generate revenue from other sources, such as the cash market, ICBC revenue represents a significant portion of their total business. In 2019, ICBC contributed to over 75% of the average revenues earned by a Collision Repair facility in BC, indicating major reliance on their relationship with ICBC to operate sustainably. The average ICBC revenue of a Collision Repair facility who participated in the Repair Industry Survey was $1,853,762.

Total facility revenue of survey respondents fluctuated between $2.3 and $2.4 million over the past three years.

Revenue is directly impacted by the volume of ICBC collision repair claims. The lowest average revenue was reported most recently in 2019 at $2,318,637, which corresponds with the lowest volume of collision repair claims reported by ICBC during this time period.



	Average total revenue	ICBC claims
2017	$2,321,960	250,641
2018	$2,412,203	244,542
2019	$2,318,637	232,041

Profitability

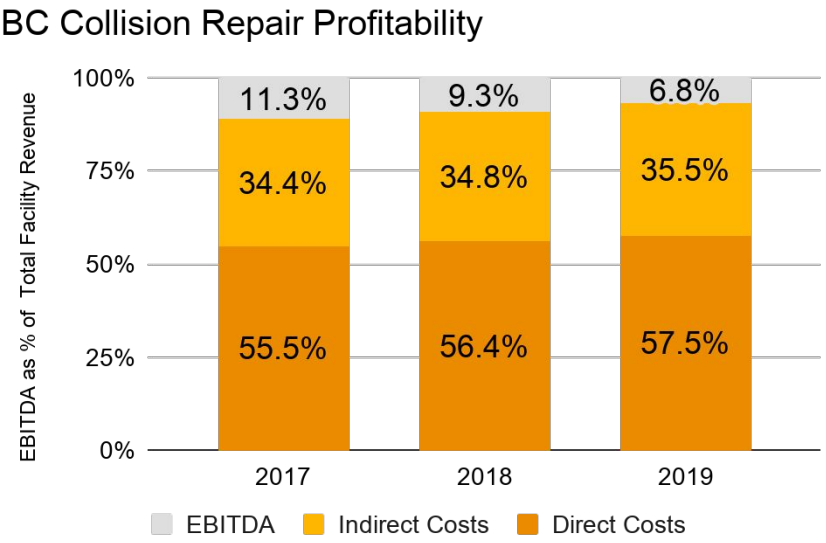
Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

Declining profits attributable to rising costs

Profitability of the Collision Repair industry was defined by subtracting both direct and indirect costs from a facility's total revenue. For the purposes of this assessment, PwC calculated profitability using EBITDA (earning before interest, taxes, depreciation and amortization), a common indicator used to assess a company's operating profitability.

EBITDA was calculated as a weighted average of Repair Industry Survey responses, with regional weighting designed to reflect the percentage of ICBC Collision Repair facilities across the province.

Despite stability in revenues, the profitability of a Collision Repair facility in BC declined over the past three years, with EBITDA as a percentage of total revenues reaching 6.8% in 2019. The decline from 11.3% EBITDA in 2017 to 6.8% in 2019 was found to be statistically significant. This represents a 4.5 percentage point decrease in profitability. This decline can be attributed to both direct and indirect cost pressures. Direct costs increased by two percentage points between 2017 and 2019, while indirect costs increased by roughly one point over the same time period.



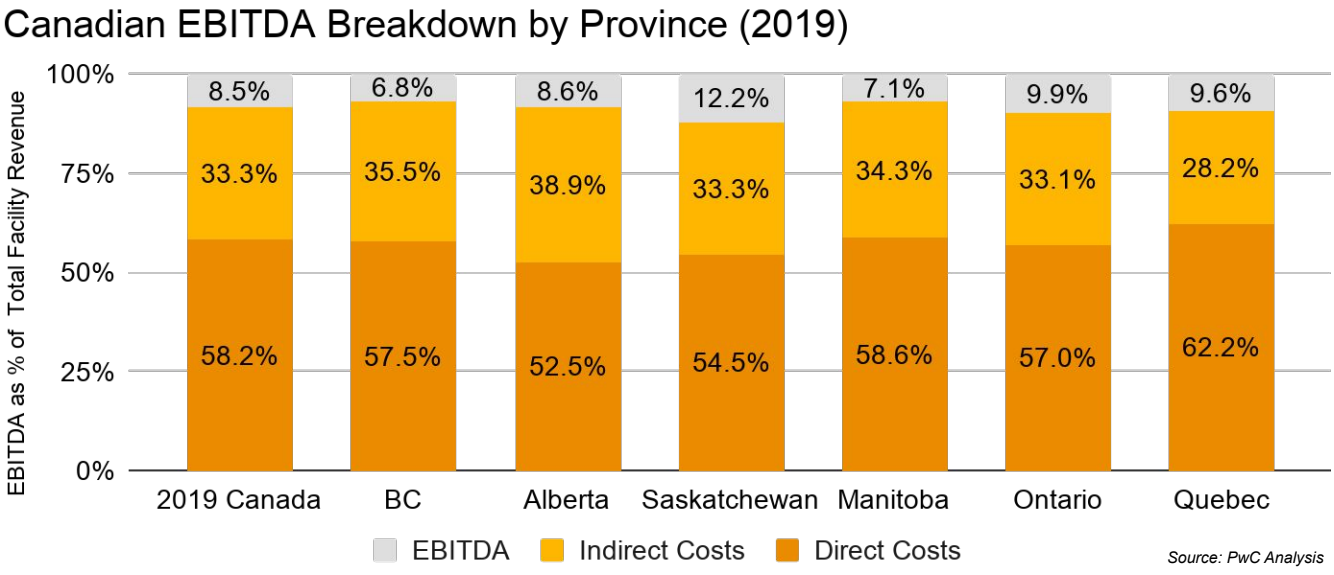
Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number.

Lower profitability than all Canadian provinces

EBITDA as a percentage of a facility's total revenue varies by Canadian province, with Collision Repair facilities in Saskatchewan reporting the highest in Canada at 12.2%. Manitoba is most similar to BC, with an EBITDA of 7.1% in 2019. This is a relevant comparison as Manitoba also operates in a predominantly public insurance system, and reported indirect costs above the national average.

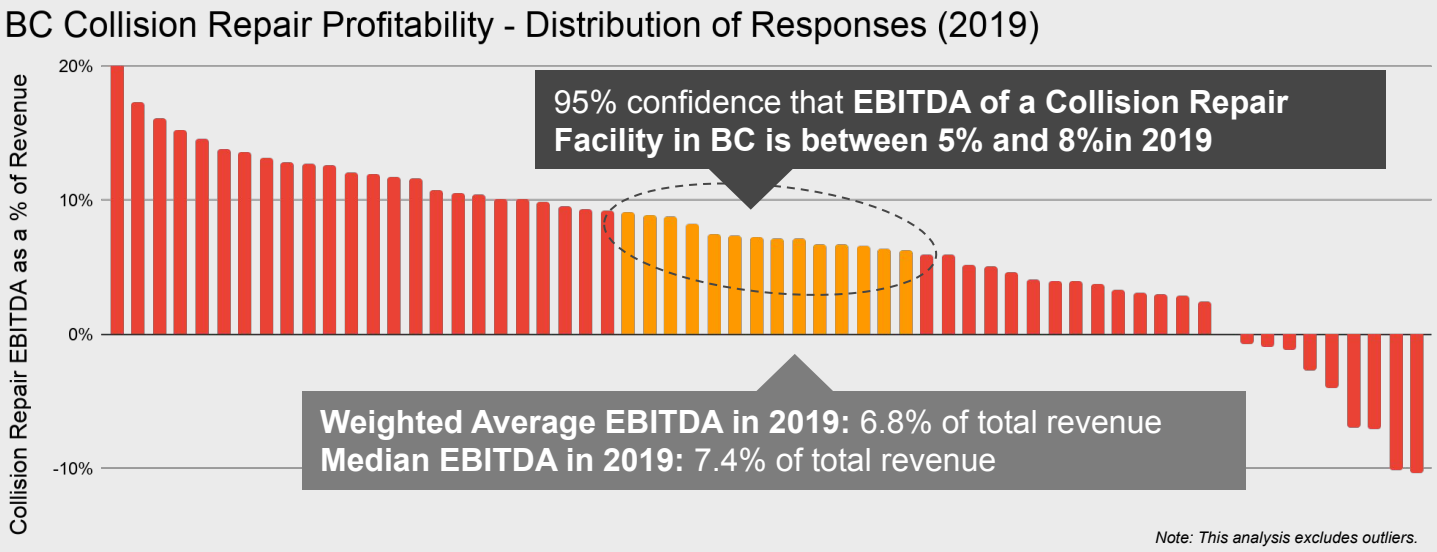
The profitability of a Collision Repair facility in BC in 2019 was below the national average of 8.5%, and lower than other provinces. Low profitability of the Collision Repair industry in BC can largely be attributed to higher indirect costs than other jurisdictions. Indirect costs of a facility in BC were 2.2 percentage points above the national average, and higher than all provinces except for Alberta. Direct costs were the third highest in Canada, behind Quebec.



Source: PwC Analysis

Wide range of profitability across the industry

The distribution of Repair Industry Survey responses illustrates a wide range in the profitability of Collision Repair facilities in the province. The maximum EBITDA of a Collision Repair facility in 2019 was 20.2%, while the minimum was -10.4%. The median EBITDA of a Collision Repair facility during the same year was slightly above the average, at 7.4% of total revenue. This wide range and higher median indicates that a large group of facilities were able to maintain profitability and outperform the provincial average of 6.8% in 2019. ICBC is the predominant source of revenue for all of these facilities, with uniform compensation rates, suggesting that the strong performers may have been able to maintain higher profitability through cost reduction initiatives.



Note: This analysis excludes outliers.

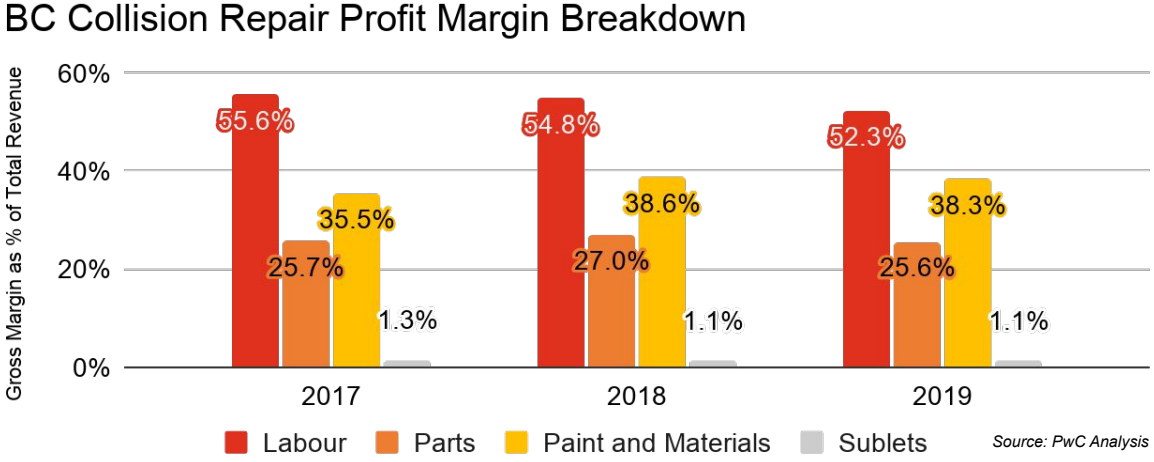
Declining profitability of Labour and stability in Parts

A closer look at the profitability of specific components reveals different gross profit trends. Labour generates the largest profit margin for a Collision Repair facility in the province, followed by Paint & Materials, then Parts.

The gross profit margin on Labour decreased from 55.6% to 52.3% over the past three years, decreasing by 2.5 points in 2019. Gross profit margins on Parts remained stable between 2017 and 2019, with some fluctuation in 2018. The profitability of Paint and Materials increased over the same time period, reaching 38.3% of total revenues in 2019.

The profitability of sublets fluctuated slightly between 2017 and 2019, generating gross profit margins of 1.1% of total revenue. This suggests that Collision Repair facilities do not see sublets as a source of profit, reducing their need to invest in additional specialized equipment that may not generate returns in the near term.

These changes suggest that Collision Repair facilities in the province have experienced greater profitability in Paint and Materials, stability in Parts, and declines in Labour. Given the size of Labour's contribution to overall gross profit margin, it can be ascertained that the decrease over the past three years negatively influenced the profitability reported by Collision Repair facilities in the province.



Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of gross profit margins: 56 in 2017, 62 in 2018 and 69 in 2019.

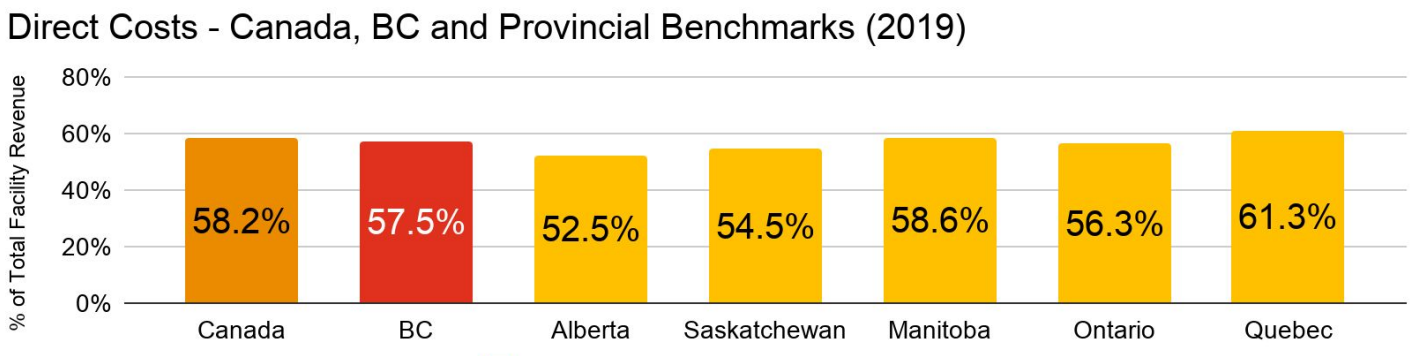
Repair costs

Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

Direct costs in line with the national average, but higher than many Canadian provinces

Direct costs, commonly referred to as Cost of Goods Sold (COGS) represent the costs directly associated with repairing a vehicle. They include Labour, Parts, Paint and Materials, Alternate Transportation Services (ATS) and Sublets.

Direct costs as a percentage of a facility's total revenue vary by Canadian province, with the highest in Quebec at 61.3% and the lowest in Alberta at 52.5% in 2019. In BC, direct costs represent 57.5% of a Collision Repair facility's total revenue, ranking as the third highest in Canada, behind Quebec and Manitoba. Direct costs in BC are in line with the national average, which was 58.2%. They were above Saskatchewan and below Manitoba, the other two Canadian provinces who operate in a predominantly public insurance system.



Source: PwC Analysis

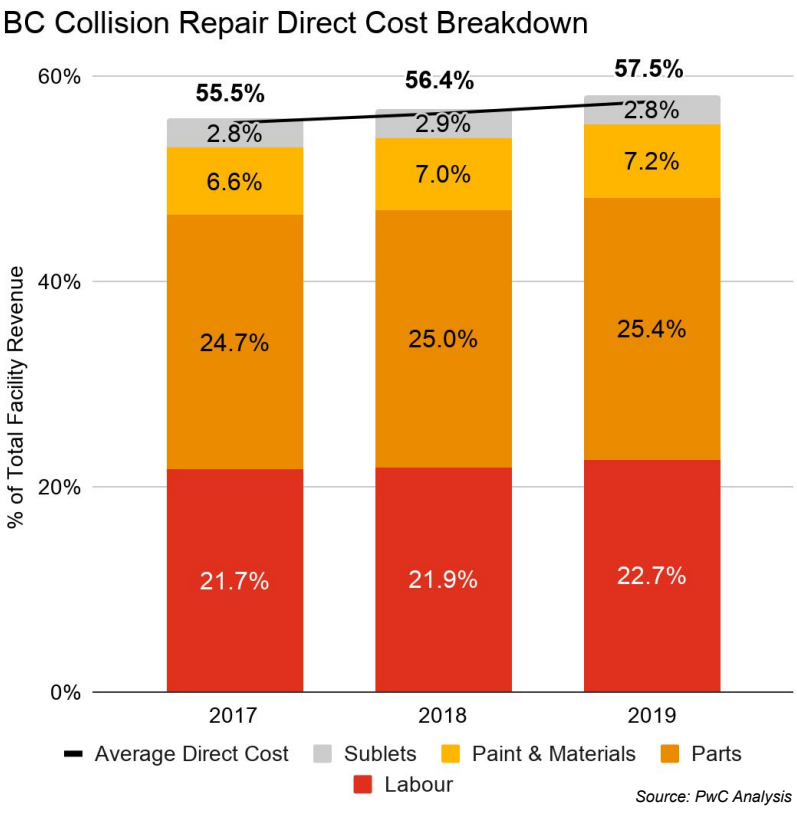
Rising direct costs over the past three years

Direct costs for a Collision Repair facility in BC were, on average, 57.5% of total revenues. Direct costs rose by 2 percentage points from 2017 to 2019, potentially contributing to the gap between BC and Saskatchewan - the public insurance province with the lowest direct costs.

Similar to revenue, Labour and Parts represent the two major contributors to direct costs. BC Collision Repair facilities reported increases in Labour costs over the past three years, reaching 22.7% in 2019. Both Parts and Paint & Materials also increased during this time period.

Parts costs increased by 0.7 percentage points from 2017 to 2019, suggesting that Collision Repair facilities are facing growing cost pressure from parts suppliers, resulting in an increase to the total cost to repair a vehicle. These costs are inclusive of any rebates received from parts suppliers.

Sublets costs, which refer to the cost of outsourcing some of the work associated with a repair order, consisted of 2.8% of a Collision Repair facility's revenue. which aligns with increases in overall facility revenue, and the rise of complex repairs requiring specialized services.



Source: PwC Analysis

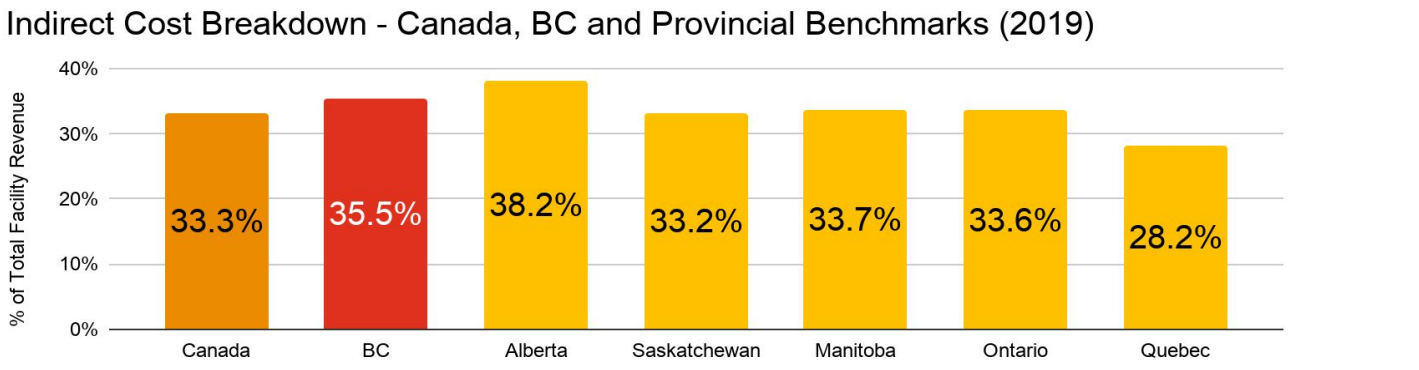
Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of total revenue: 63 in 2017, 71 in 2018 and 80 in 2019.

Higher indirect costs than most of Canada

Indirect costs represent expenses not directly associated with performing a vehicle repair. They include salaries for management and administrative staff, rent, property taxes, training, and other costs.

2019 indirect costs as a percentage of a facility's total revenue fluctuated by Canadian province, with the lowest in Quebec at 28.2% and the highest in Alberta. Indirect costs in BC represented, on average, 35.5% of a Collision Repair facility's revenue, ranking as the second highest in Canada.

Average indirect costs for a Collision Repair facility in BC were above the averages for the other Canadian provinces operating in a predominantly public insurance system. Indirect costs of a Collision Repair facility in BC were 2.3 percentage points higher than Saskatchewan and 1.8 points higher than Manitoba.



Source: PwC Analysis

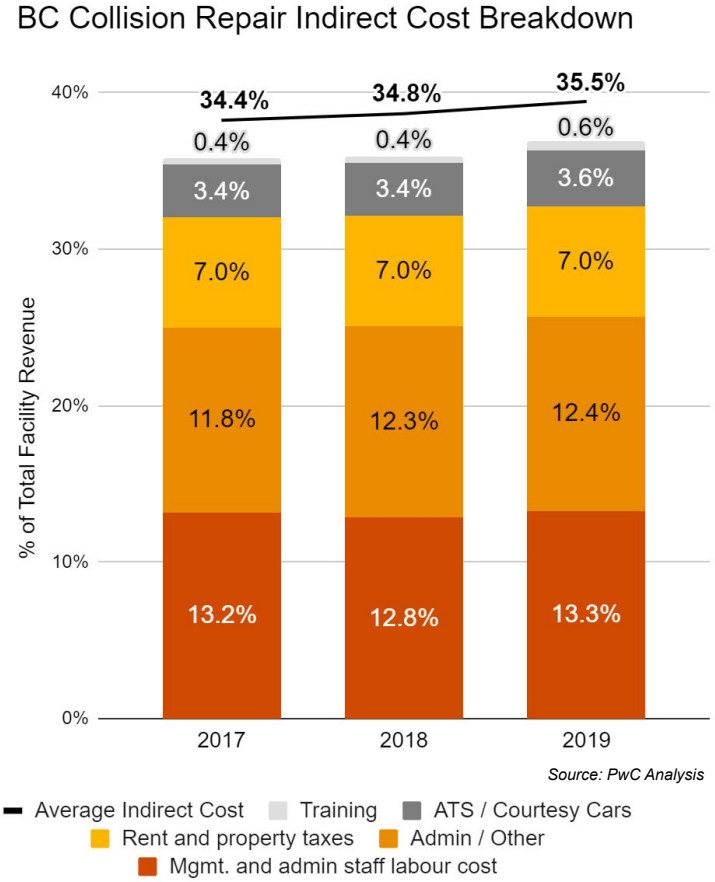
Rising indirect costs due to administration, ATS and training

Indirect costs increased by just over one percentage point between 2017 and 2019, from 34.4% to 35.5%. The largest indirect costs borne by a Collision Repair Facility in BC are Management and Administrative staff labour and Admin/ other costs. Collectively, these two categories represent over a quarter of a facility's total revenue.

Management and Administrative staff labour costs remained relatively consistent. Administrative costs increased by 0.6 percentage points between 2017 and 2019 to 12.4% of total revenues. Industry representatives attributed this increase to the administrative work associated with ICBC supplier programs, such as estimate approvals, repair order management and payments. This could be associated with the growth in ICBC's Repair Program, which required Collision Repair facilities to perform estimates directly.

Rent and property taxes did not fluctuate, remaining at 7.0% in 2019. This was higher than the Canadian average, with Ontario as the closest comparable at 5.0%. These figures align with the broader trend of high real estate prices in BC and Ontario relative to the rest of Canada.

Other increases in 2019 indirect costs can be attributed to smaller categories, such as Alternate Transportation Services (ATS) and training. ATS costs increased to 3.6% of a facility's revenue in 2019, while training costs increased to 0.6%. Industry representatives indicated that training will continue to represent a larger portion of a facility's indirect costs in the coming years as new investments are made to upskill technicians and more consistent reporting practices are implemented.



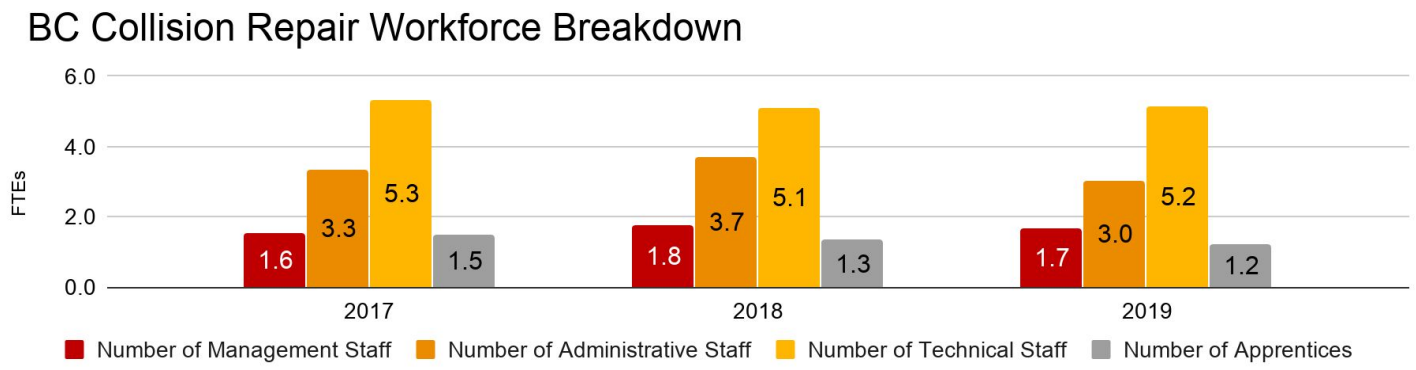
Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of indirect cost: 58 in 2017, 61 in 2018 and 65 in 2019.

Workforce

Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

Overall headcount of a Collision Repair facility in BC is decreasing due to reductions in number of Technicians, who represent 45% of the workforce. Survey respondents indicated difficulty finding and retaining technician labour and cited it as a risk to future viability, a trend that is consistent across automotive trades in Canada. Declines in the gross margin on labour of Collision Repair facilities suggests that increases in wage rates may have been implemented as a strategy to address the technician shortage.



Source: PwC Analysis

Efficiency

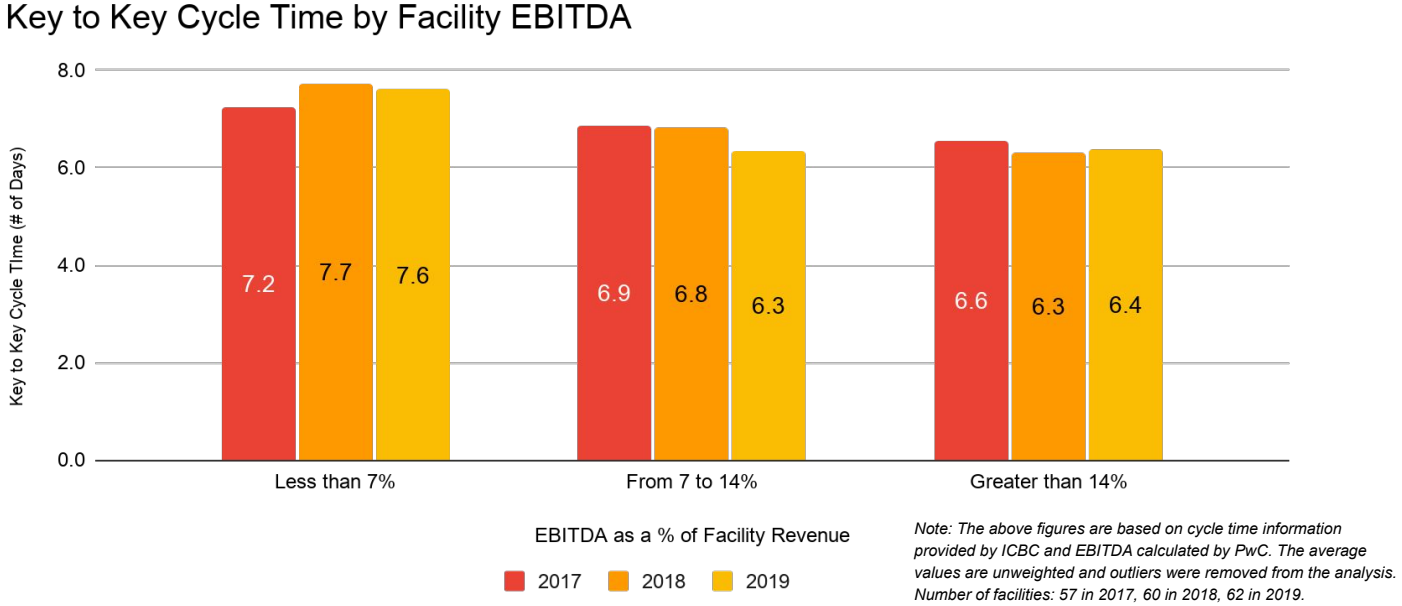
Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

There was strong, positive correlation between Collision Repair facilities who indicated they made investments in technology and their profitability. In tandem with the broader industry trends identified (see Appendix 1 - Automotive Repair Industry Trends), facilities who make investments in technology relevant for repairing newer vehicles will be more competitive in maintaining long-term profitability.

There was also a strong, positive correlation between facilities who implemented initiatives to improve operational efficiency and profitability, indicating that the introduction of new programs, such as Lean Six Sigma, generated cost reductions and improvements to EBITDA. One of the indicators used to measure operational efficiency is Key to Key Cycle Time. It is defined as the number of days between the date the vehicle arrived for a repair and the date it is picked up or delivered to the customer. Cycle time figures for each facility were provided by ICBC and assessed alongside EBITDA calculated from the Repair Industry Survey.

Collision Repair facilities with EBITDA of less than 7% had the highest Key to Key Cycle time across BC over the past three years, reaching 7.6 days in 2019. Conversely, facilities with higher EBITDA had cycle times of 6.3 to 6.4 days in 2019. These figures further suggest that more profitable facilities in BC may have been able to generate cost efficiencies through increased operational efficiency.

Source: PwC Analysis



Note: The above figures are based on cycle time information provided by ICBC and EBITDA calculated by PwC. The average values are unweighted and outliers were removed from the analysis. Number of facilities: 57 in 2017, 60 in 2018, 62 in 2019.

Collision vs. Dual Repair

Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

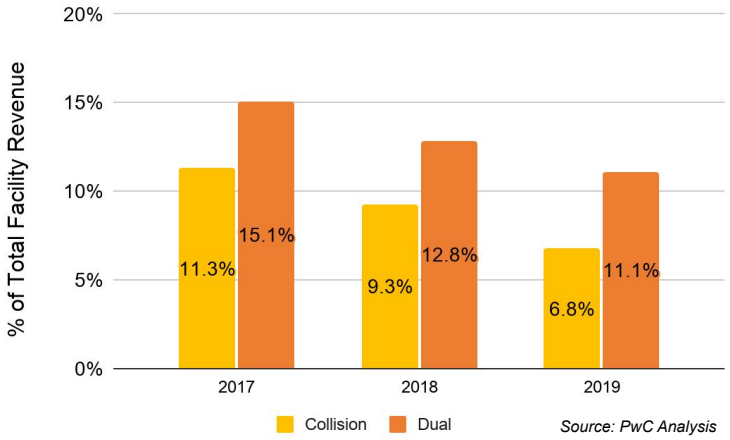
Dual facilities (those that participate in both Collision and Auto Glass Programs) reported higher profitability than Collision. They have larger headcounts, and face pressure to maintain efficiency due to the variety of services they perform.

Similar declines but more profitable than Collision Repair

Dual facilities reported a decline in EBITDA by an average of 2 percentage points per year, reaching 11.1% in 2019. While Dual facilities indicated that their share of collision services can range from 95% of their revenue down to 70%, this industry sub-group as a whole is more profitable than Collision-only facilities. Dual facilities also reported higher total revenue relative to the Collision facilities (average revenue of $2.9 million versus $2.3 million annually), indicating that this industry sub-group benefits from larger volume operations.

The largest operational distinction between the two facilities is their Auto Glass businesses, which could be contributing to differences in EBITDA. However, PwC did not receive sufficient data from the Industry Repair Survey to report on the profitability of the Auto Glass business.

BC Collision vs. Dual Repair Profitability

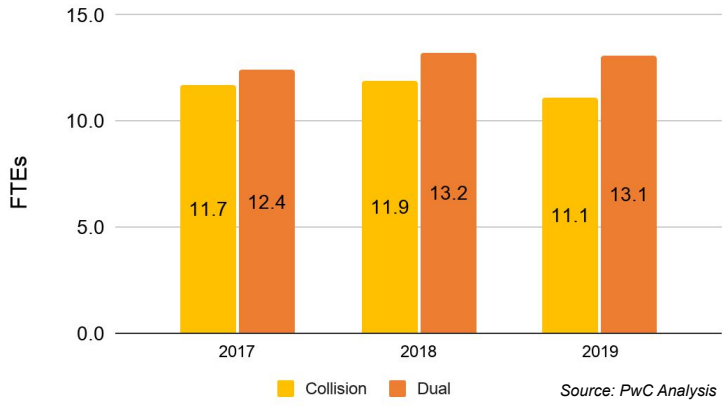


Source: PwC Analysis

Larger headcounts than Collision Repair

Overall headcount of a Dual facility in BC was one to two employees higher than Collision Repair. Dual facilities did not experience the similar decrease in the number of technicians seen at Collision facilities. Discussions with speaking with industry representatives for Dual facilities in the province identified rising administrative requirements for both Collision Repair and Auto Glass work, indicating an ability for larger facilities to invest in apprentice labour.

Collision vs. Dual Repair Facility - Average Number of Staff

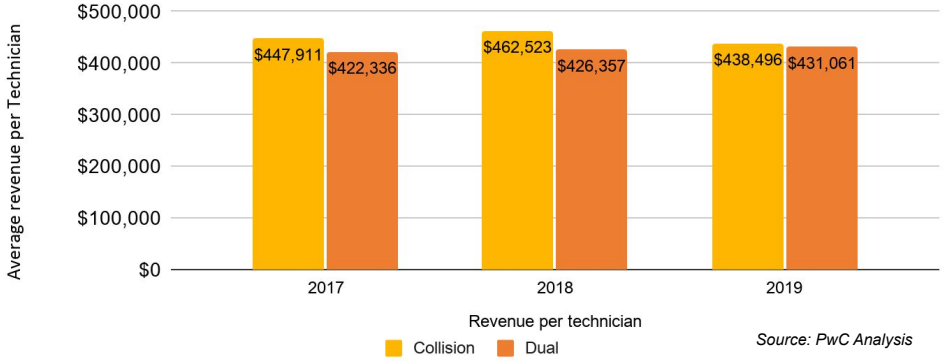


Source: PwC Analysis

Recent improvements in productivity

Between 2017 and 2019, the average revenue for a technician in a Dual facility increased by an average of 1% per year to $431,061, representing an improvement in employee productivity. This finding was unique to Dual facilities, as Collision reported a decline in average revenue per technician of 1% per year over the same time period. Increases in revenue per technician at Dual facilities can be attributed to higher average facility revenue and total number of technicians.

Collision vs. Dual Repair Facility - Revenue per Technician



Source: PwC Analysis

Glass Repair: Limited Survey Participation

Please refer to Appendix 1 - Complete findings: Collision & Dual Repair

No insights were generated for the profitability of the Auto Glass industry in BC as facilities did not provide sufficient revenue and cost data for analysis. While data pertaining to workforce and efficiency was provided by respondents, no insights could be generated due to the lack of related financial information. Aside from Repair Industry Survey data, PwC has provided an overview of the glass market in Canada and the differentiators within BC.

Limited financial information reported in the Repair Industry Survey

Less than 20% of Auto Glass facilities who participated in the survey provided breakdowns of their revenues or direct costs. This information is a critical input to assessing the financial health and sustainability of the Auto Glass industry in BC.

Cost information provided to PwC did not pass validation checks

Additional discrepancies with operating expense data in the Repair Industry Survey did not pass PwC's rules-based validations and checks. Similar to revenue information, quality data related to direct and indirect costs is critical to assessing the sustainability of the industry.

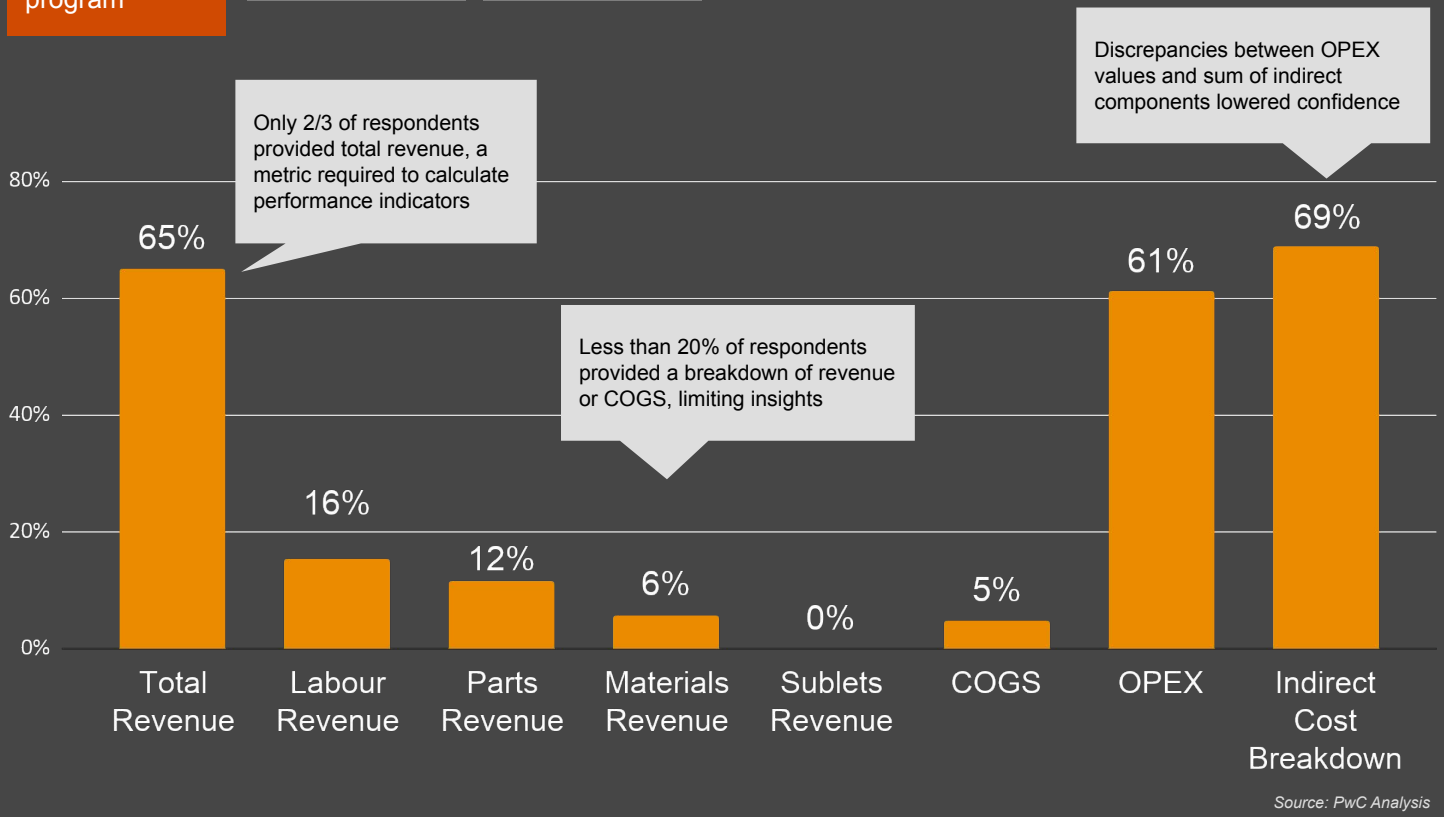
Breakdown of survey responses

(percentage of total Glass responses)

299 facilities participating in ICBC's Glass program

103 responses

197 did not respond



Source: PwC Analysis

Impacts to the Future of the Automotive Industry

Please refer to Appendix 1 - Automotive Repair Industry trends

PwC assessed the trends that will influence the future of the Collision Repair and Auto Glass industry. While these trends apply to the industry as a whole, analysis of the BC market indicates that they are already impacting the viability of ICBC's suppliers.

1. **Enhanced vehicle sophistication**
Increasingly technologically advanced vehicles continue to be manufactured (e.g. electric vehicles, connected cars, ADAS equipped cars etc.) and will continue to evolve in the short and long term.

2. **Complex repair planning process including OEM repair procedures**
New vehicle types and technologies are adding complexity to the repair planning process, such as estimating and calibrations. A rising number of OEM certification programs are heightening the complexity by requiring facilities to adapt to guidelines specific to each manufacturer.

3. **Evolving customer expectations**
Sources suggest that millennials will represent more than 45% of the potential car-buying cohort in 2025. This group brings a set of new expectations, raising the bar on what a best-in-class digital customer experience looks like. Other industries, including auto repair, will need to further digitize their interactions with customers.

4. **Changing workforce**:
There is general consensus within industry that technicians have become increasingly difficult to find. This is driven by an aging workforce, increasing requirements for specific and evolving technical skill sets, a negative perception of potential job upside, and a high turnover rate.

5. **Accelerating industry consolidation**:
Since 2012, the market share held by Canada's largest 10 facilities has grown by over 50%, indicating increased industry consolidation. It is anticipated that private equity acquisitions of auto repair facilities will continue at this pace.

While the suppliers who participated in the survey indicated that the changing workforce (cited as "labour availability") is their number one concern, insurers who also participated in the market research prioritized OE requirements as their primary concern. Going forward, investments that provide suppliers the ability to better manage their key inputs, labour and parts, will be critical to maintaining competitiveness, while also adhering to customer and insurer expectations.

COVID-19 and the Automobile Industry in BC

The immediate impact to the automobile industry has been a reduction in driving through a combination of joblessness and the move to remote working.

Pre-COVID, an estimated 34% of employed individuals in BC (~930,000) drove to work, with that number varying between 18% to 47% across different neighbourhoods in the province. The reduction in driving was felt immediately following the restrictions that were put in place in March and April 2020, with ICBC experiencing a dramatic decrease in the number of claims reported. In March and April 2020, the number of claims fell by roughly 45% relative to 2019. While this number has increased as the province rolled out the BC Restart Plan, the impact of this decrease was immediately felt by the Collision Repair and Auto Glass industries.

Given the direct impact claims volume has on material damage spend, the findings contained in this report should not be taken out of context, understanding that all figures reported from respondents were pre-COVID. Future benchmarks and projections will need to consider the industry financial health and performance in 2020.

Looking ahead

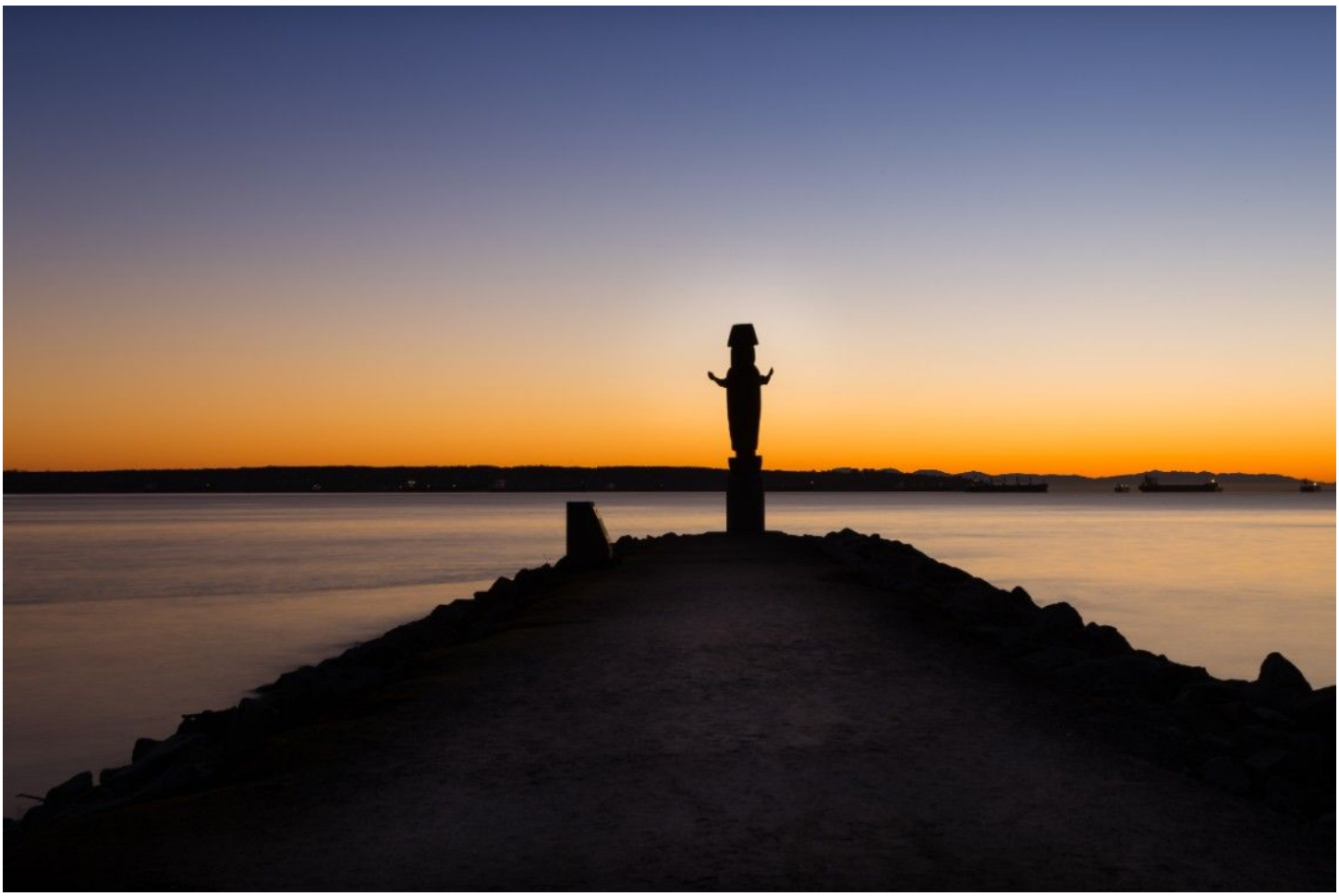
Implications of PIBR for ICBC

PIBR was rooted in a commitment from ICBC to better understand the financial health and performance of the Collision Repair and Auto Glass industries. Throughout 2019 and 2020, ICBC conducted consultations with industry and introduced new supplier management programs. ICBC continued to gather feedback and implement changes to their supplier programs as the PIBR was conducted . PwC was then requested to conduct a review of these industries and collect supplier data in a secure, anonymized format to inform ICBC's next steps and future program decisions.

Findings pertaining to the profitability, workforce and efficiency of Collision Repair facilities in BC should be used to inform ICBC's performance measures, supplier stratification, and incentive structures, as it provides a fact-based view of the financial and operational successes and challenges faced by the industry, and the provincial and national risks for future viability. The supplemental findings for Dual facilities should also be considered, given that there were noticeable differences in profitability between these two groups.

PwC was unable to generate findings on the profitability of the Auto Glass industry in BC, as Glass facilities did not provide sufficient revenue and cost information for analysis. While publicly available benchmarks provide guidance on performance relative to Canada, additional data from ICBC Auto Glass facilities will help shape future supplier program design. Participation in future data collection efforts is critical, as it will enable ICBC to make meaningful, evidence-based decisions on their Glass Repair program.

Future reviews of both these industries should continue in a scheduled and consistent manner to monitor performance and viability. Participation and engagement from key stakeholders, such as individual facilities, the Industry Working Group and industry associations, is essential to understanding the nuances of the industry and will allow ICBC to make actions that sustain the services provided to drivers in British Columbia.



Appendix 1

Appendix 1 contents

Context behind the PIBR Report	21
Data collection framework	26
Market overview: Collision Repair	37
Complete findings: Collision & Dual Repair	47
Market overview: Auto Glass	73
Automotive Repair Industry Trends	79

Structure of Appendix 1

Context behind the PIBR Report

Background information related to ICBC, the purpose and scope of the Post-Implementation Business Review (PIBR). This section also introduces PwC's phased approach to conducting the review and the target outcomes.

Data Collection Framework

Explanation of the approach to the initial phases of the PIBR - data collection and analysis. This section describes the steps taken to perform an objective review of the financial health and performance of the Collision Repair and Auto Glass industries in the BC market. It outlines the data collection methodology, design of the Repair Industry Survey and data analysis activities that were performed once responses were received.

Market Overview: Collision Repair

Overview of the Collision Repair market in Canada and BC, including size, growth rates, number of facilities and other relevant context that impacts the financial health and performance of a facility.

Complete Findings: Collision & Dual Repair

Collision

Overview of the market in Canada and BC, followed by an analysis of the facility responses gathered from the Repair Industry Survey. Findings are organized into sub-categories related to pricing, repair costs, profitability, workforce and efficiency, and include comparisons to national and provincial benchmarks where applicable. Additional breakdowns were also provided to illustrate differences in Collision Repair facilities in the BC market across region, ownership structure and size.

Dual

Supplemental analysis of the responses gathered from Dual facilities who participated in the Repair Industry Survey. Findings are provided for a subset of key performance indicators to demonstrate the similarities and differences between Collision and Dual facilities. Additional breakdowns by region, ownership structure and size are also provided.

Market Overview: Auto Glass

Overview of the market in Canada and BC, followed by a breakdown of participation and completion rates for the Repair Industry Survey. This section outlines the challenges faced in data collection from the BC Glass Community, and considerations for future reviews.

Automotive Repair Industry Trends

Perspective on the trends influencing the Collision Repair and Auto Glass industries, informed by insights from the Repair Industry Survey, Canadian insurers and third party research. This section also articulates the future outlook for both industries.

Context behind the PIBR Industry report

Purpose

Introduction to ICBC

The Insurance Corporation of British Columbia ("ICBC" or the "Corporation") is a commercial Crown corporation created in 1973 to provide universal compulsory auto insurance to motorists in British Columbia ("BC"). ICBC's governance is defined through legislation applicable to all Crown corporations, and legislation specific to the Corporation itself. ICBC's mandate is to provide basic, cost effective vehicle insurance for BC motorists through the Insurance Corporation Act, Insurance (Vehicle) Act and the Motor Vehicle Act.

ICBC Basic Autoplan is the mandatory coverage needed for a vehicle in British Columbia. Basic Insurance coverage includes third party liability coverage, accident benefits, underinsured motorist protection, hit-and-run coverage and inverse liability protection.

In addition to Basic Autoplan, drivers in British Columbia have the option to purchase Optional Insurance. ICBC Optional Insurance policies provide additional coverage beyond the Basic Autoplan Insurance policy for three primary products: extended third party liability, collision, and comprehensive.

The Basic auto insurance rates are regulated by the British Columbia Utilities Commission ("BCUC"), an independent regulator. The BCUC approves Basic rates and ensures the Basic insurance product is adequate, efficient, just and reasonable. ICBC sells Optional auto insurance in a competitive marketplace, among national and provincial insurance providers.

In addition, ICBC provides driver licensing, vehicle registration and licensing, and violation ticket and government fine collections services on behalf of the Province under a Service Agreement with the provincial government. ICBC also implements road safety initiatives to reduce collisions and losses on BC roads and to assist in managing claims costs.

Post-Implementation Business Review

ICBC committed to completing a post-implementation business review (PIBR) to support industry sustainability, while ensuring customers continue to receive cost effective, safe and quality repairs. The objectives were to evaluate the financial health and performance of the Collision Repair and Auto Glass industries, and design a new, repeatable approach to assessing sustainability on an ongoing basis.

The Competition Act does not permit ICBC to negotiate contracts with groups of vendors or associations, which created the need for an independent, third-party firm to support ICBC in the design and execution of the PIBR.

PwC was hired to complete the PIBR on behalf of ICBC to ensure the review was designed and executed independently. The objectives of the review were to:

- Assess the Collision Repair and Auto Glass supplier industry in the province of British Columbia to understand current profitability, performance and service levels.
- Design a new, repeatable approach to assess industry that ensures long term financial sustainability for ICBC, suppliers, and service for customers.

Source: ICBC

With these objectives in mind, findings from the PIBR should allow ICBC to:

- Proactively review supplier compensation and ensure it is informed by industry market drivers.
- Identify if facilities are making investments to deliver improved quality, efficiencies and innovation.
- Assess a fair return for industry, provide value for ICBC and provide efficiencies that support a sustainable supply of services to customers.

Scope

The PIBR was based on full access to ICBC information, staff and certain other materials or data, not including public comment or input. Additional input was solicited from a working group of industry representatives.

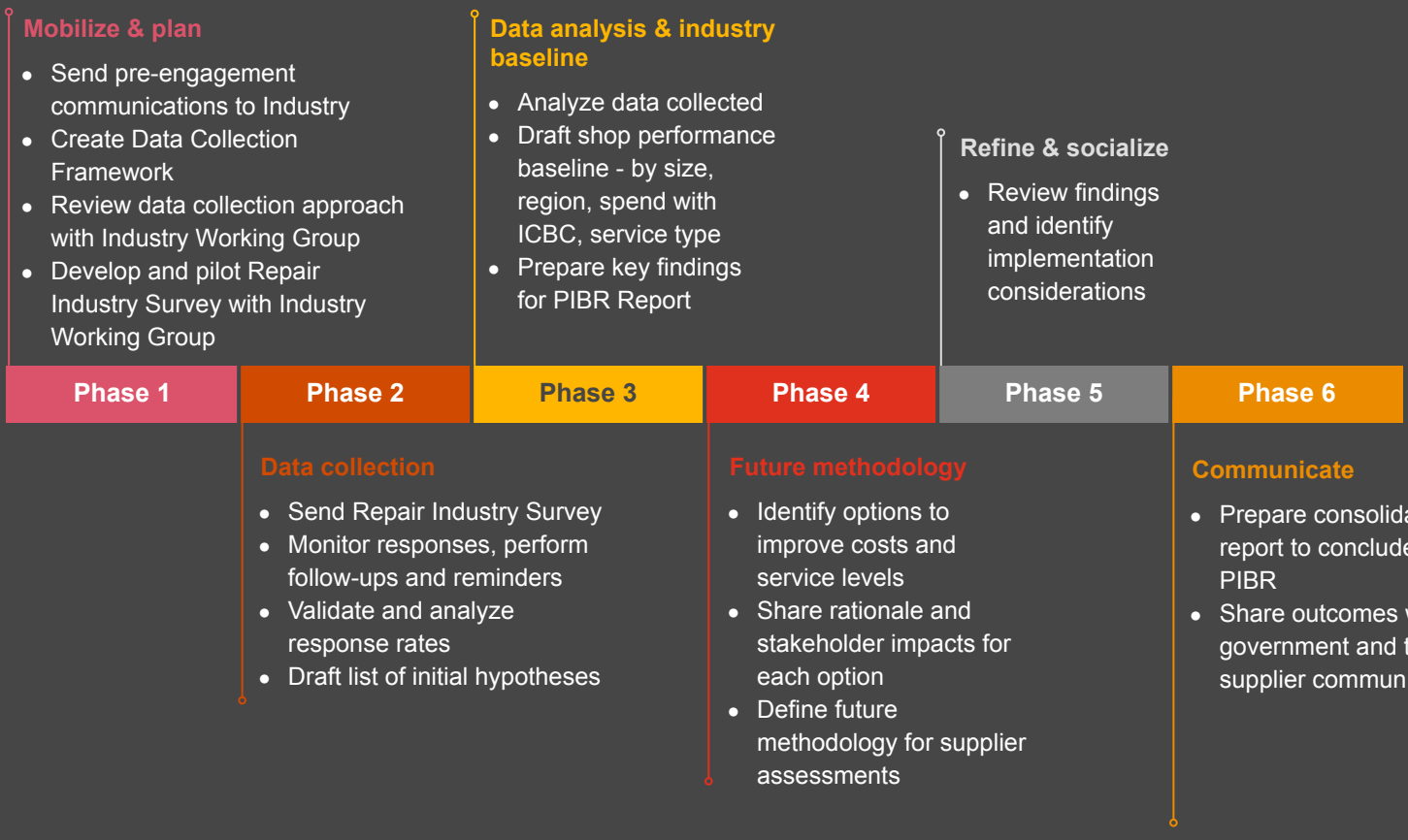
The evaluation is based on comparisons of performance and operating models of other segments in the insurance industry and their approach to material damage vendors, including Canadian provinces with public and private auto insurers.

The scope of the PIBR spans two business segments: Collision Repair and Auto Glass. It does not include other material damage vendors involved in the claims process (e.g. Towing, Heavy Equipment).

Approach and target outcomes

The PIBR was designed to be a comprehensive review of industry health and performance, considering financial and operational performance indicators to generate an informed position on the industry.

PwC adhered to a six-phased approach to assessing the industry, defining future methodology, socializing information gathered, and communicating results to stakeholders:



The approach was developed by PwC and reviewed by ICBC and industry representatives to ensure successful delivery of the following target outcomes.

Engagement from Repair facilities

Continuous involvement from Repair facilities to promote data collection and participation

Comprehensive review

Comprehensive review of supplier performance and industry viability

Repeatable process

Relevant and repeatable model for assessing suppliers

Stakeholder alignment

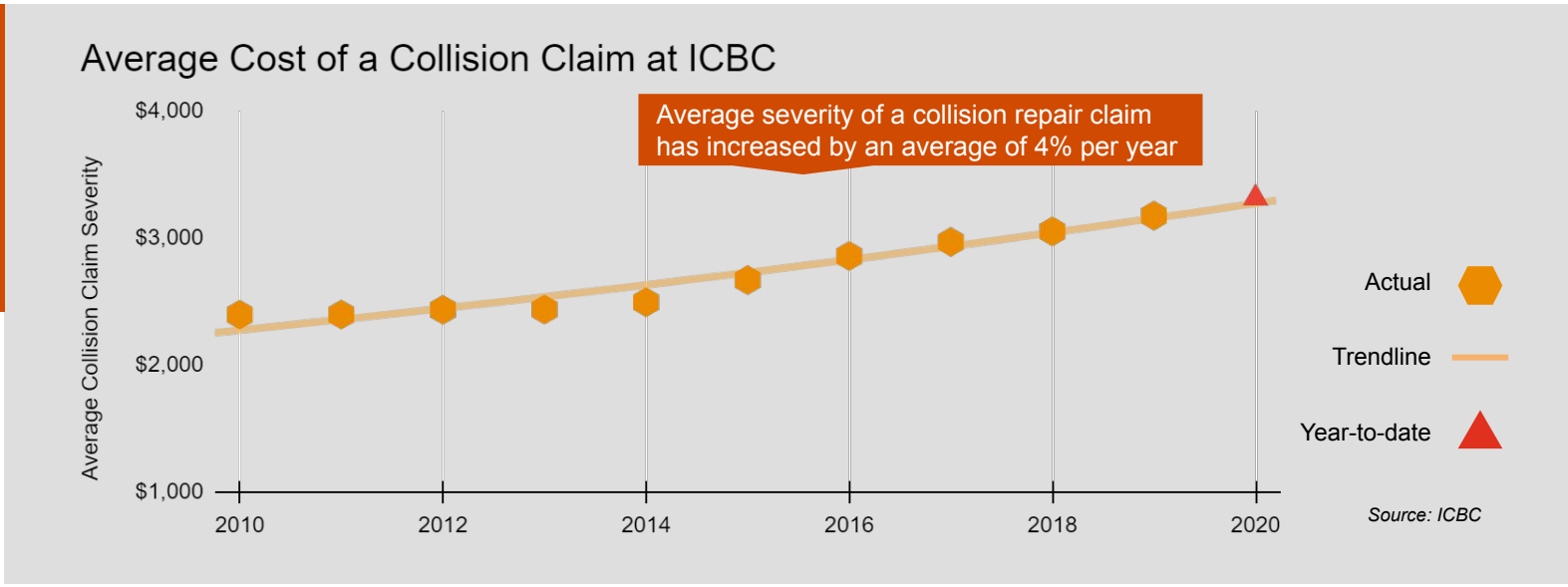
Alignment on supplier viability across internal and external stakeholders

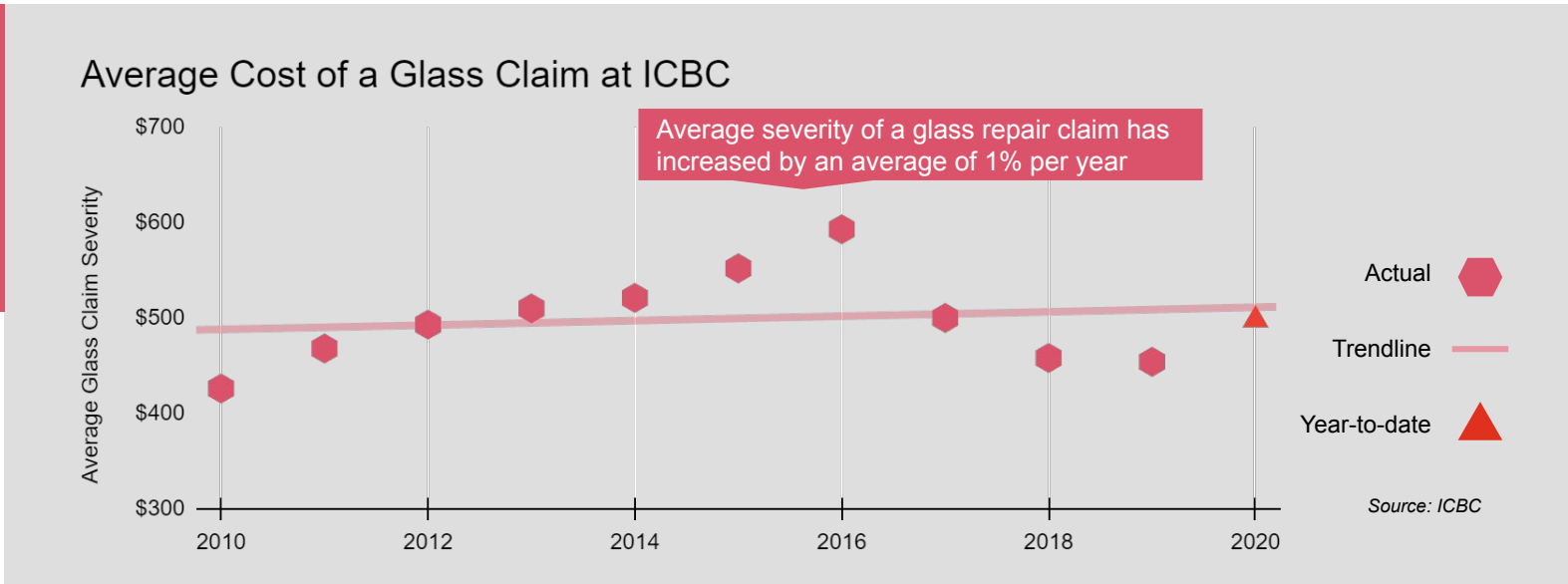
Context

Rising costs of a Collision Repair

ICBC is facing significant cost pressures due to the growing cost of vehicle repairs. ICBC's vehicle damage costs reached $1.5 billion in 2018, including total loss payouts. These costs have increased year over year, largely due to a continued increase in the number of vehicles on the road and growth in vehicle technology, which is making repairs more expensive.

The average cost of a collision repair claim at ICBC increased by 33% over the past ten years, from $2,396 in 2010 to $3,176 in 2019. These costs account for all labour, parts, paint and materials paid by ICBC to Collision Repair facilities performing a vehicle repair claim covered by ICBC. Recent figures from ICBC indicate that this trend continued in 2020, with a projected average collision repair severity of $3,315.





Smaller, varied increases in Glass Repair costs

Aside from collision repair, ICBC also faced sustained cost pressure in glass claims. These costs include average parts, labour, mouldings and other materials (e.g. urethane) for two common jobs: glass repairs and replacements.

The average cost of a glass claim at ICBC increased by 8% over the past ten years, from $426 in 2010 to $498 in 2019. This figure declined between 2016 and 2018 to $454 per claim due ICBC's introduction of a new glass windshield repair program and an increase in the NAGS discount applied to glass parts. However, the cost has grown in recent years, with figures from ICBC reporting a year-to-date increase to $498 per claim in 2020.

ICBC spend on collision and glass services

Vendor management is a common component of Claims departments that enable insurers to proactively manage their costs of services and drive service excellence. ICBC is a significant source of revenue for vendors that provide services associated with automobile insurance claims. This includes vendors associated with Material Damage claims, such as Collision Repair, Auto Glass, Towing and Salvage.

ICBC Material Damage spend is significant, representing a large category of claims vendor spend. A breakdown of the top five categories of Material Damage spend indicates that Collision Repair shops account for the largest material damage cost to ICBC, followed by Auto Glass.

ICBC's network of Collision Repair and Auto Glass vendors is extensive. As of July 2020, Collision, Glass and Dual programs facilities represented over 800 locations across the province.

Material Damage Spend Category (Top 5 and Total)	2019 Annual Spend ($ millions)	Percentage of Total ICBC MD spend
Collision Repair	**$746**	**79%**
Auto Glass	**$94**	**10%**
Towing & Storage	$38	4%
Commercial / Heavy Equipment	$40	4%
Rental	$30	3%
Total Material Damage	**$948**	

Source: ICBC

Number of Collision shops	Number of Dual shops	Number of Glass shops	Total Collision Repair & Auto Glass suppliers
362	147	299	808

Source: ICBC

Modernizing ICBC's Collision & Glass Repairs Programs

ICBC developed and introduced new Collision Repair and Glass Repair programs to manage costs, improve accountability and service provided to policyholders, and support the performance of safe, quality repairs from vendors. Development of these programs alongside a group of industry representatives began in 2018. The new Collision Repair program was implemented in February 2020 and the Glass program was implemented in March 2020.

Shift to Enhanced Care model

In addition to changes to the Collision and Glass Repair process, ICBC is implementing changes to move towards a care-based model. The increasing cost of legal representation, litigation and settlements associated with a full tort system were no longer sustainable for ICBC, and required consistent increases in the basic insurance rates paid by British Columbians.

In April 2019, government and ICBC introduced reforms that remove injury and litigation claims costs from its tort-based system and make the cost of car insurance more affordable. For the first time in almost a decade, ICBC did not increase basic insurance rates in 2020.

ICBC will launch a new Enhanced Care model in May 2021. This model will limit the ability to sue the at-fault driver of a crash, but provide greater care, recovery and wage-loss benefits for as long as they are needed. This type of model already exists in other public auto insurance jurisdictions in Canada, such as Manitoba and Saskatchewan.

ICBC projects that the introduction of Enhanced Care will help make the cost of auto insurance more affordable. Drivers will save approximately 20% or $400, on average, on their Basic and Optional insurance.

Data collection framework

The data collection framework identifies the information gathering methodology for assessing the Collision Repair and Auto Glass industries.

To create the framework, PwC and ICBC defined a problem statement that matched the project's objectives and prepared a list of initial hypotheses in order to confirm the supporting types of data that would be analyzed.

Data categories, attributes, and performance indicators

Data categories

The problem statement and hypotheses were refined to categorize the types of facility data that would be used to assess the viability of the industry. This data included facility revenue, cost, workforce and efficiency metrics.

PwC reviewed and confirmed the data categories in working sessions with ICBC and the Industry Working Group to ensure they would contribute to an accurate, well-balanced representation of the industry. Once finalized, these categories served as the foundational step for the data collection framework, and led to the identification of more detailed attributes and performance indicators that would be used to generate insights.

Four data categories were identified to represent the Collision Repair and Auto Glass industries based on the following problem statement: *How can ICBC assess Collision Repair and Auto Glass suppliers on an ongoing basis to ensure long term financial sustainability and service for British Columbians?*

1 Facility revenues	2 Repair costs	3 Efficiency	4 Quality of service
Revenue generated by facilities in BC and how they compare within BC and other provinces; rates paid by ICBC to facilities on behalf of customers.	**Repair costs** to understand what the key cost drivers are for repair facilities and how they compare within BC and to other provinces.	**Efficiency** to assess variability of operations across BC and how investments in technology have resulted in greater value to the customer.	**Quality of service** to assess the impact of customer service on pricing, and to assess the variability of quality within BC.
How do revenues compare to other provinces? Do revenues vary within BC?	What are the key cost drivers? How do costs compare to other provinces?	Does efficiency vary within BC? Does efficiency inform price? Have investments in technology resulted in improved profitability?	Does quality of service vary within BC? Does quality inform price? *Note: Quality was not reported on due to limited availability of metrics from ICBC and facilities*

As part of assessing suppliers we targeted the collection of various data categories to help produce insights toward the testing of preliminary hypotheses

Revenue (pricing / rates)	**Operating costs**	**Workforce efficiency**	**Cust. satisfaction (QA)**
	Cost of goods sold	**Capital efficiency**	
Profitability		**Operational efficiency**	

Data attributes

The four categories were then broken down into a further level of detail to identify the specific data attributes required for analysis. To structure this, PwC compiled a master list of data attributes and classified their applicability to each facility type (Dual, Collision, Glass). PwC worked with ICBC to summarize data requirements from facilities to perform market segmentation, analyze facility performance through the calculation of a performance indicator, or inform the general structure of this Report. In addition to considering data that would be collected from the supplier industry, PwC also defined which of the data attributes would be provided from ICBC, or from external sources to perform comparisons between BC and other provinces.

General Info

Description: Non-financial information used to describe a facility's position in the market, baseline operations and services provided to customers

All facilities	Collision	Glass
• Location • Number of years in business • Ownership type • Days and hours of operations • Property rented or owned • Complementary services offered • Industry trends impacting business	• OEM Brands certified to service • Name of shop management system • % of calibration services performed in-house • Number of repair orders • Number of repair bays and paint booths	• Name of point of sale software used • % of glass calibration services performed in-house • Type of calibration tool used • Number of work orders

Revenue (Pricing / Rates)

Description: Total facility revenue (including non-ICBC related business), and breakdown of key material damage components relevant to ICBC (e.g. labour, parts, materials)

All facilities	Collision	Glass

• Total shop revenue	• Repair Labour
	  ○ Paint Labour
	  ○ Body/Frame & Mechanical Labour
	• Repair Parts
	  ○ OEM Parts
	  ○ Aftermarket Parts
	  ○ Recycled Parts
	• Repair Paint & Materials
	• Sublets
		• Glass Labour
		• Glass Parts
		  ○ OEM Parts
		  ○ Aftermarket Parts
		• Glass Materials
		• Sublets

Repair Operating Costs

Description: Total facility operating expenses (indirect costs) and breakdown of rent, salaries, training, ATS, and other costs (including non-ICBC related business)

All facilities	Collision	Glass
• Total indirect costs • Management and admin cost • Training cost • Rent and property tax costs • ATS costs • Disposal costs • Total admin / other costs	• N/A	• N/A

Cost of Goods Sold

Description: Total cost of goods sold (direct costs) and breakdown by key material damage components relevant to ICBC (e.g. labour, parts, materials)

All facilities	Collision	Glass
• N/A	• Repair Labour • Repair Parts • Repair Paint & Materials • Sublets	• Glass Labour • Glass Parts • Glass Materials • Sublets

Workforce

Description: Information regarding the staff that support a facility (including non-ICBC business), such as their roles (e.g. technical, administrative and management) and pay structures

All facilities	Collision	Glass
• Number of staff breakdown by job type • Average cost of staff by job type • Number of full vs. part time staff	• Number of flat vs hourly rate technicians	• N/A

Capital costs

Description: Capital costs of equipment (excluding depreciation and amortization) and recent investments in new/ innovative technology

All facilities	Collision	Glass
• Undepreciated capital cost of equipment • Description of recent capital investments in innovative technology	• N/A	• N/A

Operational efficiency		
Description: Initiatives and key metrics used to track operational efficiency, as well as the information on the facility's future outlook and relationship with ICBC		
All facilities	**Collision**	**Glass**
• Initiatives to increase operational efficiency • Future considerations • Quality Assurance	• Initial estimate efficiency • Alternate parts • Repair to replace ratio • Average repair severity • Key to key cycle time/ Average cycle time • Average number of labour hours per day/ Average touch time	• Windshield repair ratio • Average glass claim severity • Failed windshield repair ratio

Performance indicators

PwC organized a list of performance indicators across the four data categories to determine the metrics that would be used to create a baseline for the Collision Repair and Auto Glass industry. To create this list, PwC used a combination of industry agnostic financial, workforce and efficiency metrics and contextual measures of success in these industries. Industry agnostic information was informed by PwC best practices for measuring financial performance, whereas contextual metrics were identified through discussions with the Industry Working Group and ICBC. PwC also considered the Key Performance Indicators (KPIs) that are currently used by ICBC to assess performance and tier suppliers. This combination contributed to a list of contextual, financial and non-financial performance indicators that were used to perform an objective analysis of both industries.

Similar to the data attributes, PwC identified the corresponding facility type for each performance indicator (Dual, Collision, Glass). These baseline metrics were calculated and compared against relevant national and provincial data points to draw insights on the financial health, performance and sustainability of the industries.

Data collection

Guiding principles

PwC recognized the importance of striking a balance between a detailed assessment and the complexity and effort associated with gathering the required data. Therefore, a set of guiding principles were developed to review the data sources and determine which attributes were required from facilities in BC.

The following guiding principles were established with ICBC and the Industry Working Group in advance of any data collection activities:

1. **Focus on comparable benchmarking**
   Include attributes that are readily available to ICBC, PwC and / or Industry benchmarks for relevant comparative analysis.

2. **Limit upfront complexity in the data collection process**
   Prioritize attributes that are easy to collect/report on by suppliers in order to minimize complexity and effort for facilities. Reducing the amount of effort was a key consideration to mitigate the risk of low responses and survey drop out.

3. **Collect "must haves" to gauge industry profitability**
   Balance 'must have' vs. 'nice to have' attributes - collecting only what is needed to generate a clear picture of industry performance (e.g. margins, SG&A expenses, labour/workforce efficiency).

4. **Consider sustainability of ongoing collection**
   Confirm the feasibility of collecting the attributes on an ongoing basis in order to support ICBC's execution of a new supplier assessment methodology in the future.

Data sources

Once data attributes and performance indicators were identified and defined, PwC determined their respective sources. Three sources of data were determined to be relevant for this assessment:

1. **Facility data** - individual facility revenue, cost, workforce and efficiency information. This information was not publically or readily available and required reporting from each Collision Repair or Auto Glass facility.

   Format: *Confidential survey sent by PwC to BC facilities in ICBC Collision Repair and/or Glass Repair programs*

2. **ICBC data** - claims financial information (e.g. volume and revenue) and non-financial information (e.g. location, operating hours) for each facility. This information was readily available due to a data collection exercise ICBC performed earlier this year as part of the introduction of new Collision Repair and Auto Glass supplier programs.

   Format: *Datasets provided by ICBC to PwC*

3. **Third party data** - industry benchmark information obtained by PwC through a variety of third parties, including public and private sources. A proprietary dataset was constructed to summarize the information provided by all third parties and to generate relevant benchmarks to assess the market.

   Format: *Interviews with suppliers and insurers, PwC datasets, industry reports and surveys designed by PwC, publicly available reports (e.g. IBIS World, Mitchell)*

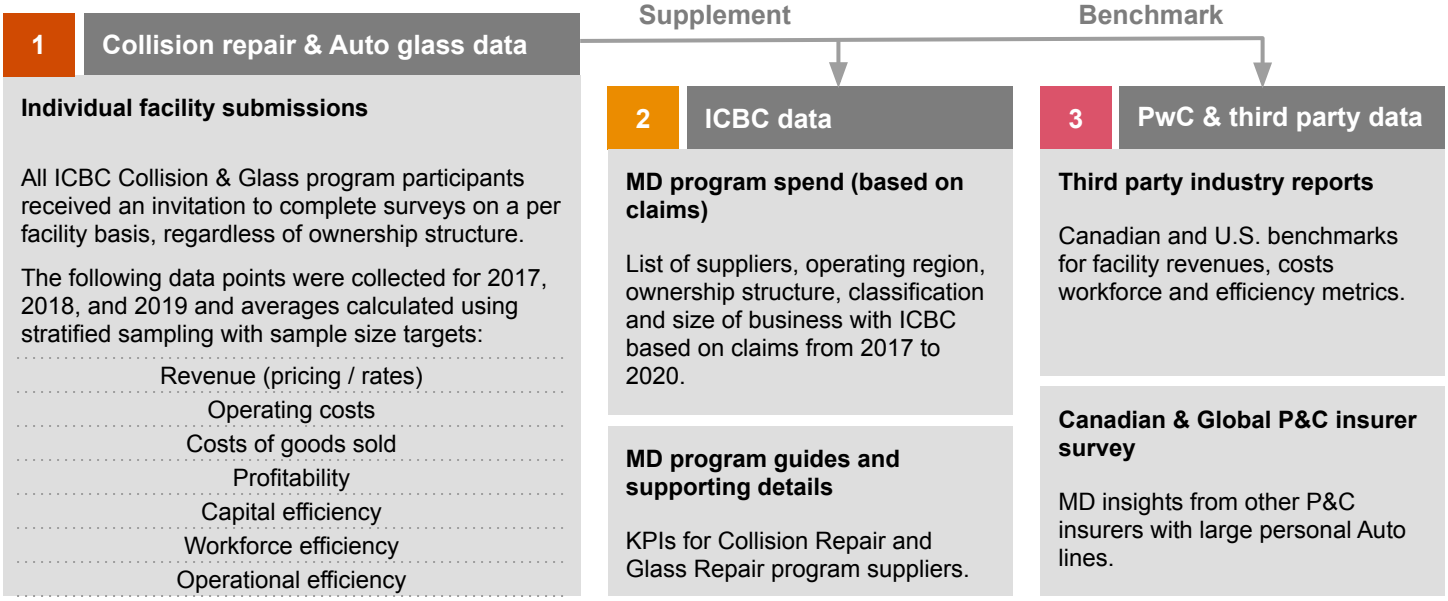
The table below summarizes the third party data sources used for this report:

Source	Description	Information obtained
Statistics Canada	Public information available on the Statistics Canada database, specific to the North American Industry Classification System (NAICS) codes relevant to this assessment. PwC referenced national and provincial information available for two codes: *NAICS code 811121* - automotive body, paint and interior repair and maintenance *NAICS code 811122* - automotive glass replacement	• Revenue • Repair Operating Costs • Cost of Goods Sold
mPower by Mitchell	Public information available on mPower by Mitchell, a widely used tool by facilities and insurers across Canada, including ICBC. These public reports provided material damage claims costs in Canada and the United States. PwC referenced national and provincial information related to parts, labour and materials, efficiency metrics, as well as details on the latest industry trends.	• Revenue • Cost of Goods Sold • Operational Efficiency
Automotive Industries Association of Canada	Member-only association that releases an annual Repair Industry Yearbook specific to Canadian Collision Repair. PwC referenced additional national and provincial information related to parts, labour and materials.	• Revenue • Cost of Goods Sold • Operational Efficiency
IBIS World	Member-only database with detailed reports relevant to Canadian industries. PwC referenced national and provincial information available from two reports: 81112CA - Car Body facilities in Canada - 2019 8112 - Car Body facilities in the US - 2019	• Revenue • Repair Operating Costs • Workforce Efficiency

Source	Description	Information obtained
Romans Group	Private information available from Romans Group, a third party research firm with specific experience in the Collision Repair market. PwC used the Romans Group report to develop a perspective on the Collision Repair market size, growth and performance, and future trends.	• Market Overview • Revenue • Industry Trends
Multi Shop Owners (MSOs) & Data Aggregators	Private information available from Collision Repair and Auto Glass facilities or data aggregators with a large footprint across Canada. PwC used this information to calculate anonymized aggregated provincial and national benchmarks.	• Revenue • Repair Operation Costs • Cost of Goods Sold • Operational Efficiency
Canadian Insurer Survey & Interviews	Private information from Canadian auto insurers gathered through a survey and interviews with Claims and Vendor Management representatives. PwC used this information to calculate aggregated provincial and national benchmarks, and to assess differences between public and private insurance markets.	• Revenue • Repair Operation Costs • Cost of Goods Sold • Workforce Efficiency • Capital Efficiency • Operational Efficiency
Other Proprietary Data	Private information gathered from relationships/engagements with Canadian and US insurers and Collision Repair and Auto Glass suppliers. PwC also used this information to validate the aggregated provincial and national benchmarks.	• Revenue • Repair Operation Costs • Cost of Goods Sold • Workforce Efficiency

Data from each source (Facility, ICBC, Third party) was a key input into the analysis of the Collision Repair and Auto Glass industries, each serving a different objective. Facility data obtained through the Repair Industry Survey served as the baseline for data collection and calculation of the performance indicators. Their individual submissions were the primary source of data. ICBC data was then used to supplement responses, and provide guidance on current performance indicators. Finally, PwC and third party data was collected to generate insights and perform benchmarking of the performance indicators at a national and provincial level.

A summary of the relationship between these three data sources has been provided below:



Repair Industry Survey

Purpose

Quality data was essential to delivering a relevant industry assessment. PwC determined that financial, workforce and efficiency data collected directly from the facilities through a survey would support an accurate representation of the sustainability of the Collision Repair and Auto Glass industries.

All responses to the Repair Industry Survey were kept strictly confidential as PwC understood the importance of protecting sensitive business data. The survey was administered entirely by PwC, and individual facility responses were not shared with ICBC, IWG members or other third parties in order to maintain independence and adhere to the Competition Act.

Design plan

In accordance with the data collection guiding principles, PwC developed a survey design plan to collect facility data.

PwC designed the surveys to accommodate each facility type, matching the classifications used in ICBC supplier programs. This led to the creation of three separate versions of the Repair Industry Survey:

01 Collision Survey

Facility is an ICBC Collision Repair program participant

02 Glass Survey

Facility is an ICBC Glass Repair program participant

03 Dual Survey

Facility is a ICBC Collision Repair program and Glass Repair program participant

The design activities included:

Framing survey questions - PwC reviewed the data attributes with ICBC and the Industry Working Group to articulate accurate terminology and simple language, reducing potential response bias or confusion. Each survey contained a set of questions applicable to all facilities, and an additional set of questions tailored to their type. Breakout sessions specific for Collision and Glass Repair facilities were conducted to validate the framing and relevancy of these questions.

Building the survey flow - PwC designed workflows for the survey, and divided the questions into data categories to optimize the user experience. The categories and sequencing of questions were discussed with ICBC and the Industry Working Group.

Configuring question response mechanisms - PwC established a response mechanism for each question individually, which led to the configuration of rules and validation checks to increase the survey's simplicity and reduce potential data quality risks. Each of these mechanisms were reviewed with the Industry Working Group.

Testing & validation - PwC built copies of the survey and tested it with representatives from the Industry Working Group to gather feedback and identify areas of confusion, repetition, or potential for respondent drop-out before finalizing and distributing to all Collision Repair and Auto Glass facilities.

Developing supporting materials - PwC created a comprehensive Survey Help Guide and Data Workbook to help facilities navigate the survey platform, understand the questions, and organize their data to effectively and accurately answer the questions.

Survey launch and response monitoring

PwC launched the Repair Industry Survey to all ICBC Collision Repair and Auto Glass providers on Monday, July 27th. Facilities were provided with four weeks to respond, including a one week extension. In recognition of the effort required to complete the Repair Industry Survey, ICBC provided a one-time financial contribution to facilities who were able to meet the deadline. Facilities were asked to complete the survey on a per location basis, in order to maintain a consistent, fair, and equitable approach to data collection.

During the time the survey was available, PwC performed several activities to review response rates and share preliminary results with ICBC and the Industry Working Group. A series of progressively impactful mitigation tactics were developed to increase participation rates.

PwC deployed the following mitigation tactics while the survey was open to the industry:

- **Deadline extension** - the deadline was extended by one week to provide facilities with additional time
- **Reminder emails** - emails sent weekly to facilities who had not responded to encourage completion
- **Targeted outreach** - emails sent weekly to facilities who had responded to the survey, but did not complete a large proportion (50%) of the questions
- **Regional outreach** - emails sent to facilities who had not responded and belonged to specific regional segments that were underrepresented
- **Individual follow-ups** - emails to facilities who had not responded before the final deadline

ICBC also deployed the following mitigation tactics in parallel:

- **Data administration contribution** - offered a one-time contribution to reimburse facilities for their data collection efforts
- **Reminder emails** - email sent from the CEO, to reinforce the need for participation and importance of good quality data to conduct the review
- **Regional outreach** - phone calls by Supplier Account Representatives to facilities in regional segments that were underrepresented

Industry Working Group (IWG)

ICBC formed a working group of Collision, Glass and Dual suppliers focused on the Post Implementation Business Review (PIBR) with the goal of ensuring the review was designed and executed with the industry in mind. This group, referred to as the Industry Working Group (IWG) was consulted by PwC throughout all critical project milestones.

The Industry Working Group had regional representation and included members from Banner/Franchises, MSOs, Independents and Dealerships. ICBC selected the membership of the IWG based on the current representation of the industry, facilities' familiarity with the consultation process and ability to participate based on project timelines. As a result, the majority of members were volunteers who also held roles on existing ICBC industry liaison committees. Additional representatives of the Glass industry were later included in order to solicit broader feedback from this group. A full breakdown of the IWG can be found in *Appendix 2 - Industry Working Group.*

The IWG represented industry in the following roles and responsibilities:

- Attend kickoff meeting to confirm project scope, objectives and PwC's role for the PIBR
- Review relevance and availability of the attributes in the data collection framework, including guiding principles
- Support the development and testing of the Repair Industry Survey
- Participate in follow-up sessions specific to survey questions for Auto Glass or Collision Repair facilities
- Provide feedback on recommendations for future supplier methodology

The IWG participated in the following meetings with PwC and ICBC:

Phase 2 July 1 - July 31	Phase 3 August 1 - August 31	Phase 4 Sept 1 - Sept 30	Phase 5 Sept 1 - Sept 30	Phase 5/6 December/ January 2021
Supplier Data Request & Survey Feedback on the design of the Repair Industry Survey and validation of the availability of the information requested, including separate sessions with Glass and Collision members.	**Response Check-ins** Weekly updates on Repair Industry Survey progress, including anonymized participation rates by region and survey section.	**Initial Results & Findings** Initial financial performance observations from survey results, discussion to validate findings and discuss limitation in Glass data received.	**Future Methodology Considerations** Debrief the assessment and discussion on considerations for the structure of PIBR and data collection to develop a sustainable approach to future reviews	**Final Report Readout** Introduction of report and findings to capture feedback from IWG members prior to the release to the broader industry and other stakeholders.

Data analysis

Final segmentation (breakdown by region, facility size, etc.)

In order to obtain responses representing the diverse range of facilities across the BC industries, three segments were defined and used to measure target response rates. These segments, referred to as “strata”, were defined separately for each facility type (Collision, Dual, Glass). Strata were then updated once facility responses were gathered and the survey closed, in order to present an accurate picture of the industry and the types of facilities responding across ownership type, revenue size, and region.

	Collision	Glass	Dual
Ownership structure	Independent	Independent	Independent
	Small MSO: ICBC Spend <$8M in 2019	Banner/Franchise/MSO	Small MSO: ICBC Spend <$8M in 2019
	Large MSO: ICBC Spend >$8M in 2019	Dealership	Large MSO: ICBC Spend >$8M in 2019
	Banner/Franchise		Banner/Franchise
	Dealership		Dealership
Size (based on total revenue reported in Survey)	Less than $1.5M reported revenue	Less than $500,000 reported revenue	Less than $1.5M reported revenue
	$1.5-$2.0M reported revenue	More than $500,000 reported revenue	$1.5-$2.0M reported revenue
	$2.0-$2.5M reported revenue		$2.0-$2.5 reported revenue
	More than $2.5M reported revenue		More than $2.5M reported revenue
Region	Lower Mainland		
	Northern Interior		
	Southern Interior		
	Vancouver Island		

Methodology for Sampling - Industry representation

A target response rate was defined to measure responses during the survey period and to proactively pursue mitigation activities to encourage survey participation and completion. A resulting target completion rate of 32% was calculated as an estimate with a 95% confidence level and 5% margin of error.

Methodology for Data Quality, Validation Checks and Statistical Insights Generation

1 Rapid profiling and clean-up of incorrect values entered

Reviewed individual shop responses on a per question basis to identify and address anomalies.

Removed 0 values where appropriate to ensure they did not skew calculations.

2 Validation checks to test submissions

Performed testing on shop responses to confirm logical relationships between data attributes and flagged issues.

(e.g. Total OPEX = sum of all OPEX components)

3 Targeted reach-outs to shops

Reached out to shops with submissions that contained anomalies that could not be logically resolved.

Provided shops additional time to correct their submission.

4 Testing for statistical significance

Drafted comprehensive list of hypotheses and conducted analysis to test statistical significance.

Conducted regression and correlation analysis between attributes provided.

Rapid profiling and cleanup of incorrect values entered

Upon closure of the survey, response data was downloaded and initial profile exercises were completed. Tools leveraged as part of these exercises included Alteryx, Python and the R statistical environment.

Initial profile activities included:

Completion

Checking for completeness of data attributes entailed identifying whether a value was provided in a particular field, or whether a respondent stated no data was available. Situations for which a respondent stated no data was available for a particular field but provided a response (e.g. 0) were also checked. In such situations, improperly provided values of 0 were removed. This was checked across all numeric fields.

Numeric Validation

A check on the validity of values for numeric questions was performed. The minimum, maximum and average values for each numeric question were assessed to identify response issues such as numeric errors (e.g. accidentally misplaced decimal places to show 10.500 instead of 10500.00) and potential outliers. Furthermore, scatter plots and box and whisker plots were built from the responses to identify outliers.

Text Validation

Text based responses such as those questions requesting commentary from respondents were also scanned. A simplistic approach was taken in cleaning up text-based responses including standardizing the case of letters and removing responses for which no value was provided (e.g. when “none” or “n/a” was provided as a response).

Validation checks to test submissions

After profiling and cleansing of the survey data was completed, activities pertaining to validation checks were performed to check for the presence of logical relationships between various data attributes.

PwC understood that facilities may have an interest in understating their profitability, which posed a risk to the quality of the data provided. While some of this risk cannot be measured or avoided, a comprehensive list of checks were performed to circumvent misleading information and eliminate bias. These checks included validation of revenue and expense breakdowns against totals, comparisons to national benchmarks and conversations with industry representatives.

As an example, a validation check was performed to check whether total operating expense figures amounted to the summation of all operating related expenses. A passing grade was allotted to responses within certain tolerances due to rounding of values. Anomalies that exceeded tolerance were flagged for follow up with shops, and removed from the analysis if they could not be reconciled.

A breakdown of the validation checks performed for Collision and Dual facilities is contained in *Appendix 2 - Validation Checks.*

Targeted reach outs to shops

A concerted and targeted effort was made by PwC to contact facilities via email and requesting clarity on certain responses provided. This included requesting shops to provide input where a response appeared as an outlier relative to the average, or where validation checks failed. This exercise was conducted iteratively over the span of three weeks and helped improve the total quality of responses.

Testing for statistical significance

After targeted communications to facilities were completed and response data was refined based on confirmed and clarified figures, various statistical tests were performed to generate insights. These tests were conducted on survey response values with regional weighting applied to ensure regions were not over- or under-represented.

For data points showing BC averages, data on confidence intervals, and correlation tests and tests of differences between regions, the weights were based on regional strata. For testing differences between ownership types, the weights were based on ownership type strata.

Testing differences between strata and years

To determine whether there were any significant differences in the average of responses across strata and across years, one-way Analysis of Variance (ANOVA) calculations were performed in R. The Scheffe post-hoc test was applied to identify pairs of strata or years that had statistically significant differences and associated p-values with indicative higher / lower values. Note that a p-value of 0.05 was used as the standard threshold for statistical significance.

Statistically significant differences between 2017 and 2019 were identified for the profitability of Collision Repair facilities. While no other differences were found to be statistically significant, the differences between weighted average values were reported.

24 and 57 ANOVA tests were performed for testing differences between strata and years, respectively.

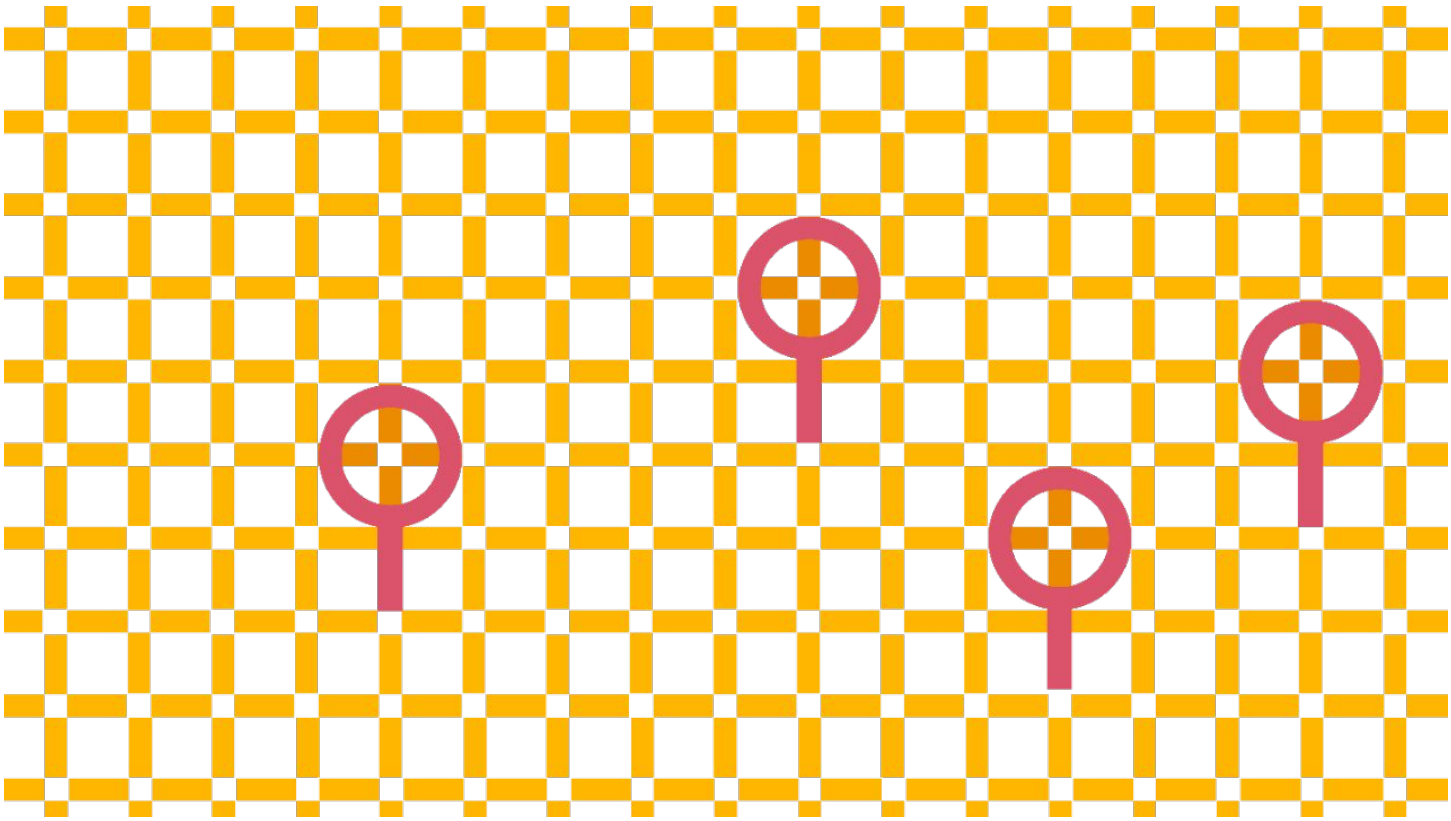
Testing correlations between metrics

Correlation tests were performed in R to generate correlation coefficients identifying if pairs of metrics trended together or in opposite directions. This helped to determine the presence of any significant positive or negative associations between pairs of metrics existed.

32 correlation tests were performed, of which the results of 6 tests are presented in the Appendix.

95% Confidence Intervals

Supplementing insights, confidence intervals were calculated using a 95% confidence level threshold. This confidence interval defines the range expected to contain the population average for all facilities, with 95% confidence. Values were weighted according to the regional segmentation provided by ICBC. Confidence intervals were calculated in R based on stratified sampling with a finite population correction factor.



Market overview: Collision Repair

Collision Repair in Canada

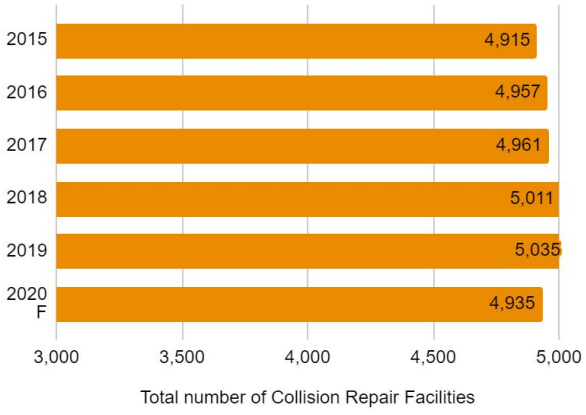
Steady growth in the number of facilities

Canadian Collision Repair facilities provide a range of services to customers, and drive revenues driven from body repair and painting services. Many facilities also provide glass repair and replacement, upholstery and detailing services.

There are four common types of facilities that exist in the Canadian market - Banner/Franchise, Multi-Shop Owner (MSO), Independent and Dealerships. While each of these facilities provide similar services, their ownership structures differ, often creating differences in their back-end operations and workforce.

Type	Description
Multi-Shop Operator (MSO)	Collision Repair facility that operates more than one location under the same ownership structure.
Banner/ Franchise	Network of Collision Repair facilities, including corporate and privately-held franchise locations that work together under a single brand in the market.
Independent	Collision Repair facility that operates a single location and is independently owned.
Dealership	Collision Repair facilities that operate out of the same location as a car dealership, either independently or corporate owned.

Canadian Collision Repair Facilities



The number of Collision Repair facilities grew steadily at 1% over the past 5 years, with just over 5,000 across Canada in 2019.

This count includes all services categorized as body repair and paint services according to Statistics Canada, which utilizes the North American Industry Classification System (NAICS). Data was not yet available for 2020, however, PwC projects the number of facilities will decline due to market pressures and the uncertainty surrounding COVID-19.

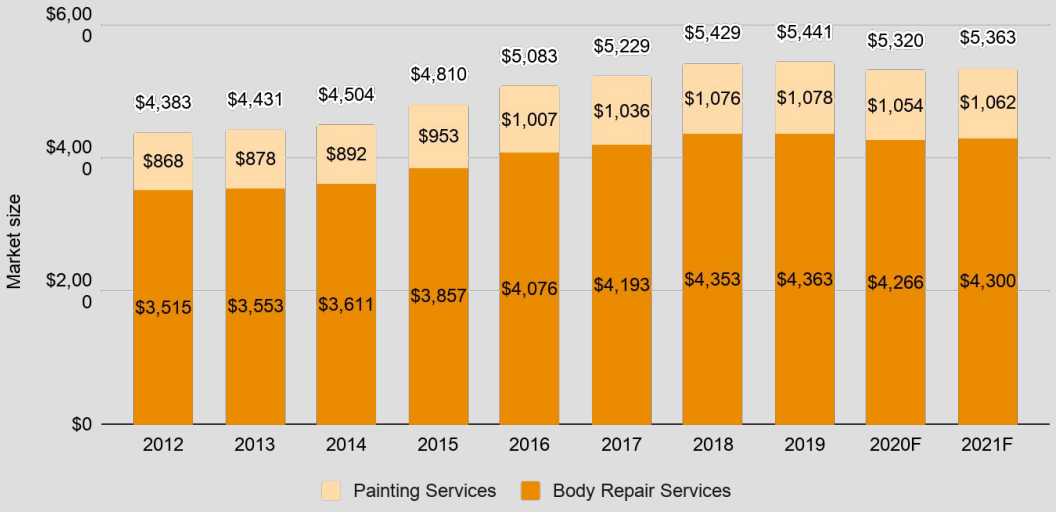
Source: IBIS World, Automotive Industries Association of Canada

Overall market growth is projected to continue at a slower pace

The Canadian Collision Repair market grew by approximately 2% per year since 2012 to a total market size of roughly $4.3 billion.

Despite a short term market contraction of -2% in 2020 due to economic impacts of the COVID-19 pandemic, growth is expected to continue. Following 2020, growth will be slow closer to the pace of inflation over the next 5 years, at an average growth rate of 1%.

Canadian Collision Repair Market Size ($ millions)

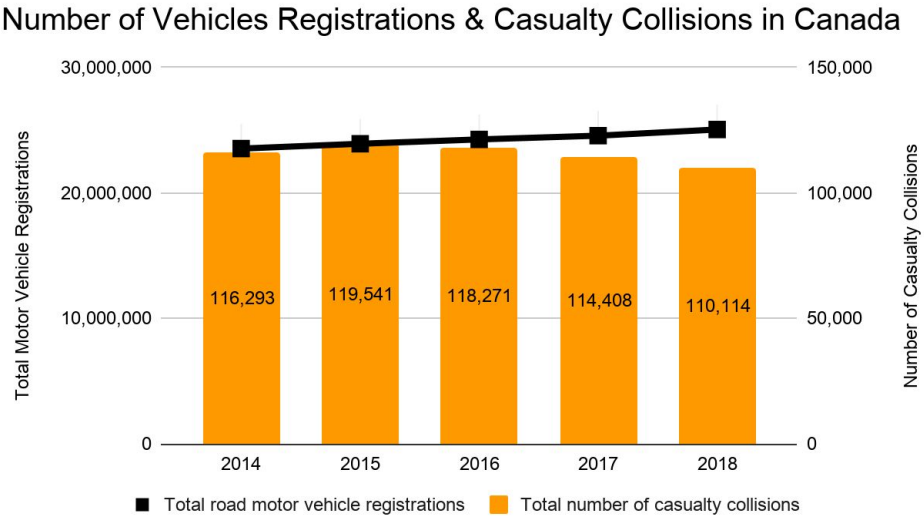


Source: IBIS World, Statistics Canada. PwC Analysis

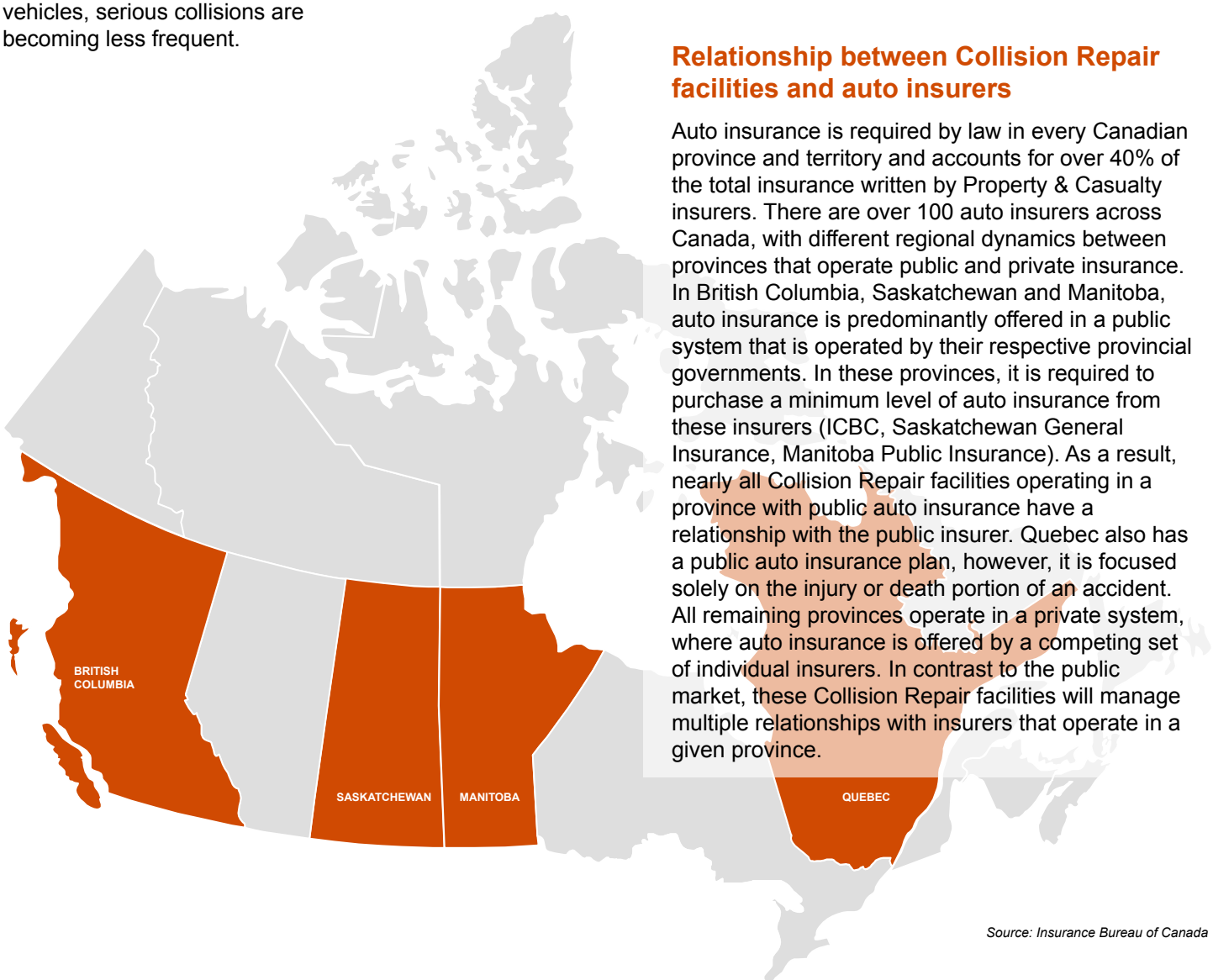
Declining number of severe collisions despite more vehicles

A major contributor to the revenue earned by Collision Repair facilities is the number of jobs performed. In Canada, the Ministry of Transportation reports the number of registered motor vehicles on the road and the annual number of casualty collisions. The number of casualty collisions is used to show trends in the overall number of vehicle crashes.

The total number of motor vehicle registrations steadily increased with the overall Canadian population at a growth rate of 1.3% over the past five years. Over the same time period, casualty collisions, which result in either a fatal or personal injury, decreased by an average of 1.5%. This means that despite the increase in number of vehicles, serious collisions are becoming less frequent.



Source:Statistics Canada



Relationship between Collision Repair facilities and auto insurers

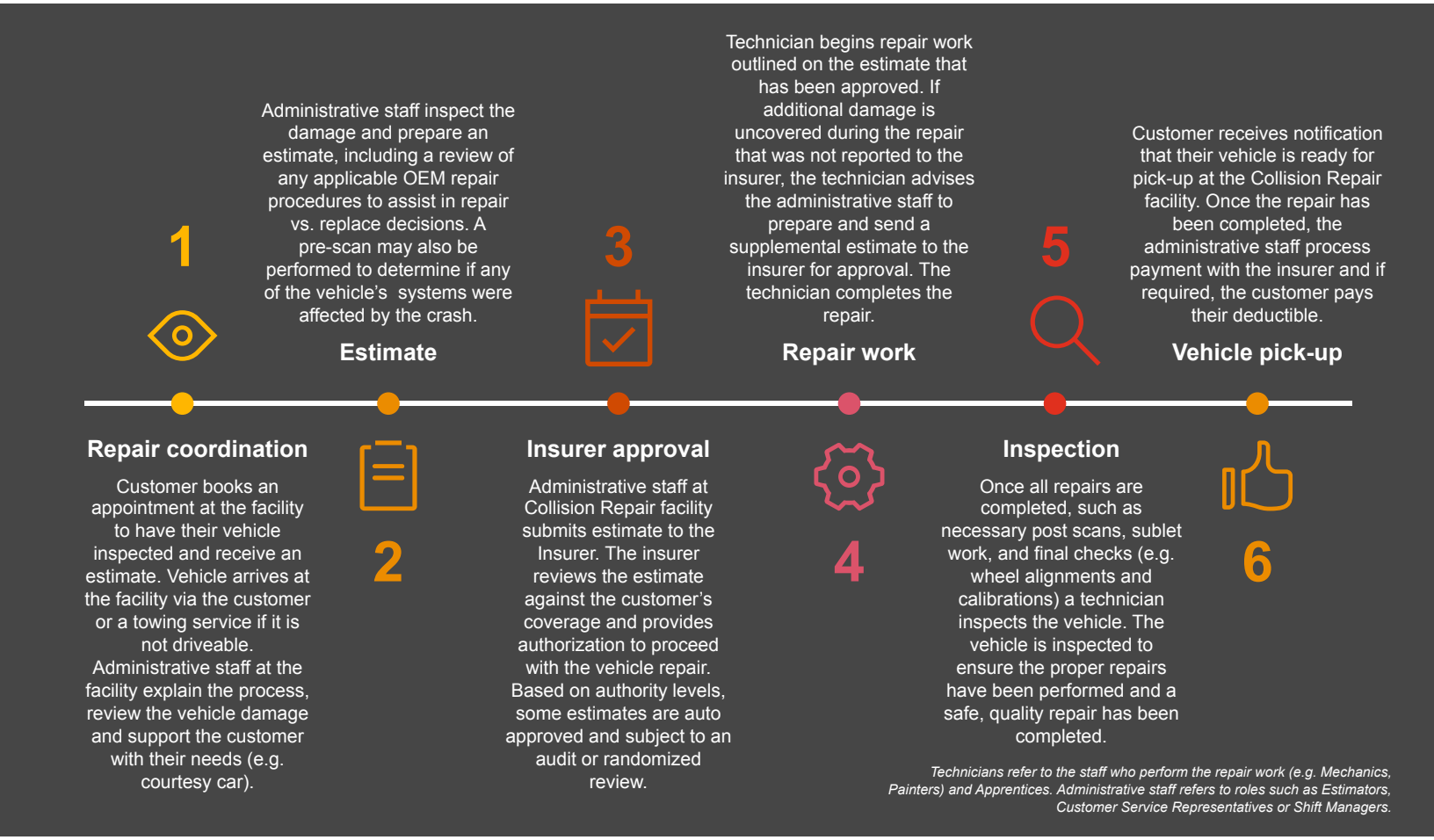
Auto insurance is required by law in every Canadian province and territory and accounts for over 40% of the total insurance written by Property & Casualty insurers. There are over 100 auto insurers across Canada, with different regional dynamics between provinces that operate public and private insurance. In British Columbia, Saskatchewan and Manitoba, auto insurance is predominantly offered in a public system that is operated by their respective provincial governments. In these provinces, it is required to purchase a minimum level of auto insurance from these insurers (ICBC, Saskatchewan General Insurance, Manitoba Public Insurance). As a result, nearly all Collision Repair facilities operating in a province with public auto insurance have a relationship with the public insurer. Quebec also has a public auto insurance plan, however, it is focused solely on the injury or death portion of an accident. All remaining provinces operate in a private system, where auto insurance is offered by a competing set of individual insurers. In contrast to the public market, these Collision Repair facilities will manage multiple relationships with insurers that operate in a given province.

Source: Insurance Bureau of Canada

Collision Repair process in Canada

Immediately following a collision, a customer is instructed to contact their insurance company to report the incident. During this initial report, referred to as First Notice of Loss (FNOL), the customer will receive guidance from an Adjuster at the insurance company on the repair process. They will also receive information on the components of their claim, including accident benefits if they are injured. Depending on the level of damage to the vehicle, the customer will receive guidance to attend a Collision Repair facility for repairs or that the vehicle damage requires further investigation to determine whether it is a repair or total loss. If the total cost of repair exceeds the cash value of the vehicle, the vehicle will not be repaired and deemed to be a total loss.

If the vehicle is deemed to be repairable, Collision Repair facilities work with both the auto insurer and customer in a series of steps that typically include:



Technicians refer to the staff who perform the repair work (e.g. Mechanics, Painters) and Apprentices. Administrative staff refers to roles such as Estimators, Customer Service Representatives or Shift Managers.

Canadian Collision Repair services and the impact to auto insurers

Collision Repair facilities perform three common types of repairs -SMART Repair, Minor Accident Damage (MAD) and Major Collision Repair. SMART Repair is a term used to describe the simple repairs that do not require major body, frame or mechanical labour, whereas Minor Accident Damage and Major Repair bring additional complexity. Minor Accident Damage can be repaired quickly with standard processes. In contrast, Major Repairs occur when significant damage has occurred to the vehicle, often requiring advanced equipment to perform the repair. The price associated with each of these repairs varies, with Minor Accident Damage (MAD) and Major Repairs contributing to the largest revenue for a Collision Repair facility and cost to an auto insurer.

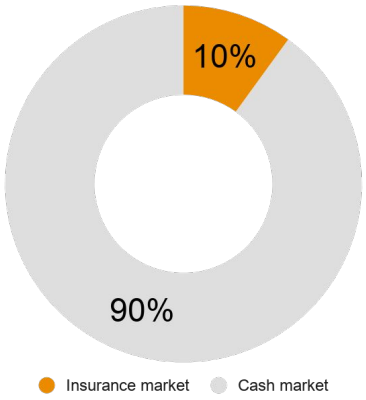
	SMART Repair	Minor Repair	Major Repair
Services provided	Ding and scratch repairs Paintless dent repairs	Non-structural repairs to vehicle frame (e.g. bumpers, fenders)	Structural repairs to vehicle frame (e.g. panel replacement)
Typical payment type	Cash	Cash & Insurance	Insurance

Source: PwC Analysis

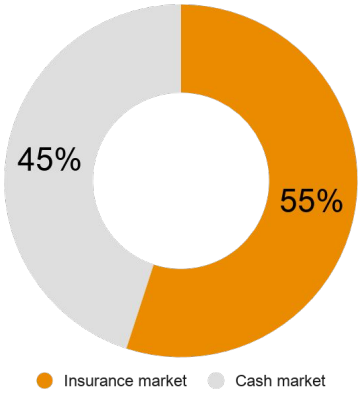
Depending on the cost of the repair, the customer has the choice to proceed with the repair and submit to their insurer or pay in cash to avoid potential increases in their insurance premiums if they were found to be at fault. Repairs completed outside the insurer are deemed to be performed in a “cash market.” Aside from those who do not want to submit a claim through their insurer, the cash market contains other types of customers, such as businesses who provide fleet services.

The distribution of the cash versus insurance market depends on the type of repair, with the more severe handled by auto insurers. The insurance market covers 55% of all Minor Accident Damage Repair and 75% of Major Collision Repair, making insurers a significant contributor to the profitability of Collision Repair facilities.

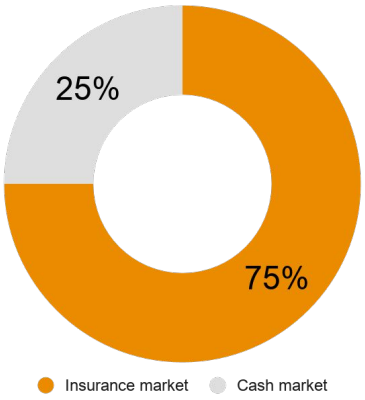
SMART Repair - Insurance vs. Cash Market



Minor Accident Damage Repair - Insurance vs. Cash Market



Major Collision Repair - Insurance vs. Cash Market

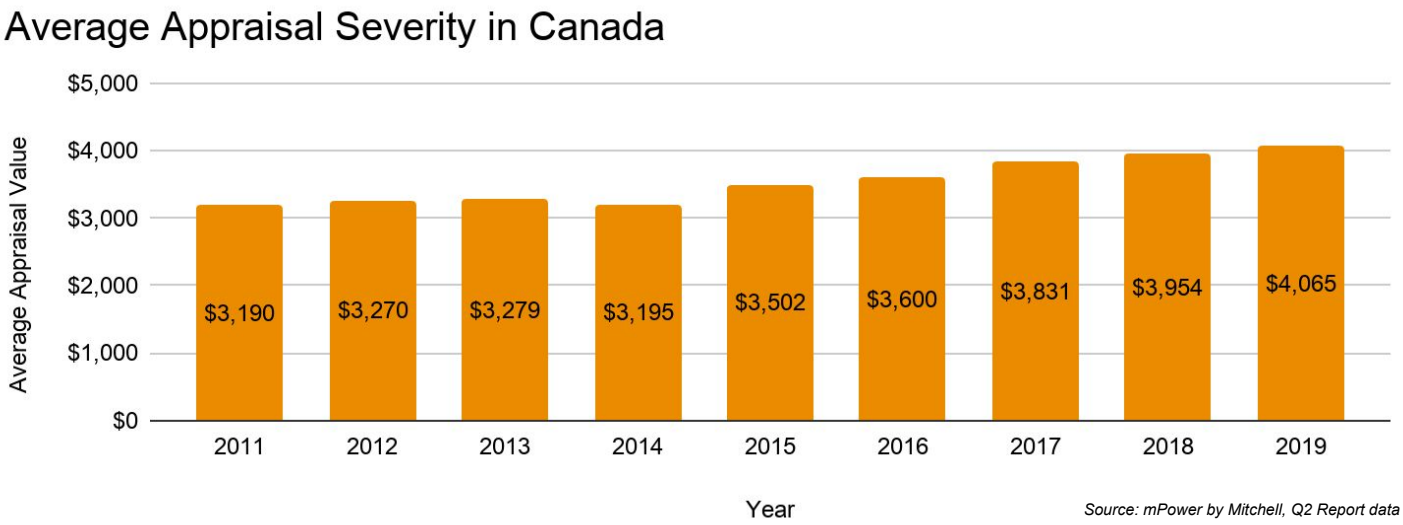


Source: PwC Analysis

Vehicles are becoming more expensive to repair

Appraisal value, otherwise known as the cost of repairs submitted to insurance companies through a claim, has grown over the past 10 years. According to Mitchell International, average vehicle appraisal severity increased by a year over year average of 3% since 2010, and surpassed $4,000 in 2019. Rising severity can be attributed to growth in vehicle repair costs, which are driven by increases in the labour, parts and material costs associated with a job.

Vehicle complexity has evolved rapidly over the past decade as the number of hardware and software components, such as electronic control units (ECUs), continue to rise. According to Massachusetts Institute of Technology (MIT), many cars have roughly one hundred million lines of code. This means that there are now more lines of code in a single vehicle than a Boeing passenger plane, or the first rocket to the moon. These repair complexities have caused changes in the processes and materials Collision Repair facilities use to perform a job, which result in a higher cost. At the same time, OEM (Original Equipment Manufacturer) repair procedures are becoming more common, placing additional demands on Collision Repair facilities to perform a repair according to the standards prescribed by vehicle manufacturer.



Source: mPower by Mitchell, Q2 Report data

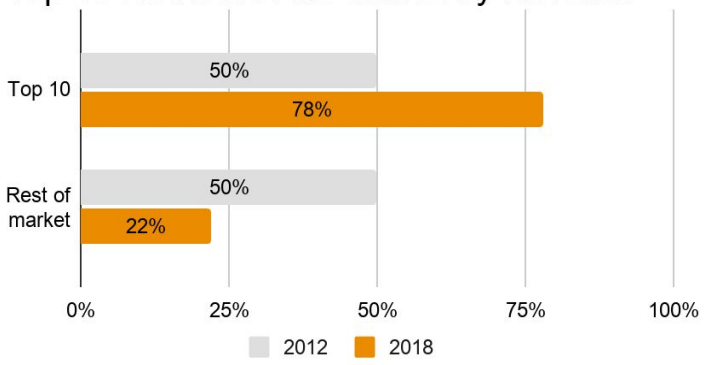
Heavy consolidation driven by top competitors

The Canadian Collision Repair industry continues to consolidate, with the top 10 Canadian Collision competitors increasing their scale over the past five years. Since 2012, the market share held by Canada's largest 10 companies has grown by over 50%, reaching 78%. This same group operates roughly 30% of the Collision Repair industry's facilities, which have also nearly doubled in the same time period. Consolidation is expected to continue as large Banner/ Franchise networks and MSOs gain more control of the market through acquisition of independents and receive support from private equity and investment firms.

Over half of the largest 10 companies are Banner/ Franchise networks, who have amassed significant scale in the last five years. The following is a breakdown of the largest 10 competitors across all ownership types in the industry, according to a Romans Group report published in 2018.

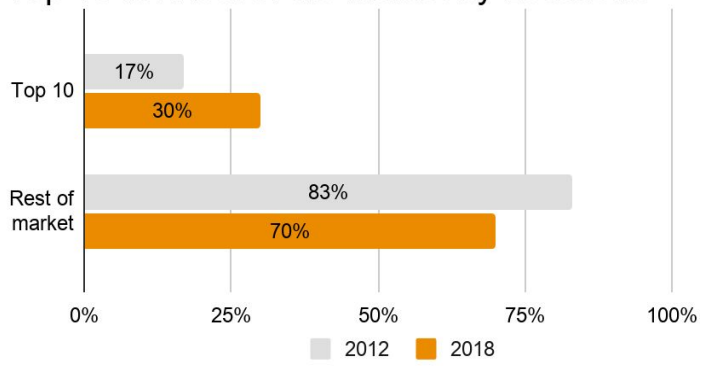
1. CSN Collision Centres
2. Fix Auto
3. CARSTAR
4. Boyd Auto Body & Glass
5. CarrXpert
6. Craftsman
7. Kirmac Canada
8. Auto Canada
9. Speedy
10. Maaco

Collision Repair Market Breakdown: Top 10 vs. Rest of the Market by Revenue



Source: Romans Group

Collision Repair Market Breakdown: Top 10 vs. Rest of the Market by Locations



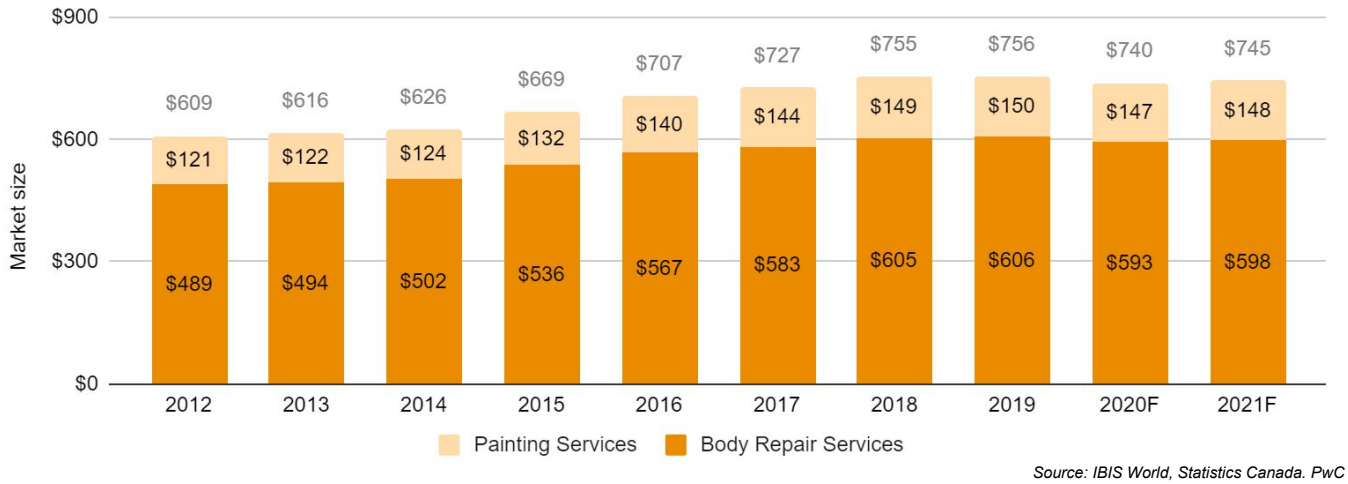
Source: Romans Group

Collision repair in British Columbia

Growth exceeding the rest of Canada

British Columbia represents roughly 14% of the total Canadian Collision Repair market based on revenues from all facilities, or $756 million in 2019. While also increasing in size over the past ten years, the year over year growth of the BC Collision Repair market was 3%, surpassing the Canadian average of 2%. Similar to the rest of Canada, PwC anticipated this growth to contract in 2020 due to the COVID-19 pandemic and then recover from 2021 onward.

BC Collision Repair Market Size ($ millions)



Source: IBIS World, Statistics Canada. PwC Analysis

This growth is largely being absorbed by existing facilities. The average revenue from ICBC per Collision Repair location in BC increased from $1,348,130 in 2017 to $1,359,792 in 2019. During the same period, the number of Collision Repair facilities enrolled in ICBC programs remained stable at roughly 530. This includes Dual facilities that perform Collision Repair and Auto Glass services for ICBC customers.

	2015	2016	2017	2018	2019
Number of ICBC Collision Repair facilities	509	513	530	530	529
Average revenue from ICBC per location	$1.12 M	$1.274M	$1.35M	$1.27M	$1.36M

Source: ICBC

Large regional differences and a high concentration of Independent facilities

While the breakdown of ICBC Collision Repair Program facilities varies by region, Independents play a significant role. This is particularly the case in rural areas, such as the Northern Interior, where Independents represent over three quarters of all Collision Repair Program facilities. On Vancouver Island, MSOs also have a strong presence, representing 30% of ICBC program participants. Banner/ Franchise networks have a relatively small presence across the province, the largest of which is in the Southern Interior.

Breakdown of ICBC Collision Repair Program facilities
(2019, number of facilities, does not include Dual)

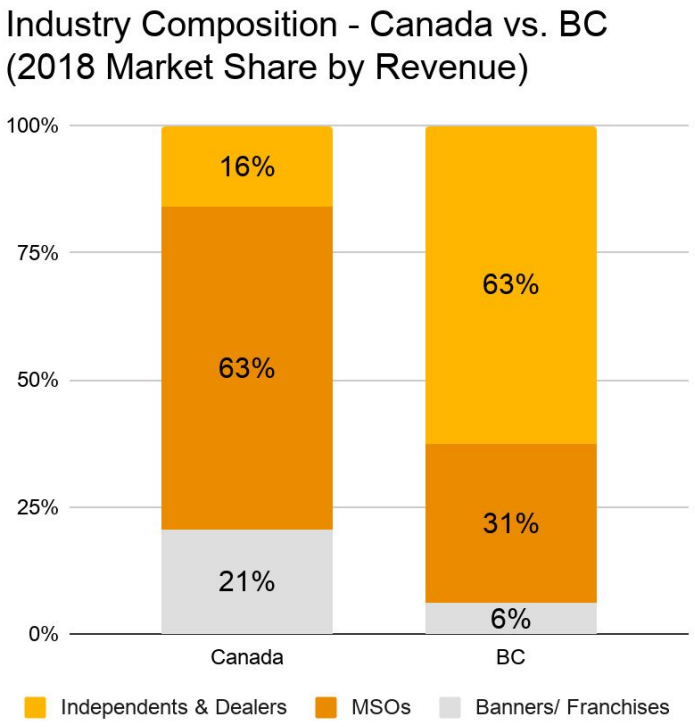
	BC	Lower Mainland	Vancouver Island	Northern Interior	Southern Interior
Dealership	6%	6%	9%	0%	6%
Independent	67%	70%	53%	76%	60%
Banner/Franchise	5%	4%	7%	0%	13%
MSO	22%	20%	30%	24%	21%

Source: ICBC

Relative to the rest of the Canada, Independent facilities in BC hold a higher percentage of the overall market share than Banner/Franchises and MSOs.

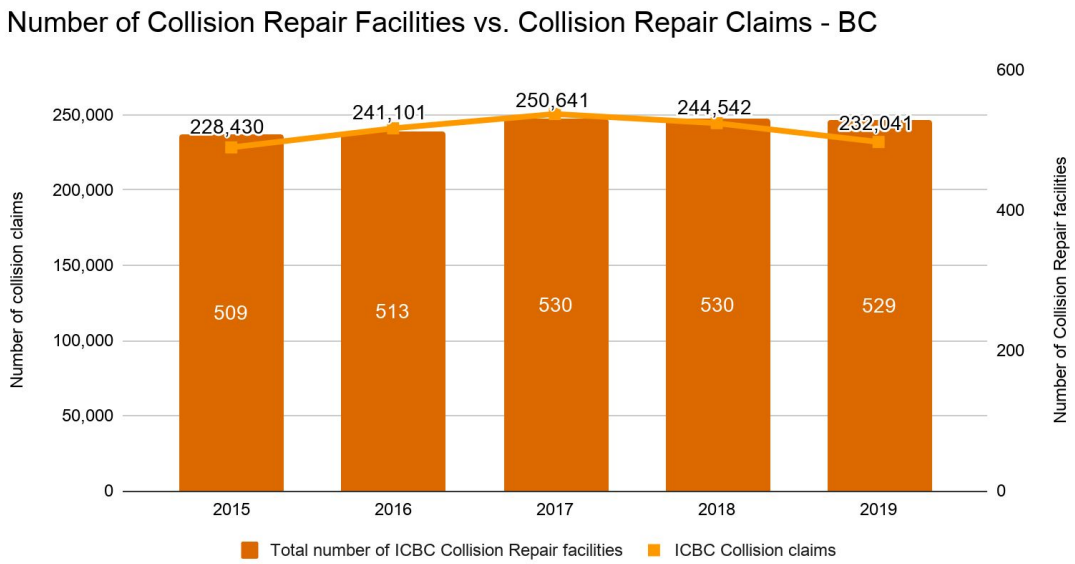
Across all regions, there are a select number of Banner/Franchises and MSOs with multiple locations. The following represents a breakdown of the number of locations associated with the largest five Banner/Franchises and MSOs that perform ICBC vehicle repair work and are registered in the Collision Repair Program.

Banner/Franchises and Large MSOs	Number of locations in BC
Craftsman Collision	35
Boyd Auto Group	23
Kirmac Canada	17
Fix Auto Group	16
CARSTAR	12



Source: ICBC , PwC analysis, Romans Group

The number of facilities has not changed, despite declines in volume



-7.4%
3-year change in the number of collision repair claims

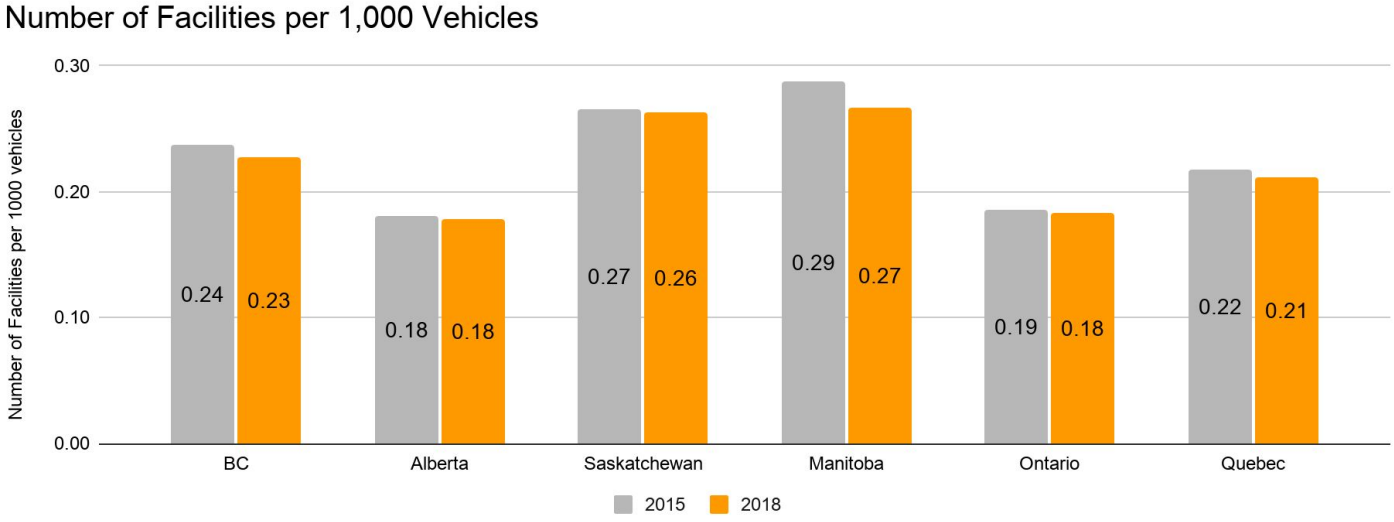
-0.2%
3-year change in the number of ICBC Collision Repair facilities

Source: ICBC, PwC Analysis

The number of collision repair claims reported to ICBC has started to decline, falling by 7.4% between 2017 and 2019. During this period, the number of ICBC Collision Repair Program facilities showed little change, remaining at 530 between 2017 and 2018, then declining to 529 facilities in 2019. These figures include Dual facilities.

When considered together, these figures speak to the capacity of a Collision Repair facility to meet claims demand. They suggest that the Collision Repair market in BC may have reached a point of saturation, where the supply of Collision Repair facilities could be exceeding demand. This would be consistent with the overall decline in claims frequency reported at ICBC and across Canada.

Higher ratio of facilities to vehicles in public insurance markets



Source:Automotive Industries Association, Statistics Canada, PwC Analysis

Further review of the ratio of repair facilities per 1,000 vehicles was performed to evaluate differences across provinces. This analysis was performed using the total number of facilities in the auto repair and service market provided by AIA Canada.

In BC, the ratio of repair facilities per vehicle decreased between 2015 and 2018, from 0.24 to 0.23. This decrease is consistent with most provinces in Canada, indicating the increase in vehicles is outpacing the change in the number of facilities. All provinces with public insurance markets (BC, Saskatchewan, and Manitoba) showed higher saturation of suppliers than provinces with solely private insurance markets.

Collision Repair in the ICBC environment

Collision Repair facilities in British Columbia sit in a unique position within Canada as one of three provinces operating in a predominantly public auto insurance system. In BC, Collision Repair facilities can be an ICBC Base Supplier or participate in ICBC's Collision Repair Program, where they are allowed to bill ICBC directly. ICBC sets rates for cost components, such as labour (body/frame/mechanical and paint) and parts, for both these supplier classifications. To operate as an ICBC supplier in the Collision Repair program, facilities must adhere to requirements and key performance indicators (KPIs) spanning customer service, technology, training and equipment. These KPIs are tracked by ICBC.

In February 2020, ICBC introduced a new program for Collision Repair facilities following a thorough consultation period with industry. The goal of this program is to increase efficiencies, improve industry throughput and reduce costs. A new tiering model was introduced with three staged levels to monitor and support Collision Repair facilities in the province - Assessment Tier, Tier 2 and Tier 1. The Assessment Tier refers to the initial tier assigned to new program participants who provide their data for the purposes of calculating KPIs. Tier 1 refers to the highest ranking of an ICBC Collision Repair facility and is defined as a fixed percentage of the highest performing participants, whereas Tier 2 refers to the remaining Collision Repair facilities that met minimum threshold after a fixed period of data collection.

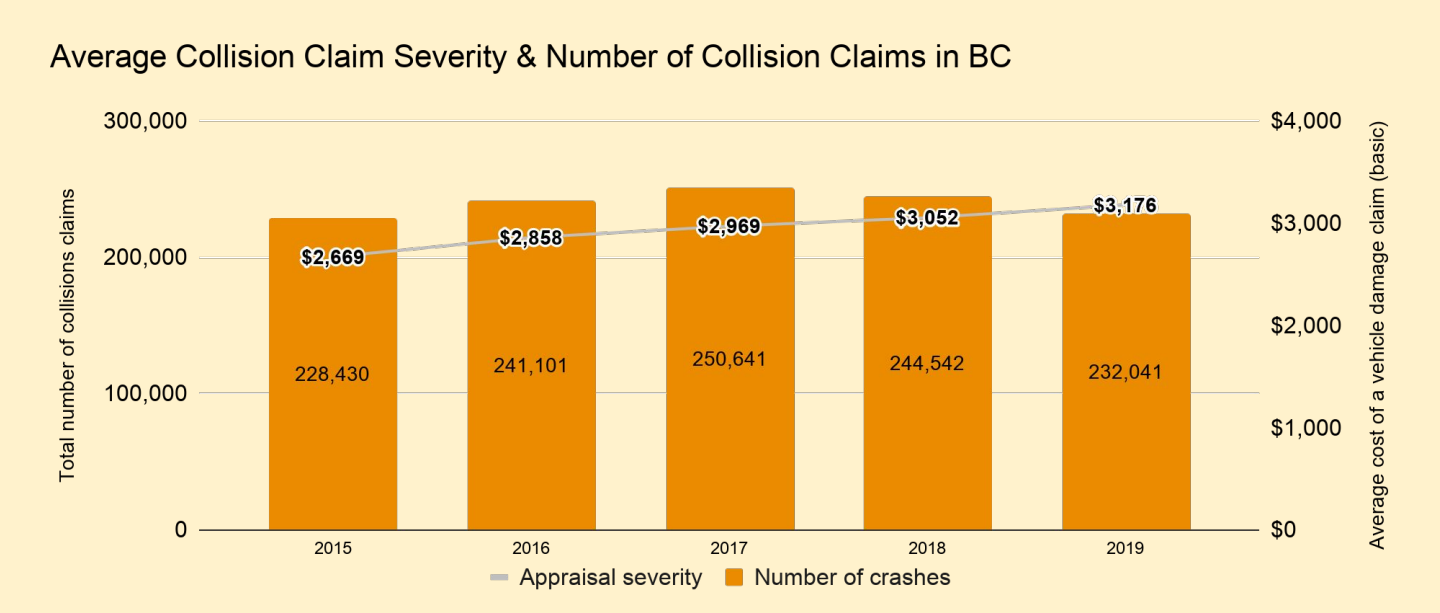
November 1, 2020 Onward	May 1, 2021 & beyond	
Assessment Period	**Tier 2**	**Tier 1**
KPI data collected during a six-month period from all existing Collision Repair facilities will be used for the first static Tier date. All new suppliers will be part of a 12-month assessment period.	Collision Repair facilities whose KPIs meet the minimum ICBC performance threshold	Collision Repair facilities whose KPIs meet a fixed percentage of highest performing participants in the program

Given the recent introduction of the program, existing Collision Repair facilities were placed in Tier 2 and continue to provide data to ICBC for calculation of the KPIs used to assess performance and determine new tiering. All new program participants are in the Assessment Tier and began providing data to ICBC for the calculation of KPIs over a twelve-month period. KPIs include estimating efficiency, cycle time, quality assurance (QA) and customer service.

Recent declines in collision claim frequency, rising severity

The total number of collision repair claims in BC are mirroring downward trends in collisions reported across Canada in recent years. In 2017, 250,641 collision repair claims were reported to ICBC. This does not include glass claims. While this figure grew until 2017, a new trend has appeared. ICBC reported a lower number of claims in both 2018 and 2019. ICBC projects that COVID-19 will accelerate this decline as fewer drivers are on the roads, signalling a sustained downward trend.

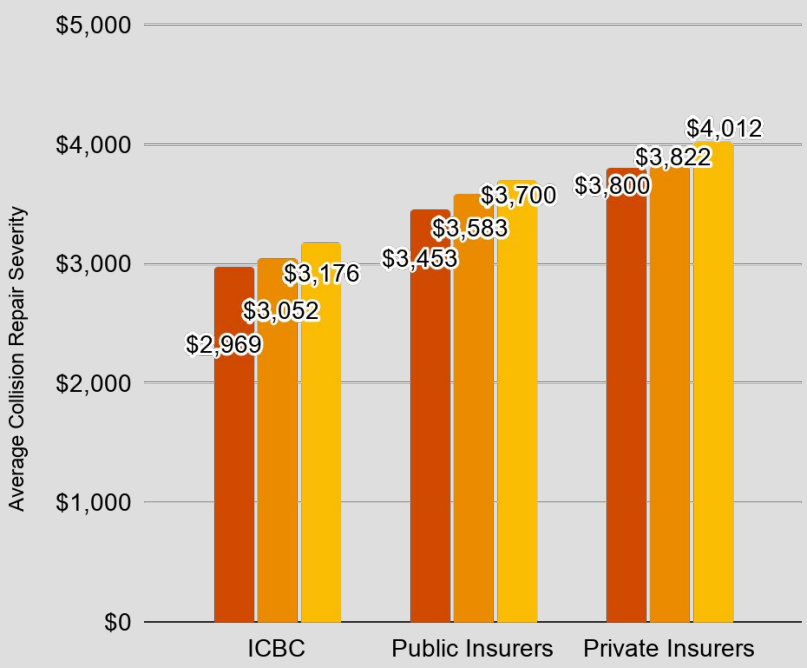
While frequency is declining, the costs associated with a collision repair claim are increasing. Average severity of a collision repair claim at ICBC increased by 4% per year between 2015 and 2019, to $3,176 in 2019. This suggests that the collision repair cost pressures facing ICBC are aligned with the broader trend of rising severity across Canada.



Collision claim severity is rising for both Public and Private auto insurers

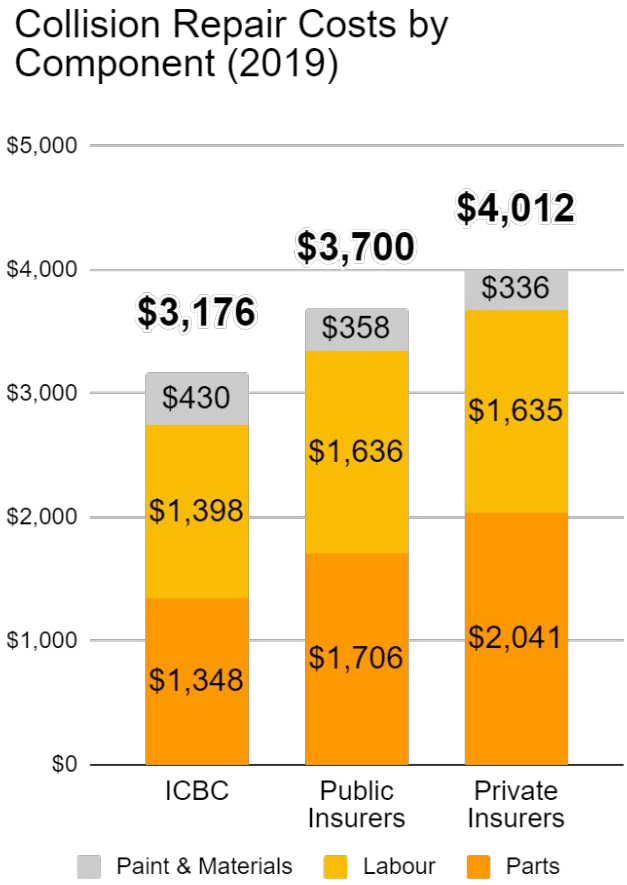
The severity of a collision claim includes Parts, Labour and Paint & Materials costs. It has increased over the past three years in both public and private insurance models. In provinces where public insurance is required, the average collision repair cost grew by 4% per year between 2017 and 2019, reaching $3,700. This cost also increased in provinces with private insurance, growing by 3% per year and surpassing $4,000 in 2019.

At ICBC, the average cost of a collision repair claim under basic insurance is below the average for both public and private insurers. Over the past three years, the cost of an ICBC collision repair claim grew by 5% per year to $3,176 in 2019. Despite this growth, the cost remains roughly $520 less than the average for other public insurers and $840 less than the average for private auto insurers. Lower claim severity indicates that on average, ICBC pays Collision Repair facilities in BC less to perform a vehicle repair relative to other jurisdictions. This is also impacted by factors such as vehicle type, average age, and efficiency.



Source: ICBC , PwC analysis - Survey of Canadian insurers

Note: Public Insurers does not include ICBC, only Manitoba and Saskatchewan



Note: Public Insurers does not include ICBC, only Manitoba and Saskatchewan

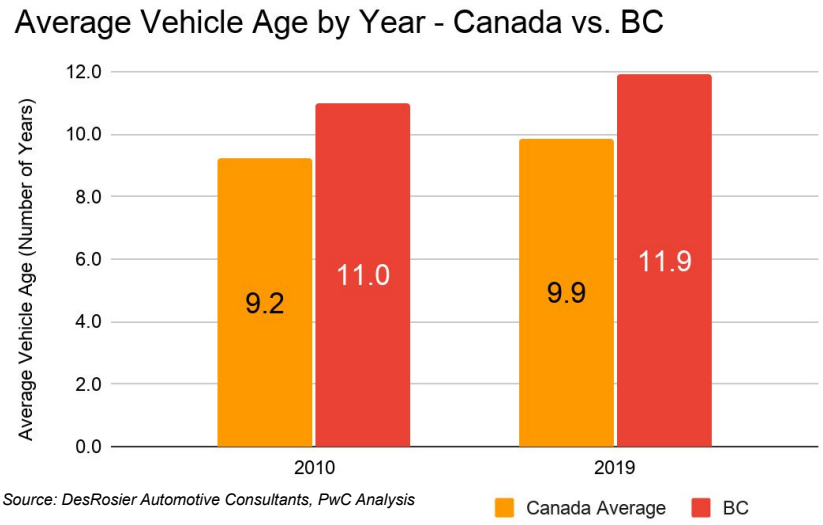
Source: ICBC , PwC analysis - Survey of Canadian insurers

ICBC pays less for Labour and Parts, and more for Paint & Materials

Parts and Labour costs drive the majority of collision claim costs. Further breakdown of the average cost per collision repair claim reveals differences between ICBC and other public or private models. Labour and Parts represent a significantly smaller portion of overall collision claim costs at ICBC relative to public or private insurers. Conversely, ICBC pays 20 to 28% more for Paint & Materials. There are also noticeable differences in Parts costs, with private insurers paying roughly $300 more per claim than their public counterparts.

Average age of vehicles is increasing, particularly in BC

Vehicle age can impact the average severity of a vehicle damage claim, as it can be argued that older vehicles are less complex to repair due to a smaller number of features and larger set of aftermarket and replacement part options. They also contain less expensive technology features, such as ADAS. The average age of vehicles on the road in Canada has increased by 7% between 2010 and 2018, to 9.9 years.



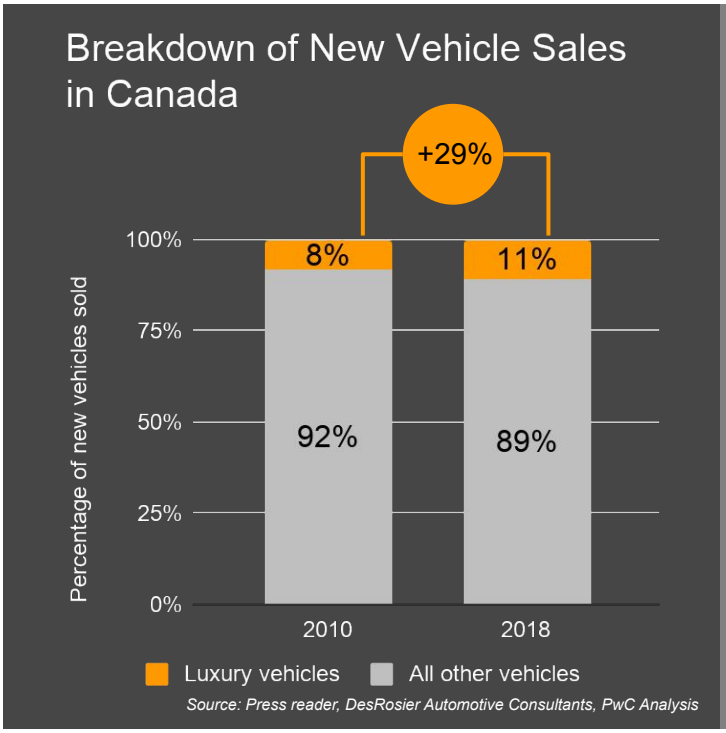
Source: DesRosier Automotive Consultants, PwC Analysis

A report from DesRosiers Automotive Consultants indicates that these increases can be attributed to improvements in durability of newer vehicles. Relative to the Canadian average, BC has some of the oldest vehicles in the country. During the same time period, the average age of a vehicle in BC increased by 8% to 11.9 years, which can be attributed to less extreme weather conditions relative to other Canadian provinces. When considered alongside a lower average severity relative to the rest of Canada, it appears that a higher vehicle age may be contributing to lower claim payments from ICBC to Collision Repair facilities across the province.

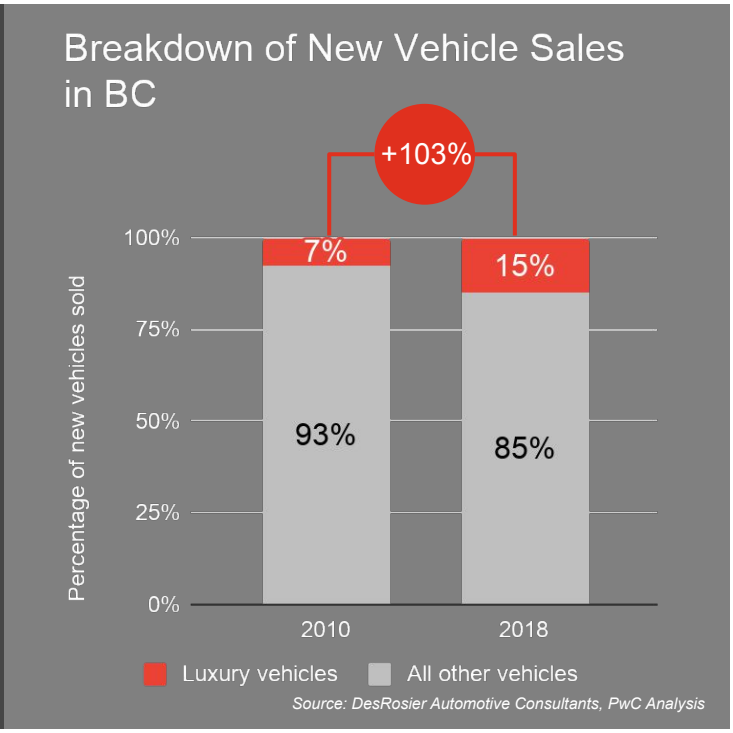
Significant shift in BC's vehicle mix

The type of vehicles on the road can also influence claim severity. The luxury vehicle market (defined as vehicles with an MSRP of $150,000 and up), which includes sports cars and SUVs, has exploded in popularity. According to DesRosiers Automotive Consultants, there were over 36,000 luxury vehicles sold in BC in 2018. The share of luxury vehicles relative to total vehicles sold more than doubled, from 7% in 2010 to 15% in 2018. This increase was significantly higher than the change in the overall Canadian market, where the sale of luxury vehicles grew by 29% over the same time period. Furthermore, the share of European vehicles in BC is 17% of sales, higher than the 12% reported for the rest of Canada (in 2018). These vehicles include many of the luxury brands, such as Maserati and Porsche.

Luxury and European vehicles are typically more complex and expensive to repair, requiring specialized equipment, training and parts. This shift is likely contributing to the recent increases in claim severity reported by ICBC, and can be expected to increase average severity at a rate faster than the rest of Canada in the coming years.



Source: Press reader, DesRosier Automotive Consultants, PwC Analysis



Source: DesRosier Automotive Consultants, PwC Analysis

Complete findings: Collision & Dual Repair

Breakdown of Repair Industry Survey participation

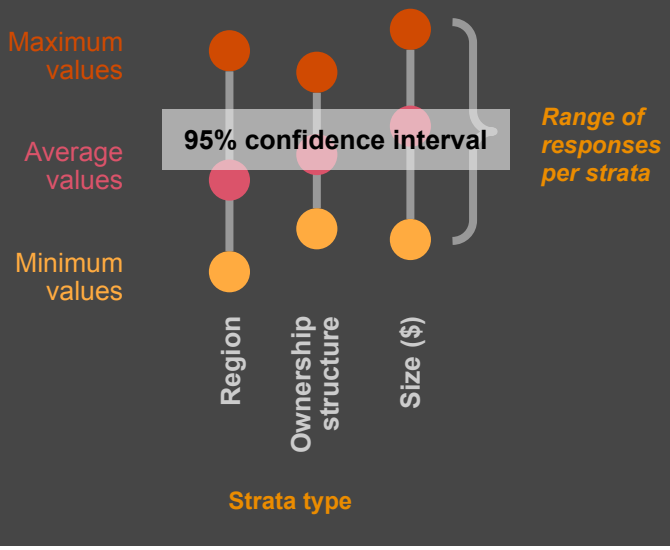
ICBC's Collision Repair facility population is made up of **362 individual facilities**, of which **121 responded** to the Repair Industry Survey conducted by PwC. This does not include Dual facilities.

Strong participation across suppliers of all sizes (represented by revenue) across all questions (revenue, COGS, OPEX, workforce, and efficiency), contributing to several insights on facility profitability and performance.

How to interpret the analysis by strata

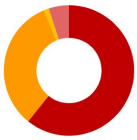
For each strata, the range of values for the given metric are illustrated by the dark grey lines, with the yellow, pink and orange circles representing the minimum, average and maximum values, respectively. The light grey rectangle illustrated below represents the estimated confidence interval for which the population average resides in with 95% confidence. Certain strata do not display circles as the response rates did not meet PwC's standard for participation relative to the total population.

Example: For the metric Collision COGS as a % of Revenue in 2017, the range of values is between 37% (minimum) and 61% (maximum) with an average of 52% for Collision facilities in the Lower Mainland region. The average COGS as a % of Revenue for all Collision Repair Facilities in BC in 2017 occurs between 50% and 60%, with 95% confidence.



Lower Mainland

- **79 responses out of 250 ICBC suppliers (32%)**
- Largest proportion of Independents represented within a region

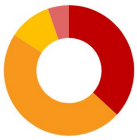


Northern Interior

- **6 responses out of 21 ICBC suppliers (28%)**
- Largest proportion of Large MSOs represented within a region

Southern Interior

- **19 respondents out of 48 ICBC suppliers (40%)**
- Respondents comprised mostly of Large MSOs and Independents



Vancouver Island

- **17 respondents out of 43 ICBC suppliers (40%)**
- Responses varied across all ownership structures
- Largest proportion of Dealerships represented within a region

Independent | Large MSO | Small MSO | Dealer | Banner/Franchise

Region	Responses	% of ICBC suppliers
Lower Mainland	79	**32%**
Northern Interior	6	**28%**
Southern Interior	19	**40%**
Vancouver Island	17	**40%**

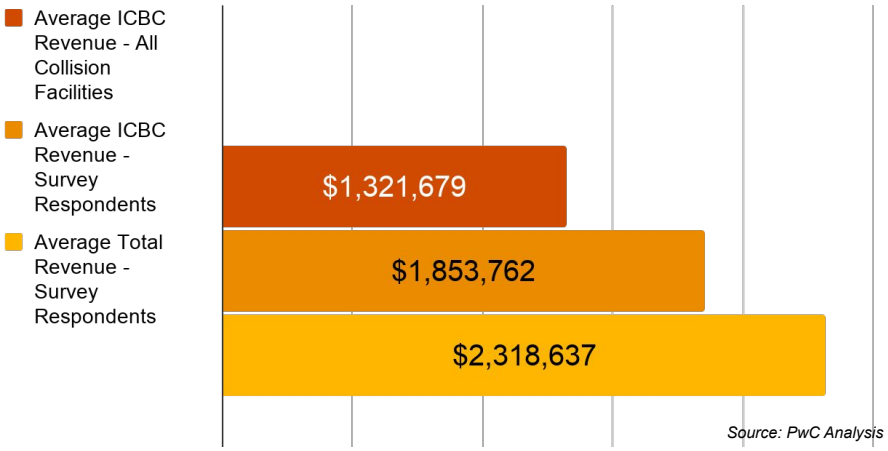
Pricing

Majority of Collision Facility revenues come from ICBC

While Collision facilities generate revenue from other sources, such as the cash market, ICBC revenue represents a significant portion of their total business. In 2019, ICBC contributed to over 75% of the average revenues earned by a Collision Repair facility in BC, indicating major reliance on their relationship with ICBC to operate sustainably. The average ICBC revenue of a Collision Repair facility who participated in the Repair Industry Survey was $1,853,762.

Total facility revenue of survey respondents fluctuated between $2.3 and $2.4 million over the past three years. Revenue is directly impacted by the volume of ICBC collision repair claims. The lowest average revenue was reported most recently in 2019 at $2,318,637, which corresponds with the lowest volume of collision repair claims reported by ICBC during this time period.

BC Collision Facility Revenue - ICBC vs. Total in 2019



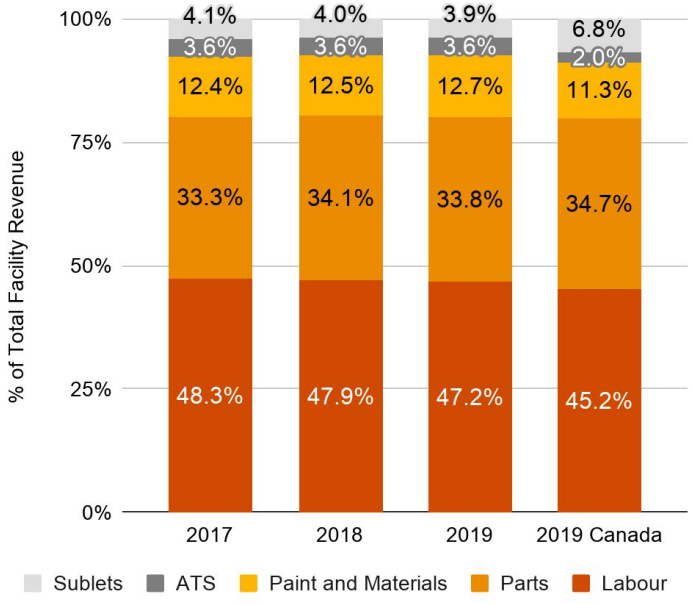
Source: PwC Analysis

	Average total revenue	ICBC claims
2017	$2,321,960	250,641
2018	$2,412,203	244,542
2019	$2,318,637	232,041

Labour and Parts are the largest revenues

The largest contributors to a facility's revenue are Labour and Parts, representing over 80% of total revenue earned from ICBC. The revenue breakdown of BC Collision Repair program facilities was consistent between 2017 and 2019, with small changes. Revenue from Labour fell by slightly more than one percentage point and revenue from Parts increased by half a point.

BC Collision Repair Revenue Breakdown vs. Canada



Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of total revenue: 54 in 2017, 73 in 2018 and 81 in 2019.

The revenue breakdown of a BC Collision Repair facility differs when compared to the Canadian average. The average Collision Repair facility in BC generates less revenue from Parts relative to the Canadian average, which is 34.7%. Labour comprises more under the same comparison, where the Canadian average is 45.2% and the BC average in 2019 is 47.2%.

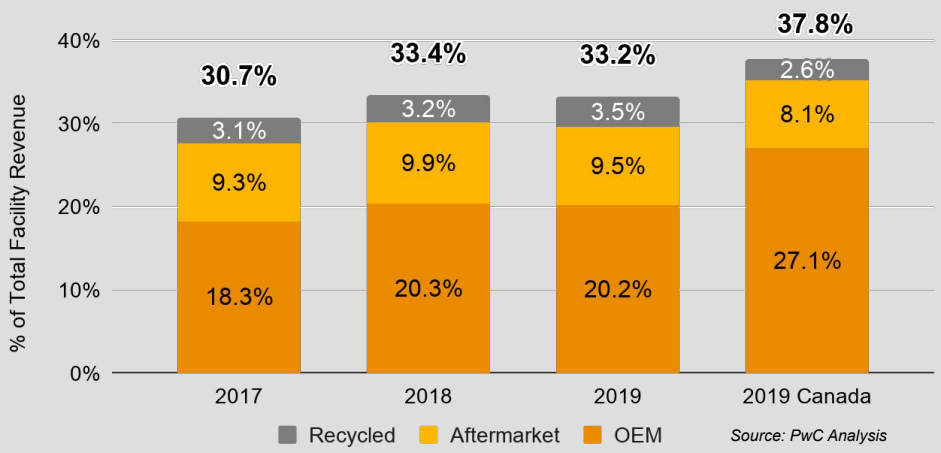
Both Paint/Materials and Alternate Transportation Service (ATS) are smaller revenue sources for a Collision Repair facility in BC. Relative to the Canadian average, Collision Repair facilities in BC generate twice as much revenue from ATS. This can be attributed to the coverage requirements by ICBC related to transportation while a customer's vehicle is being repaired. ATS is not consistently provided by other insurers across Canada, while ICBC provides consistent ATS compensation per repair, per hour.

Facilities earn, on average, 3.9% of their revenues from sublets relative to the Canadian average of 6.8%. This suggests that Collision Repair facilities may be performing more work in-house than their counterparts in the rest of Canada.

Parts revenues are driven by OEMs, followed by Aftermarket parts

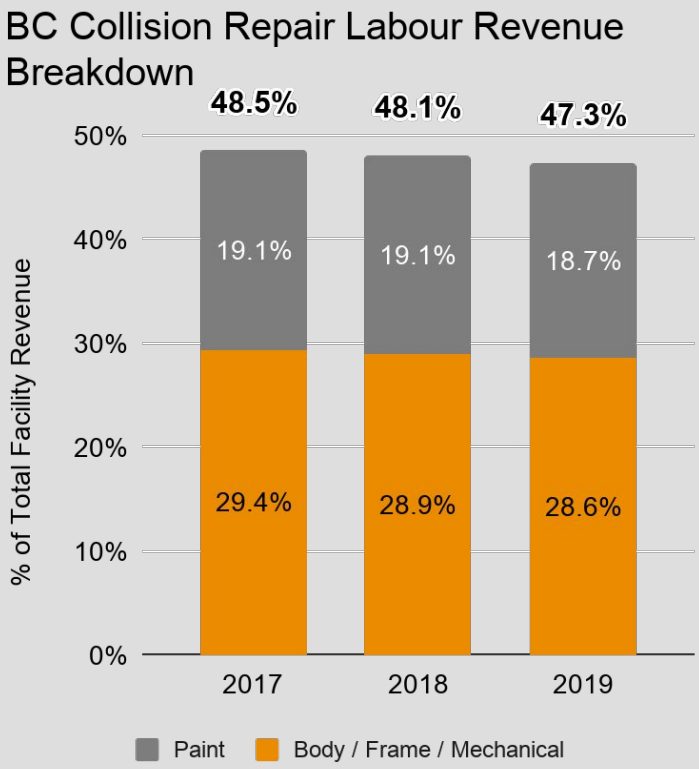
Further breakdowns of Parts revenues by type illustrates that each provides a different contribution to the average revenue earned by a BC Collision Repair facility. OEM parts contribute to the largest share, representing, on average, 20.2% of total revenue earned by facilities in 2019. This figure increased by roughly 2 percentage points from 18.3% in 2017, and can be attributed to growing pressure from vehicle manufacturers to perform repairs with approved parts.

Relative to the Canadian average, OEM parts represent a smaller percentage of total revenues for a Collision Repair facility in BC.



Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of parts revenue: 47 in 2017, 53 in 2018 and 60 in 2019.

Aftermarket parts represent the second largest source of Parts revenue, averaging 9.5% of total revenue for facilities in BC in 2019. This figure slightly increased between 2017 and 2019, and peaked in 2018 at 9.9% of total revenues. Aftermarket parts represent a larger percentage of total revenues for a Collision Repair facility in BC relative to the Canadian average, which was 8.5% in 2019. While Recycled parts represented a consistently small source of revenue for over the past three years, it appears that they contribute to more of a facility's business in BC than the Canadian average. This suggests that Collision Repair facilities in BC may be using more recycled parts than other provinces.



Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of labour revenue: 59 in 2017, 65 in 2018 and 73 in 2019.

Declining labour revenues

Unlike Parts, further breakdowns of Labour revenue by type illustrates a decline in their contribution to a facility's revenue over the past three years.

Body/Frame/Mechanical Labour represents the majority of Labour revenue, contributing to 28.6% of total revenue. This figure decreased by 0.8 percentage points over the past three years. Paint Labour also decreased, from 19.1% in 2017 to 18.7% in 2019. These declines suggest that Collision Repair facilities in BC are earning less of their total revenue from Labour relative to three years ago.

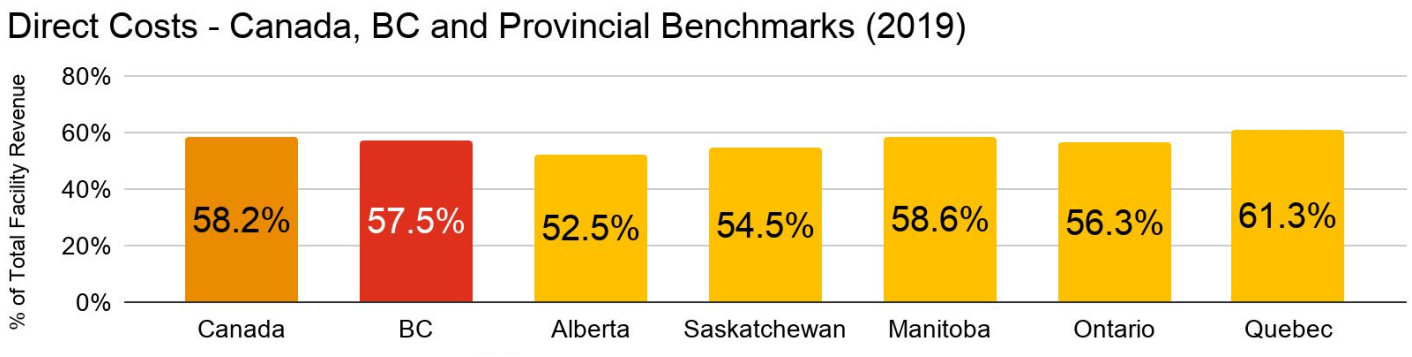
The breakdown of Labour revenue for Collision Repair facilities in BC is directly influenced by ICBC, who publishes set rates for Body, Paint, Frame and Mechanical work paid to suppliers during a claim. These rates are posted by ICBC and were last increased by 1.8% for Collision Repair program participants (previously known as c.a.r. shop VALET) in 2016.

Repair costs

Direct costs in line with the national average, but higher than many Canadian provinces

Direct costs, commonly referred to as Cost of Goods Sold (COGS) represent the costs directly associated with repairing a vehicle. They include Labour, Parts, Paint and Materials, Alternate Transportation Services (ATS) and Sublets.

Direct costs as a percentage of a facility's total revenue vary by Canadian province, with the highest in Quebec at 61.3% and the lowest in Alberta at 52.5% in 2019. In BC, direct costs represent 57.5% of a Collision Repair facility's total revenue, ranking as the third highest in Canada, behind Quebec and Manitoba. Direct costs in BC are in line with the national average, which was 58.2%. They were above Saskatchewan and below Manitoba, the other two Canadian provinces who operate in a predominantly public insurance system.



Source: PwC Analysis

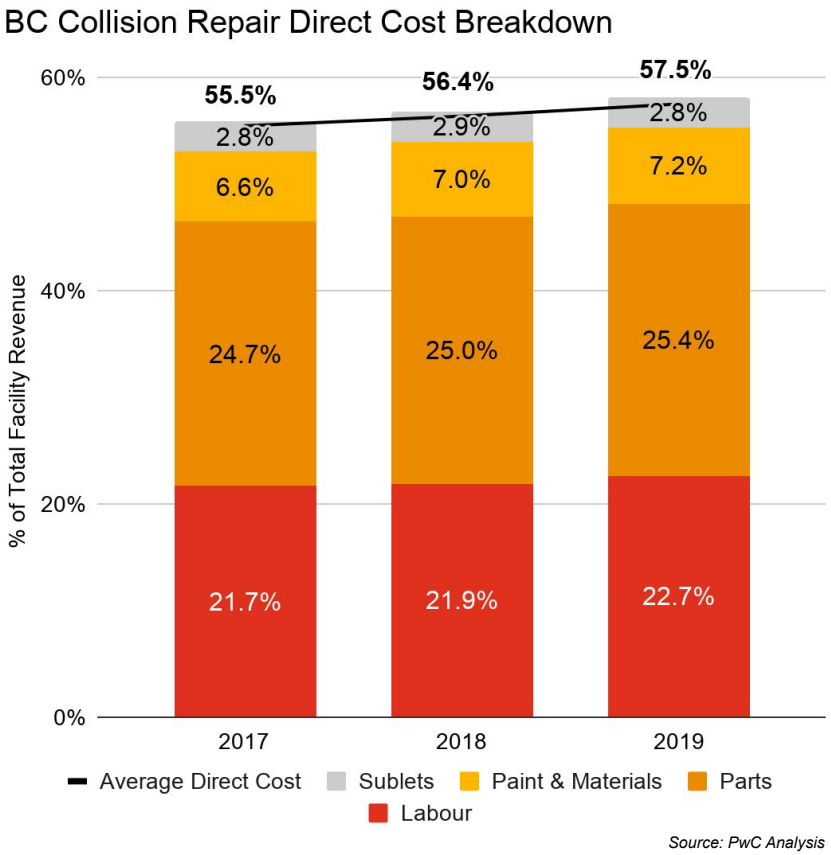
Rising direct costs over the past three years

Direct costs for a Collision Repair facility in BC were, on average, 57.5% of total revenues. Direct costs rose by 2 percentage points from 2017 to 2019, potentially contributing to the gap between BC and Saskatchewan - the public insurance province with the lowest direct costs.

Similar to revenue, Labour and Parts represent the two major contributors to direct costs. BC Collision Repair facilities reported increases in Labour costs over the past three years, reaching 22.7% in 2019. Both Parts and Paint & Materials also increased during this time period.

Parts costs increased by 0.7 percentage points from 2017 to 2019, suggesting that Collision Repair facilities are facing growing cost pressure from parts suppliers, resulting in an increase to the total cost to repair a vehicle. These costs are inclusive of any rebates received from parts suppliers.

Sublets costs, which refer to the cost of outsourcing some of the work associated with a repair order, consisted of 2.8% of a Collision Repair facility's revenue. which aligns with increases in overall facility revenue, and the rise of complex repairs requiring specialized services.



Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of total revenue: 63 in 2017, 71 in 2018 and 80 in 2019.

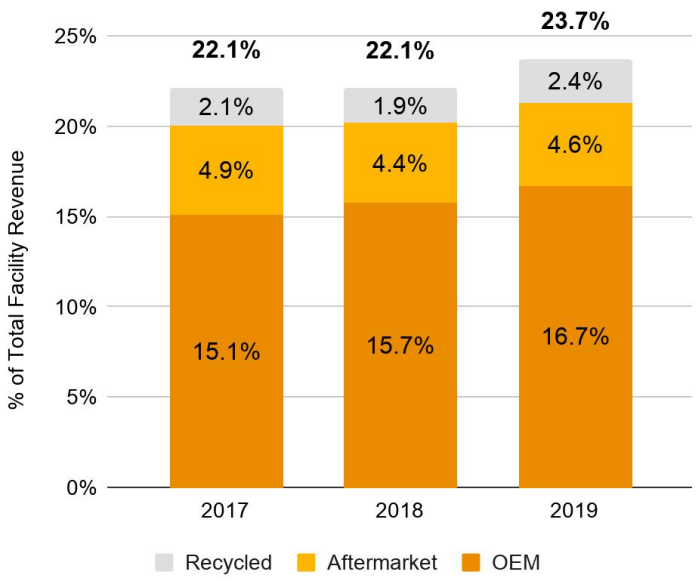
Increases in Parts costs driven by OEMs

Further breakdowns of Parts costs by type illustrate that OEMs represent the largest share, contributing to roughly 70% of a BC Collision Repair facility's Parts costs in 2019. This figure has increased over the past three years, rising by 0.6 percentage points between 2017 and 2018, and a full percentage point in 2019. These accelerating increases suggest that OEM will continue to contribute to significant cost pressure among Collision Repair facilities in the province.

Aftermarket parts costs fluctuated over the past three years, reaching a low of 4.4% of a Collision Repair facility's total revenues in 2018. They increased by 0.2 percentage points to 4.6% in 2019.

Similar to revenues, Recycled parts represent the smallest portion of overall Parts costs. They increased between 2017 and 2019, reaching 2.4% of total revenues in 2019.

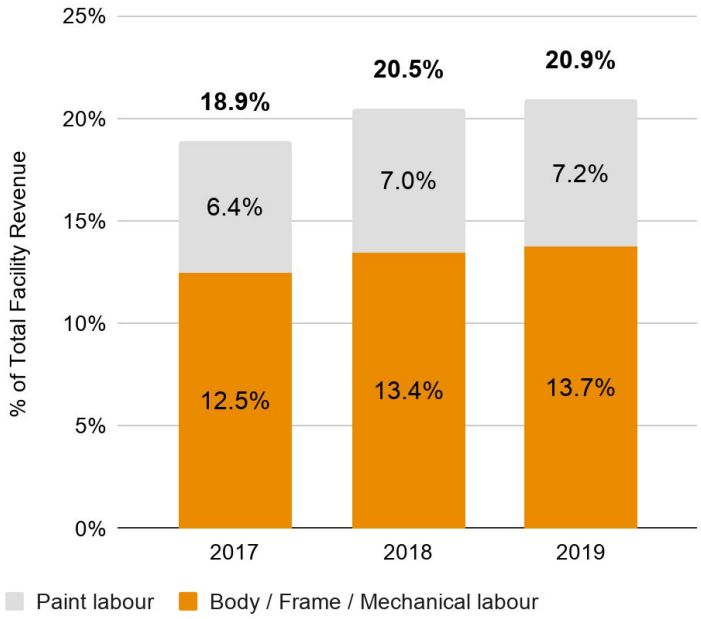
BC Collision Repair Parts Cost Breakdown



Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of parts cost: 16 in 2017, 21 in 2018 and 28 in 2019.

BC Collision Repair Labour Cost Breakdown



Source: PwC Analysis

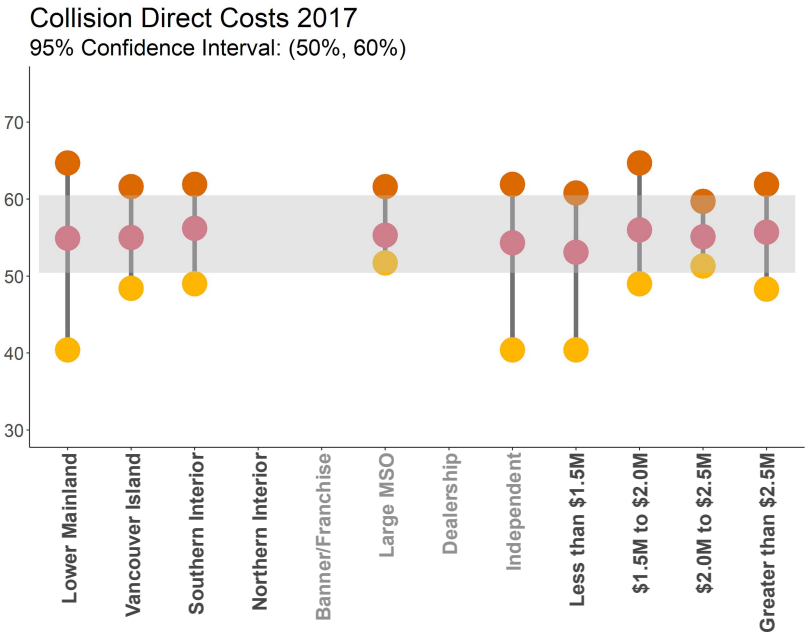
Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of labour cost: 57 in 2017, 63 in 2018 and 69 in 2019.

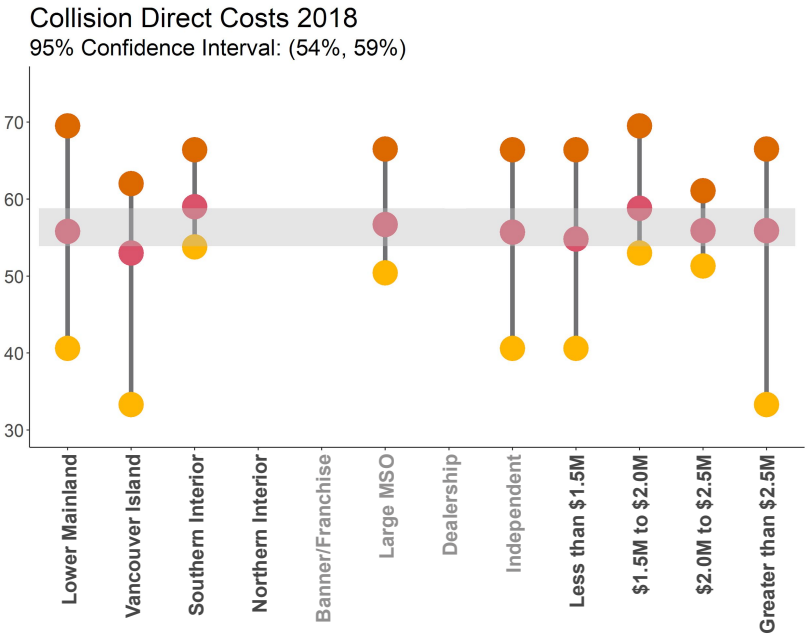
Steadily increasing Labour costs associated with body, frame and paint

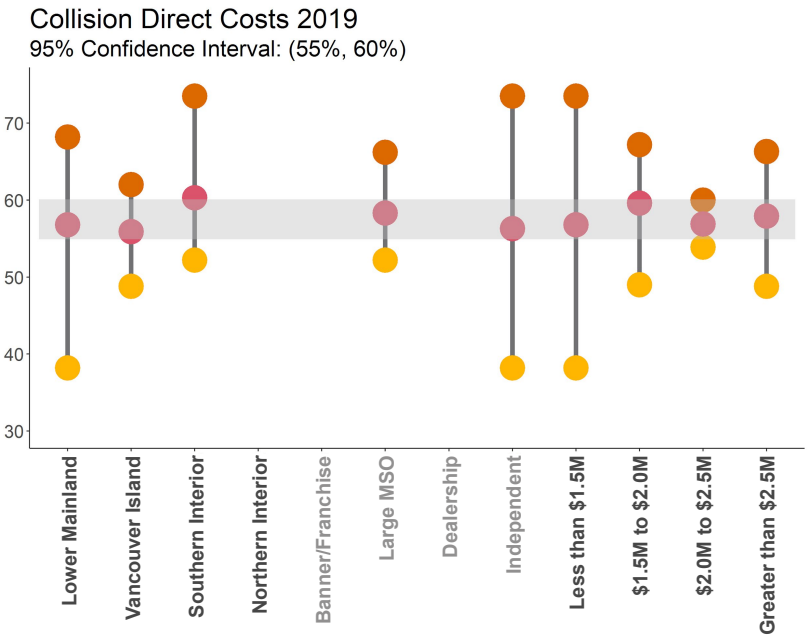
A breakdown of Labour costs by type also illustrates rising contributions to a BC Collision Repair facility's costs over the past three years. Across all types, total Labour costs increased by two percentage points between 2017 and 2019.

Body/Frame/Mechanical labour represents the largest Labour cost. It increased by 1.2 percentage points between 2017 and 2019 to 13.7% of total revenues. Paint labour also increased to 7.2% of total revenues during this period.

Similar to Parts, BC Collision Repair facilities reported the highest Labour costs in 2019. Industry representatives indicated the rising cost of Labour has been a growing challenge for their business, as technical and administrative staff spend more time addressing the growing complexity associated with vehicle repairs.







Source: PwC Analysis

Direct Costs - Breakdown of BC Facilities by Strata

The following charts represent a breakdown of direct costs reported by BC Collision Repair facilities by strata for 2017, 2018 and 2019. Ranges of values are provided for three strata (region, ownership type and size) to illustrate differences in direct costs within the BC market.

General observations

- Between 2017 and 2019, the confidence interval for direct costs of a Collision Repair facility in BC narrowed from 10% (between 50% and 60%) to 5% (between 55% and 60%) due to higher facility participation.
- The smaller interval in 2019 indicates that there is 95% confidence that the average direct costs of a Collision Repair facility in BC sit between 55% and 60%.

Region

- The range of direct cost values in the Vancouver Island tightened between 2018 and 2019, indicating they best controlled fluctuations in cost relative to other regions in the province.
- The largest range for direct costs was Lower Mainland, indicating less control within the region to negotiate prices costs.
- *No observations can be made for the Northern Interior as the responses did not meet PwC's standard for participation relative to the total population (N must be greater than 3).*

Ownership structure

- Independent facilities consistently had the largest range, regardless of year, indicating more variation in their indirect costs. Conversely, Large MSOs have the smallest ranges in direct costs.This may be due to greater control of parts costs through centrally managed orders and negotiations.
- *No observations can be made for Banner/Franchises and Dealerships as the responses did not meet PwC's standard.*

Size

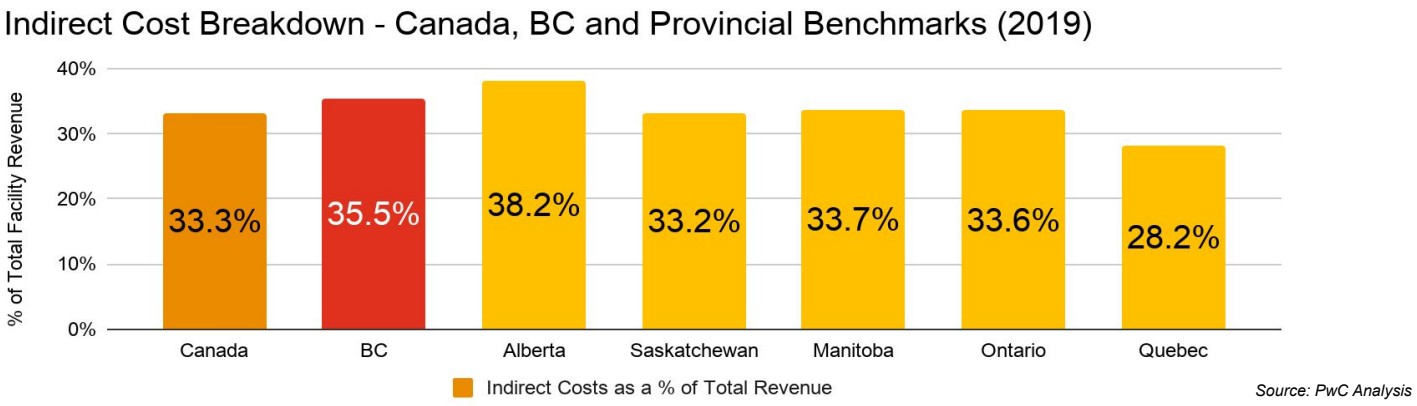
- Small facilities (total revenues less than $1 million) had the largest range in direct costs, up to a maximum of 80% of revenues.
- Large facilities had a small range in 2017 and 2019, with a fluctuation occurring in 2018. The smaller range in 2019 may indicate that larger facilities were able to control costs.

Higher indirect costs than most of Canada

Indirect costs represent expenses not directly associated with performing a vehicle repair. They include salaries for management and administrative staff, rent, property taxes, training, and other costs.

2019 indirect costs as a percentage of a facility's total revenue fluctuated by Canadian province, with the lowest in Quebec at 28.2% and the highest in Alberta. Indirect costs in BC represented, on average, 35.5% of a Collision Repair facility's revenue, ranking as the second highest in Canada.

Average indirect costs for a Collision Repair facility in BC were above the averages for the other Canadian provinces operating in a predominantly public insurance system. Indirect costs of a Collision Repair facility in BC were 2.3 percentage points higher than Saskatchewan and 1.8 points higher than Manitoba.



Source: PwC Analysis

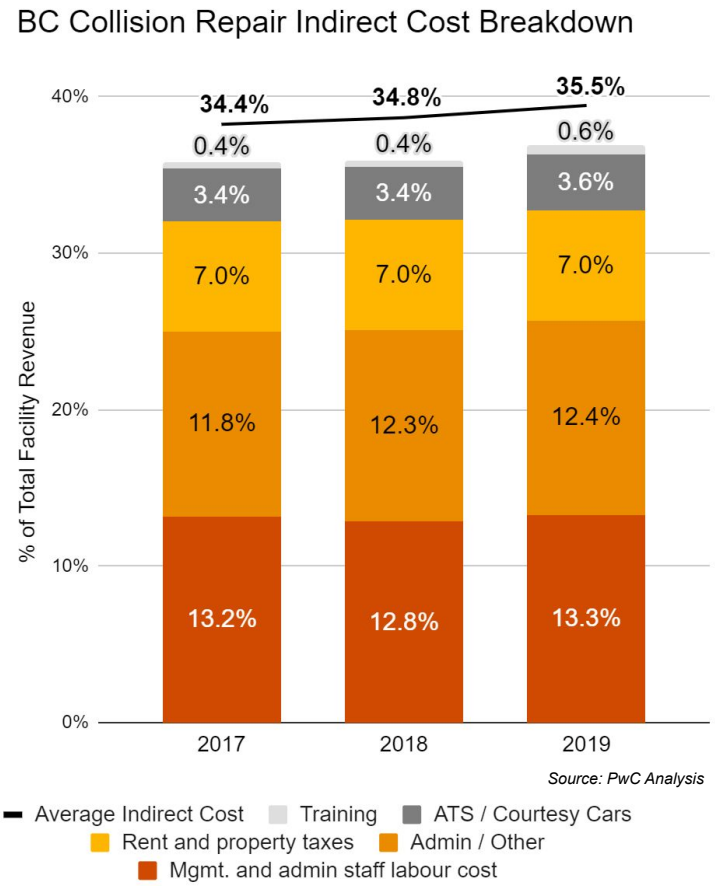
Rising indirect costs due to administration, ATS and training

Indirect costs increased by just over one percentage point between 2017 and 2019, from 34.4% to 35.5%. The largest indirect costs borne by a Collision Repair Facility in BC are Management and Administrative staff labour and Admin/ other costs. Collectively, these two categories represent over a quarter of a facility's total revenue.

Management and Administrative staff labour costs remained relatively consistent. Administrative costs increased by 0.6 percentage points between 2017 and 2019 to 12.4% of total revenues. Industry representatives attributed this increase to the administrative work associated with ICBC supplier programs, such as estimate approvals, repair order management and payments. This could be associated with the growth in ICBC's Repair Program, which required Collision Repair facilities to perform estimates directly.

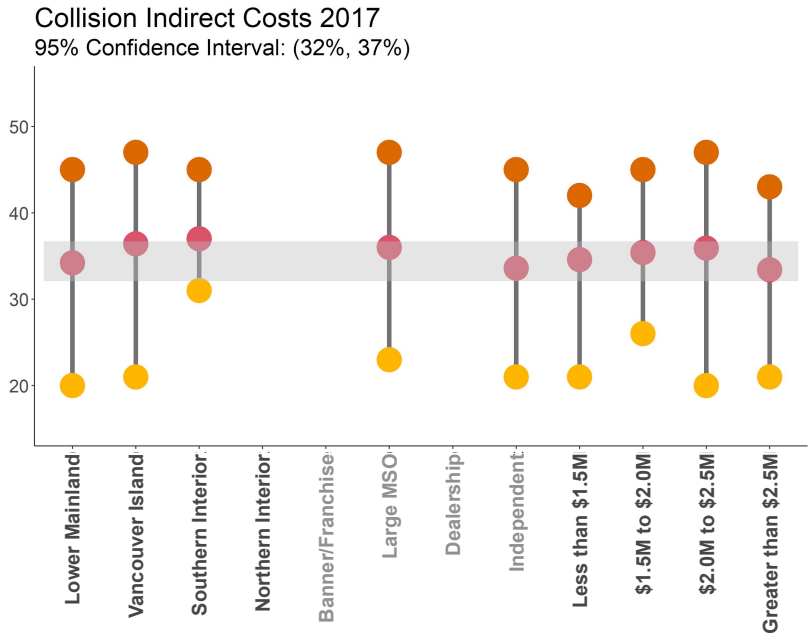
Rent and property taxes did not fluctuate, remaining at 7.0% in 2019. This was higher than the Canadian average, with Ontario as the closest comparable at 5.0%. These figures align with the broader trend of high real estate prices in BC and Ontario relative to the rest of Canada.

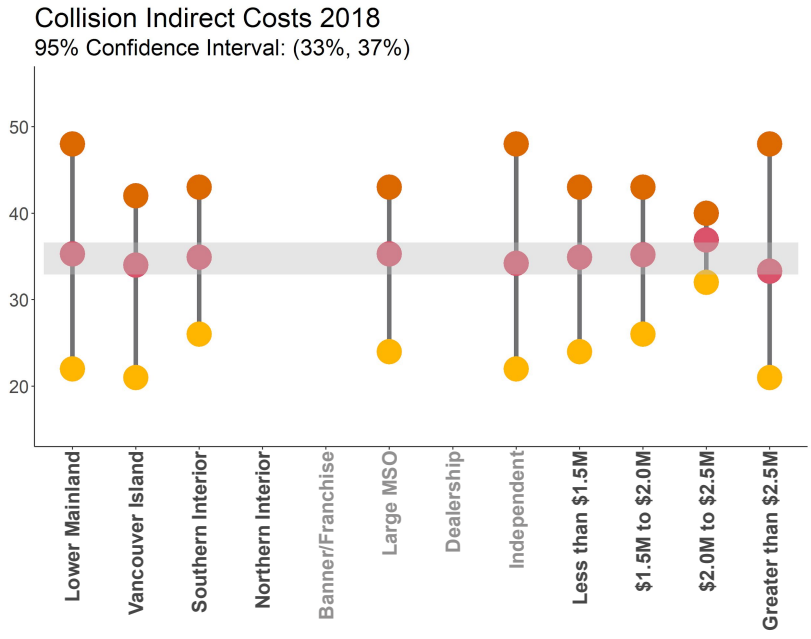
Other increases in 2019 indirect costs can be attributed to smaller categories, such as Alternate Transportation Services (ATS) and training. ATS costs increased to 3.6% of a facility's revenue in 2019, while training costs increased to 0.6%. Industry representatives indicated that training will continue to represent a larger portion of a facility's indirect costs in the coming years as new investments are made to upskill technicians and more consistent reporting practices are implemented.

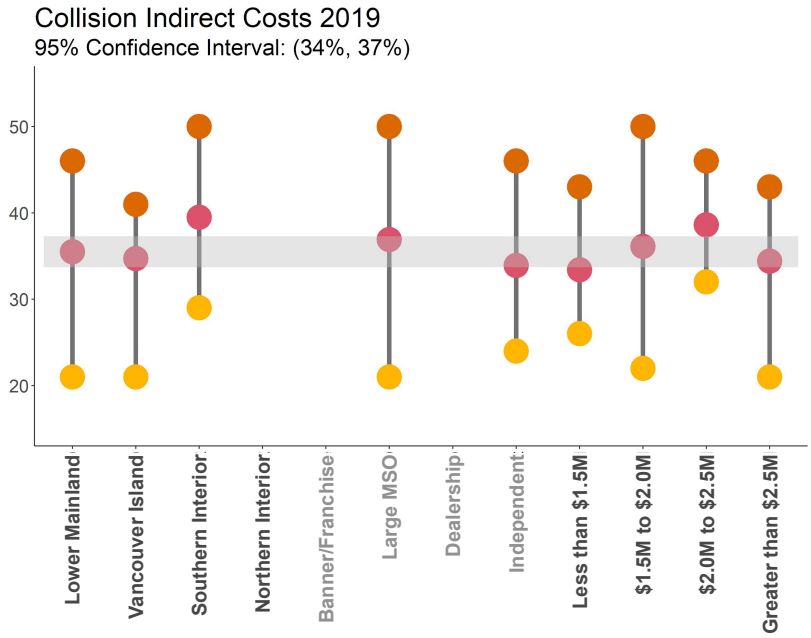


Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of indirect cost: 58 in 2017, 61 in 2018 and 65 in 2019.







Source: PwC Analysis

Indirect Costs - Breakdown of BC facilities by Strata

The following charts represent a breakdown of indirect costs reported by BC Collision Repair facilities by strata for 2017, 2018 and 2019. Ranges of values are provided for three strata (region, ownership type and size) to illustrate differences in indirect costs within the BC market.

General observations

- Between 2017 and 2019, the confidence interval for indirect costs of a Collision Repair facility in BC narrowed from 5% (between 32% and 37%) to 3% (between 34% and 37%) due to higher facility participation.
- The smaller interval in 2019 indicates that there is 95% confidence that the average indirect costs of a Collision Repair facility in BC sit between 34% and 37%.

Region

- The range of indirect cost values for Vancouver Island shifted downward between 2017 and 2019, indicating they were able to lower their indirect costs relative to other regions in the province.
- The largest range for indirect costs was Lower Mainland, indicating less control within the region to manage overhead costs.
- *No observations can be made for the Northern Interior as the responses did not meet PwC's standard for participation relative to the total population (N must be greater than 3).*

Ownership structure

- Independent facilities reported large ranges in indirect costs, regardless of year, indicating more variation other operating expenses.
- Large MSOs consistently reported high average indirect costs relative to other ownership structures, which may be attributed to additional cost burdens associated with their geographic footprint.
- *No observations can be made for Banner/Franchises and Dealerships as the responses did not meet PwC's standard.*

Size

- Both small and large facilities reported the lowest average indirect costs, illustrating two options are possible to lower indirect costs: greater cost control through smaller, consolidated operations or cost reductions through economies of scale.

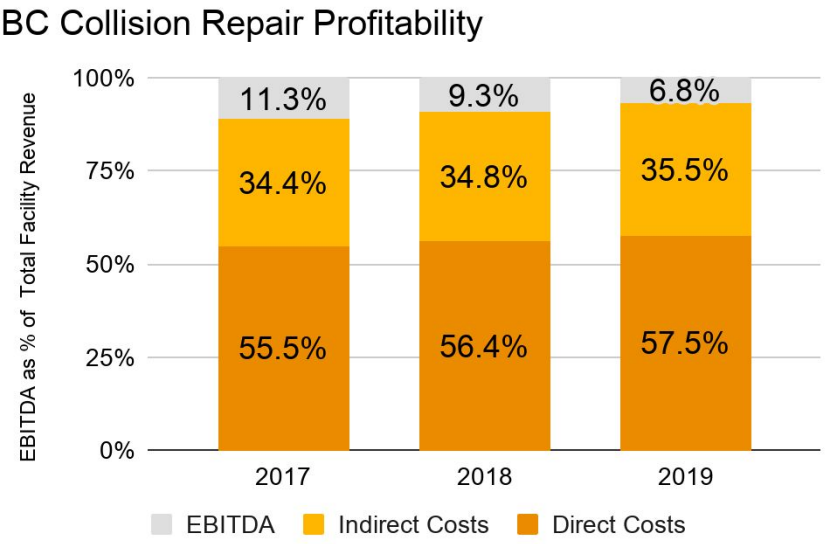
Profitability

Declining profits attributable to rising costs

Profitability of the Collision Repair industry was defined by subtracting both direct and indirect costs from a facility's total revenue. For the purposes of this assessment, PwC calculated profitability using EBITDA (earning before interest, taxes, depreciation and amortization), a common indicator used to assess a company's operating profitability.

EBITDA was calculated as a weighted average of Repair Industry Survey responses, with regional weighting designed to reflect the percentage of ICBC Collision Repair facilities across the province.

Despite stability in revenues, the profitability of a Collision Repair facility in BC declined over the past three years, with EBITDA as a percentage of total revenues reaching 6.8% in 2019. The decline from 11.3% EBITDA in 2017 to 6.8% in 2019 was found to be statistically significant. This represents a 4.5 percentage point decrease in profitability. This decline can be attributed to both direct and indirect cost pressures. Direct costs increased by two percentage points between 2017 and 2019, while indirect costs increased by roughly one point over the same time period.



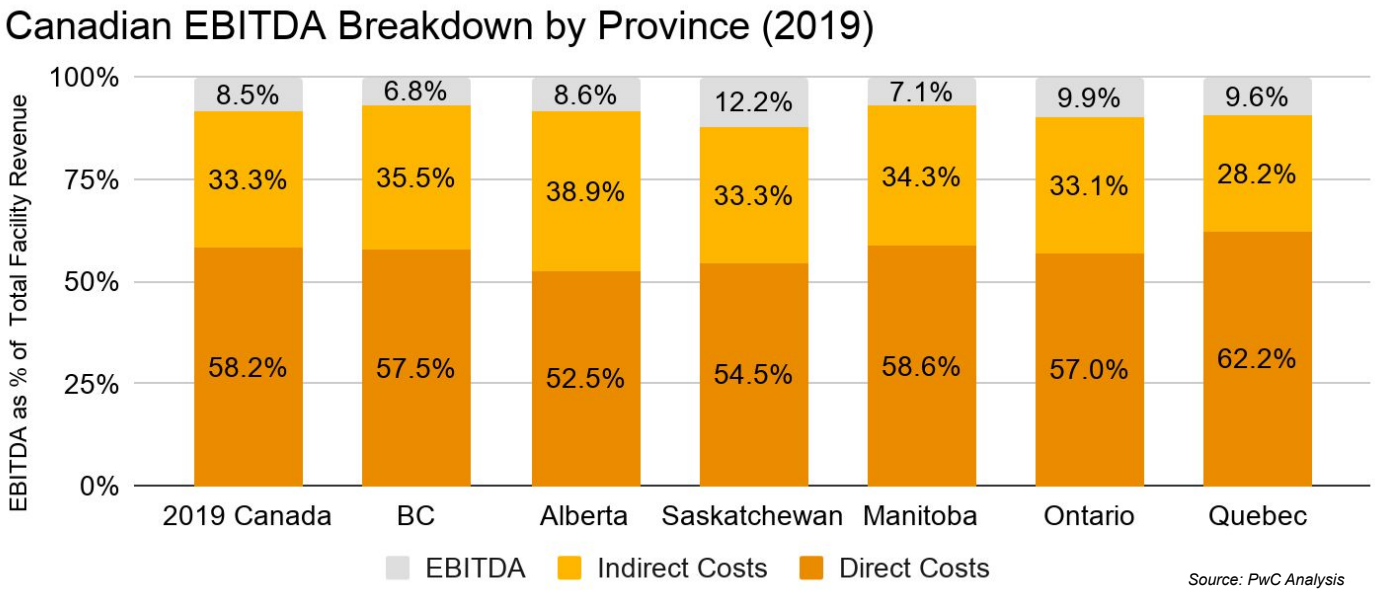
Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number.

Lower profitability than all Canadian provinces

EBITDA as a percentage of a facility's total revenue varies by Canadian province, with Collision Repair facilities in Saskatchewan reporting the highest in Canada at 12.2%. Manitoba is most similar to BC, with an EBITDA of 7.1% in 2019. This is a relevant comparison as Manitoba also operates in a predominantly public insurance system, and reported indirect costs above the national average.

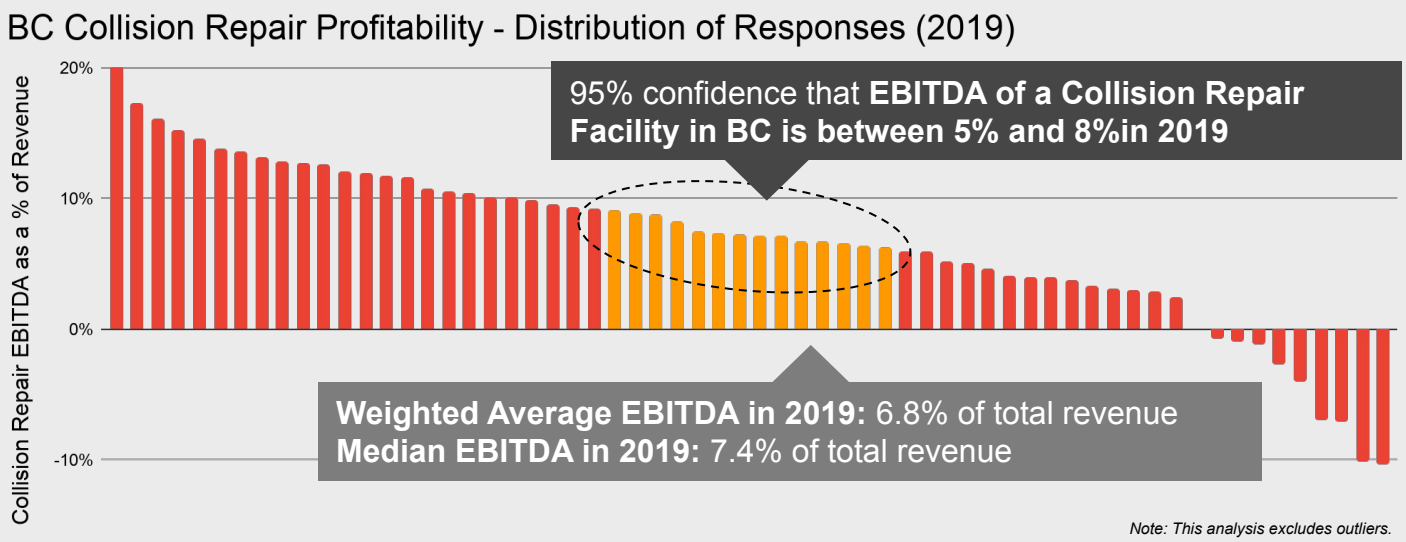
The profitability of a Collision Repair facility in BC in 2019 was below the national average of 8.5%, and lower than other provinces. Low profitability of the Collision Repair industry in BC can largely be attributed to higher indirect costs than other jurisdictions. Indirect costs of a facility in BC were 2.2 percentage points above the national average, and higher than all provinces except for Alberta. Direct costs were the third highest in Canada, behind Quebec.



Source: PwC Analysis

Wide range of profitability across the industry

The distribution of Repair Industry Survey responses illustrates a wide range in the profitability of Collision Repair facilities in the province. The maximum EBITDA of a Collision Repair facility in 2019 was 20.2%, while the minimum was -10.4%. The median EBITDA of a Collision Repair facility during the same year was slightly above the average, at 7.4% of total revenue. This wide range and higher median indicates that a large group of facilities were able to maintain profitability and outperform the provincial average of 6.8% in 2019. ICBC is the predominant source of revenue for all of these facilities, with uniform compensation rates, suggesting that the strong performers may have been able to maintain higher profitability through cost reduction initiatives.

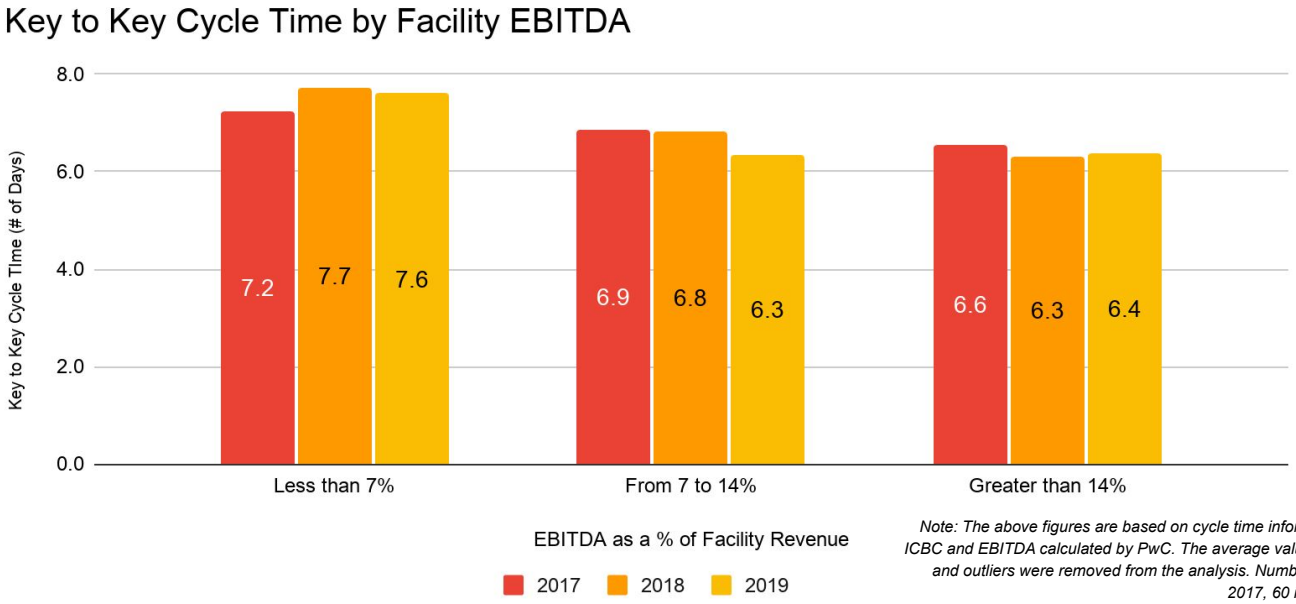


Note: This analysis excludes outliers.

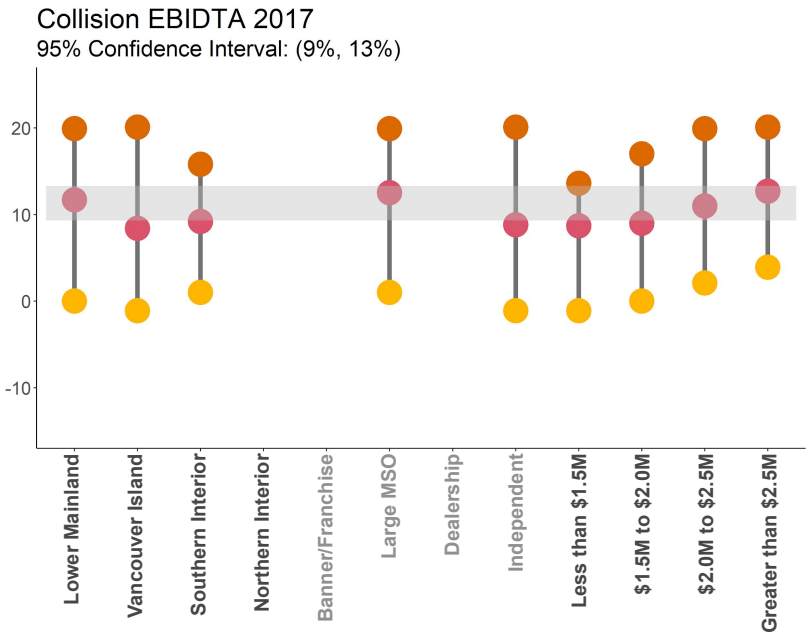
The more profitable facilities show signs of greater efficiency

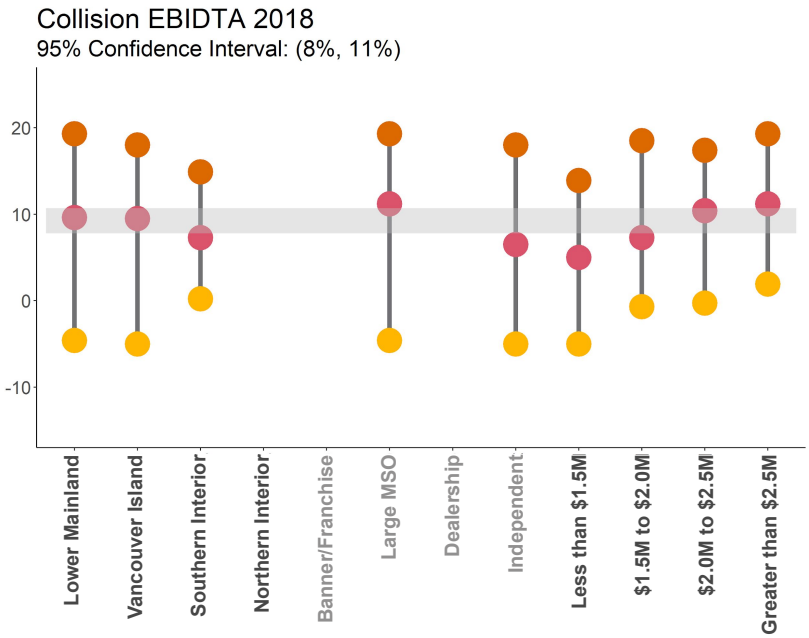
A closer look at the relationship between Collision Repair facility EBITDA and Cycle Time indicates a relationship between profitability and efficiency. Key to Key Cycle Time is a performance indicator calculated by ICBC for all Collision Repair program participants. It is defined as the number of days between the date the vehicle arrived for a repair and the date it is picked up or delivered to the customer. Cycle time figures for each facility were provided by ICBC and assessed alongside EBITDA calculated from the Repair Industry Survey.

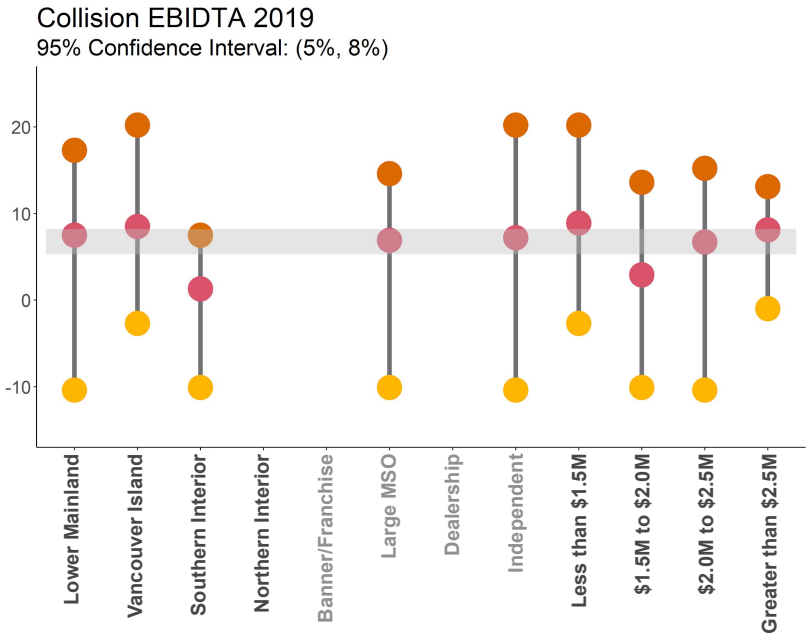
Collision Repair facilities with EBITDA of less than 7% had the highest Key to Key Cycle time across BC over the past three years, reaching 7.6 days in 2019. Conversely, facilities with higher EBITDA had cycle times of 6.3 to 6.4 days in 2019. The most profitable facilities, with EBITDA of greater than 14%, reported the lowest cycle times in 2017 and 2018, with a slight increase of 0.1 days in 2019. These figures further suggest that more profitable facilities in BC may have been able to generate cost efficiencies through increased operational efficiency.



Note: The above figures are based on cycle time information provided by ICBC and EBITDA calculated by PwC. The average values are unweighted and outliers were removed from the analysis. Number of facilities: 57 in 2017, 60 in 2018, 62 in 2019.







Source: PwC Analysis

EBITDA - Breakdown of BC facilities by Strata

The following charts represent a breakdown of EBITDA calculated by PwC by strata for 2017, 2018 and 2019. Ranges of values are provided for three strata (region, ownership type and size) to illustrate differences in profitability within the BC market.

General observations

- The confidence interval shifted downward over the past three years indicating a decline in profitability of Collision Repair facilities in BC.
- The confidence interval for profitability of a Collision Repair facility in BC also narrowed. The range of average EBITDA decreased from 4% (between 9% and 13%) to 3% (between 5% and 8%).

Region

- Range of EBITDA values in the Lower Mainland widened in the past three years, indicating growing variability in profitability.
- Southern Interior reported a large decline in EBITDA between 2018 and 2019, indicating recent profitability challenges in that region.
- *No observations can be made for the Northern Interior as the responses did not meet PwC's standard for participation relative to the total population (N must be greater than 3).*

Ownership structure

- Independent facilities consistently reported the highest EBITDA values among ownership types. This may be attributed to smaller corporate costs (e.g. management, admin or marketing).
- Profitability of Large MSOs declined in 2019 and the range of responses widened. In discussions with the Working Group, it was mentioned that Large MSOs may show lower profitability due to internal reporting and management costs.
- *No observations can be made for Banner/Franchises and Dealerships as the responses did not meet PwC's standard.*

Size

- Large facilities consistently had the smallest range of EBITDA values, and minimum profitability never fell below zero.
- Small facilities had the lowest EBITDA values in 2017 and 2018. When combined with the finding that Independent operators reported the highest EBITDA ranges, it is apparent that revenue size affects profitability.

Variations across strata were investigated to understand if the ranges reported by each group were statistically significant relative to one another. Statistical significance was assessed using p-values, a common statistical test used to measure the probability of whether the differences could have occurred randomly or if a future test would yield similar results.

Regional differences

- Differences in profitability between the Northern Interior and all other regions were statistically significant in 2017.
- Differences in profitability between all regions in 2018 were not statistically significant.
- Recent differences (2019) in profitability between the Southern Interior and Lower Mainland were statistically significant.

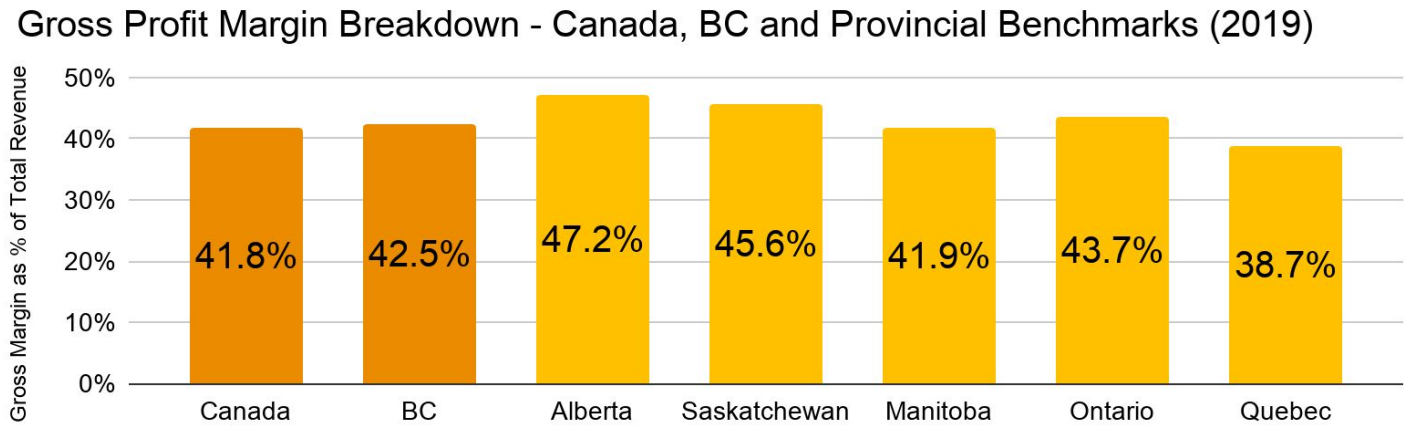
Ownership structure differences

- Large MSOs and Independent facilities had statistically significant differences in profitability for the past three years.

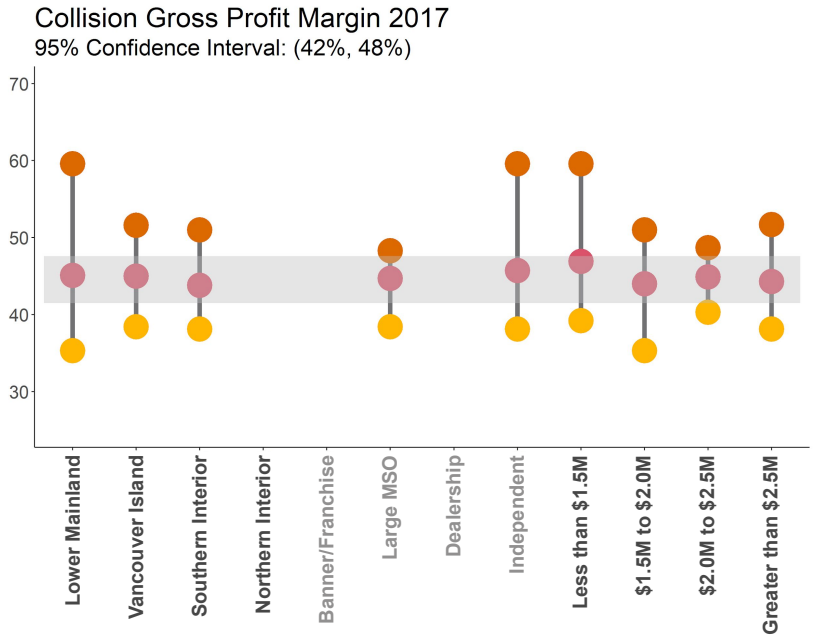
Small gross profit margins relative to the rest of Canada

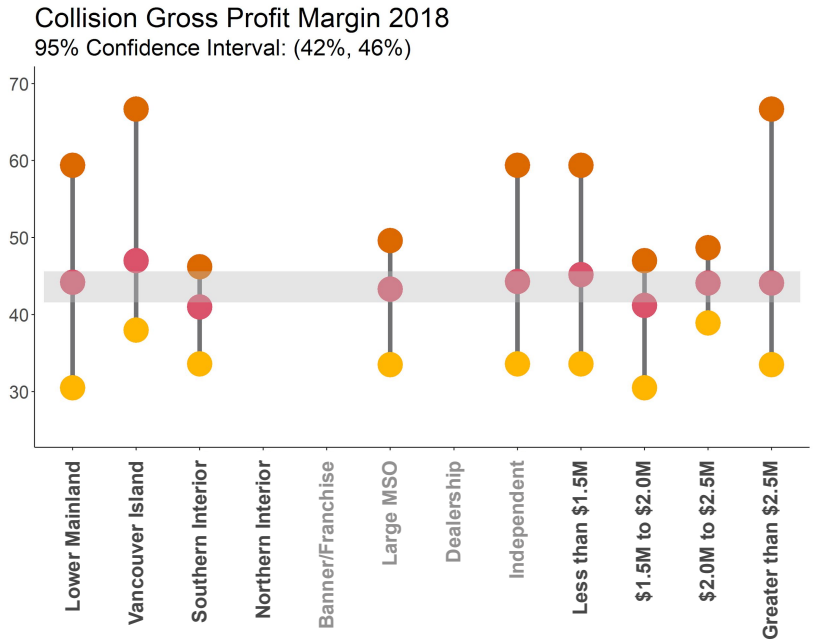
The average gross profit margin of a Collision Repair facility in Canada was 41.8% in 2019. Before removing indirect costs, the average gross margin of Collision Repair facilities in BC is slightly above this national average. It is 0.6 percentage points higher than Manitoba and 3.1 percentage points lower than Saskatchewan.

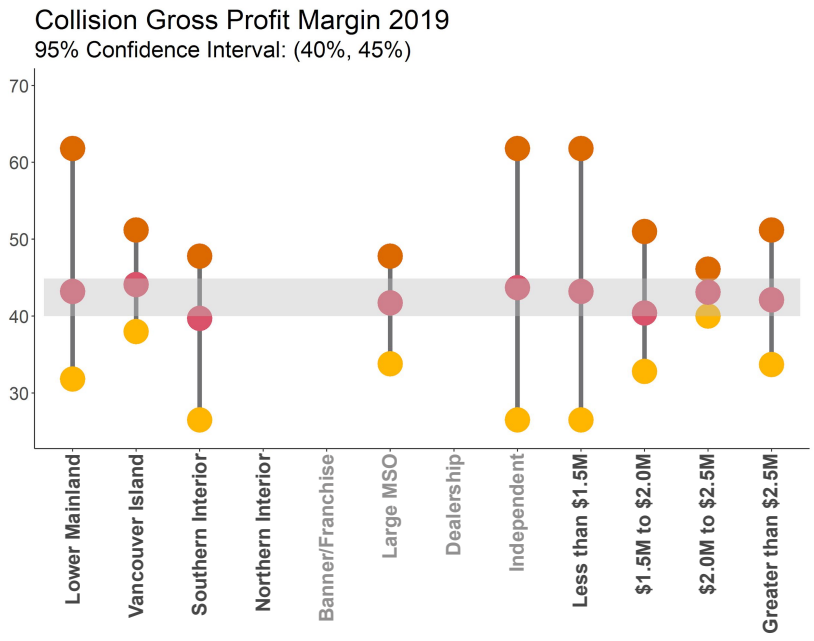
The gross margin of BC facilities decreased by two percentage points over the past three years, indicating part of the decline in overall repair profitability can be attributed to the cost of goods. Over the same time period, EBITDA of a Collision Repair facility declined from 11.3% of total revenues to 6.8%. Stronger profitability in previous years was supported by lower direct costs and higher gross margins, which have now eroded to a number below the average for many Canadian provinces. This suggests that further increases in direct costs will continue to negatively impact the profitability of a facility in BC.



Source: PwC Analysis







Source: PwC Analysis

Gross Profit Margin - Breakdown of BC Facilities by Strata

The following charts represent a breakdown of gross profit margins calculated by PwC by strata for 2017, 2018 and 2019. Ranges of values are provided for three strata (region, ownership type and size) to illustrate differences in profitability within the BC market.

General observations

- Between 2017 and 2019, the confidence interval for gross profit margin of a Collision Repair facility in BC narrowed from 6% (between 42% and 48%) to 5% (between 40% and 5%) due to higher participation.
- The smaller interval in 2019 indicates that there is 95% confidence that the average gross profit margin of a Collision Repair facility in BC sits between 40% and 45%.

Region

- Lower Mainland consistently reported the largest range of gross profit margins, indicating higher variability.
- Gross profit margins on Vancouver Island fluctuated heavily between 2017 and 2019. Vancouver Island also reported the highest average gross profit margin among regions.
- *No observations can be made for the Northern Interior as the responses did not meet PwC's standard for participation relative to the total population (N must be greater than 3).*

Ownership structure

- Independents reported the largest range of gross profit margins, and the highest gross profit margin of any ownership structure in 2019. This trend is aligned with Independents reporting low average direct costs.
- Large MSOs have the smallest range of gross profit margins with little fluctuation over the past three years, indicating greater stability in their annual costs.
- *No observations can be made for Banner/Franchises and Dealerships as the responses did not meet PwC's standard.*

Size

- Both the smallest and largest facilities had significant variability in gross profit margins, however small facilities consistently reported the lowest margins of all facility sizes over the past three years.

Variations across strata were investigated to understand if the ranges reported by each group were statistically significant relative to one another. Statistical significance was assessed using p-values, a common statistical test used to measure the probability of whether the differences could have occurred randomly or if a future test would yield similar results.

Regional differences:

- Differences in gross profit margins across all regions in the province were statistically significant in 2017.
- Variation in gross profit margins in the Lower Mainland compared to Vancouver Island and Southern interior have been statistically significant for the past three years.
- Northern Interior has had statistically significant differences in gross profit margins for the past three years.

Ownership structure differences:

- From 2017 to 2019, there were no statistically significant differences in gross profit margins between Dealerships and Independents.
- All ownership types had statistically significant differences in gross profit margins in 2019.

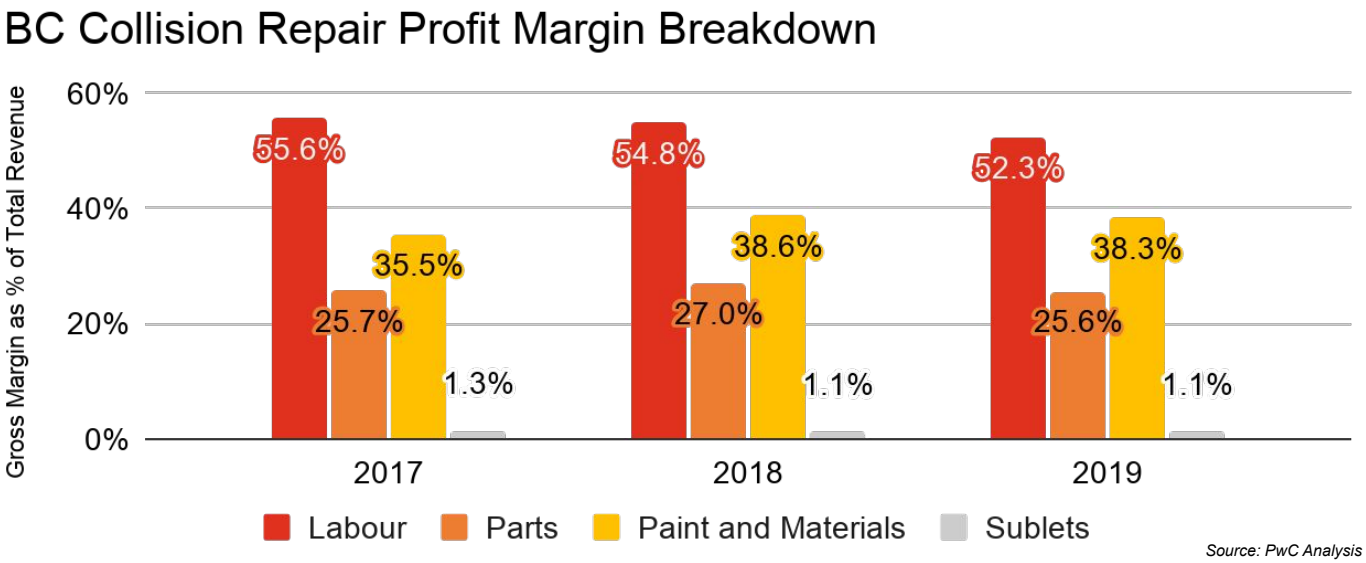
Declining profitability of Labour and stability in Parts

A closer look at the profitability of specific components reveals different gross profit trends. Labour generates the largest profit margin for a Collision Repair facility in the province, followed by Paint & Materials, then Parts.

The gross profit margin on Labour decreased from 55.6% to 52.3% over the past three years, decreasing by 2.5 points in 2019. Gross profit margins on Parts remained stable between 2017 and 2019, with some fluctuation in 2018. The profitability of Paint and Materials increased over the same time period, reaching 38.3% of total revenues in 2019.

The profitability of sublets fluctuated slightly between 2017 and 2019, generating gross profit margins of 1.1% of total revenue. This suggests that Collision Repair facilities do not see sublets as a source of profit, reducing their need to invest in additional specialized equipment that may not generate returns in the near term.

These changes suggest that Collision Repair facilities in the province have experienced greater profitability in Paint and Materials, stability in Parts, and declines in Labour. Given the size of Labour's contribution to overall gross profit margin, it can be ascertained that the decrease over the past three years negatively influenced the profitability reported by Collision Repair facilities in the province.



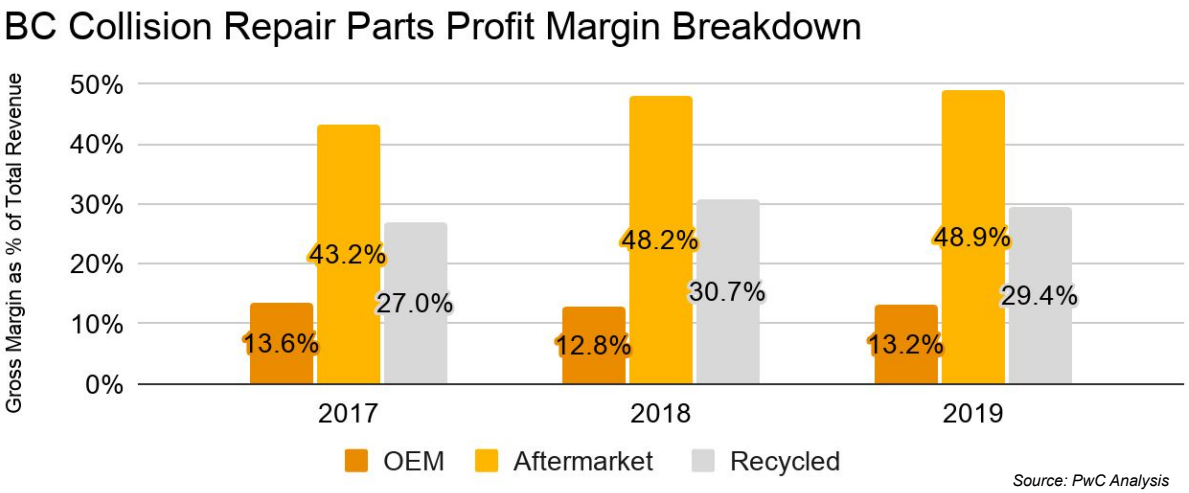
Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of gross profit margins: 56 in 2017, 62 in 2018 and 69 in 2019.

Varying gross profit margins by repair part type

Further breakdowns of parts gross profit margins illustrates large differences in profitability by part type. While OEM parts represent a significant source of revenue, they are the least profitable, yielding 13.2% gross margin in 2019. Aftermarket parts have a significantly higher gross profit margin at 48.9% of total revenues in 2019, followed by Recycled parts with 29.4%.

Profit margins on OEM parts remained stable over the past three years, while Aftermarket margins increased by 5.7 percentage points during the same period. Aftermarket parts were the only type that experienced a consistent, year over year increase in gross profit margin, indicating that they will continue to positively contribute to the profitability of a Collision Repair facility in BC. However, Aftermarket parts only make up 4 to 5% of total shop revenue, reinforcing the influence OEM parts have on overall profitability.



Source: PwC Analysis

Please note that totals may not match data observed in the breakdown due due to differences in the number of responses. All numbers have been rounded to the nearest whole number.

Profitability

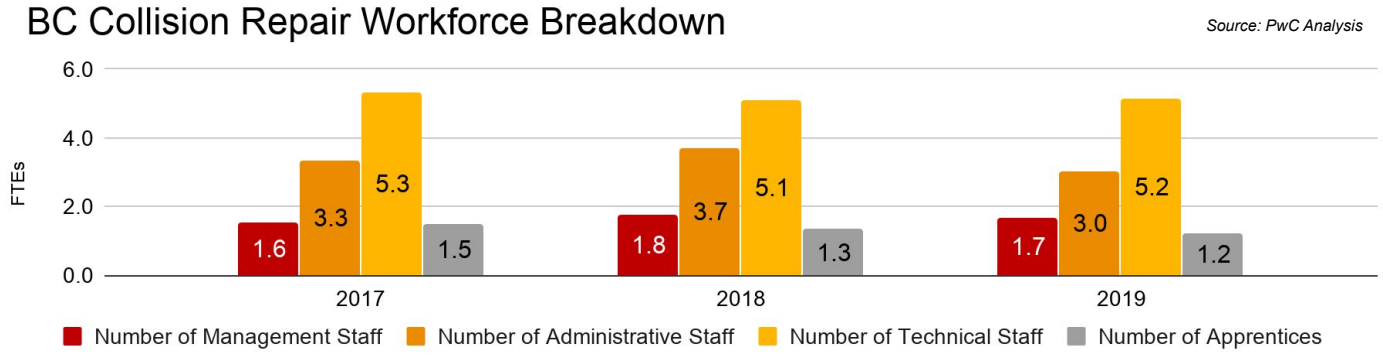
Technicians and Administrative staff represent the majority of headcount

Full-time equivalents (FTE) is used to express the workload of an employee and was used to account for the number of employees dedicated to specific positions. Positions relevant to a Collision Repair facility were defined as Management, Administration, Technicians and Apprentices. Across these positions, facilities across the province reported a decrease in the average headcount from 11.7 and 11.1 FTE over the past three years.

Technical staff represent the largest component of a Collision Repair facility's workforce at 5.2 FTE in 2019. This number has declined, with the proportion of technicians relative to the total number FTEs shrinking from 48% in 2017 to 43% in 2019.

Apprentices are mentored by technicians to perform repair work through on-the-job training programs. The number of Apprentices decreased over the past three years from 1.5 FTE to 1.2 FTE, which is likely attributable to the challenges facilities are facing with talent attraction and retention.

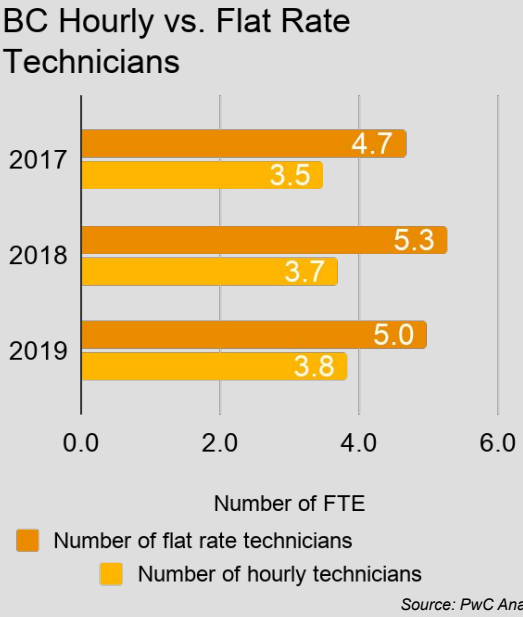
Administrative FTEs represent the second largest component of a Collision Repair facility's workforce. Similar to technicians, the number of Administrative staff decreased between 2017 and 2019. The number of Management staff fluctuated slightly during this period, reaching a peak in 2018, which aligns to the year with the highest volume of repairs.



There are two common compensation structures for technicians at Collision Repair facilities: hourly rate and flat rate. Hourly rate technicians are paid per hour of work, whereas flat rate technicians are paid per repair order they complete. Under a flat rate pay structure, hours are assigned to common types of repair orders by the Collision Repair facility based on how long it should take to complete.

While Collision Repair facilities in BC are deploying a mix of hourly and flat rate pay structures for technicians, most are compensated with a flat rate structure. Industry representatives indicated that the differences between pay structures are connected to technician seniority. Apprentices and newer technicians are typically compensated hourly as they learn and acquire repair skills, and more experienced technicians are compensated with flat rates.

Increases in the average number of both technician types were similar over the past three years, growing by 0.3 FTEs. Of the facilities that employ hourly technicians, the average number of FTEs increased from 3.5 to 3.8 between 2017 and 2019, and the average flat rate number of technicians increased from 4.7 to 5.0 over the same period.



Growing number of technicians are compensated on flat-rate models

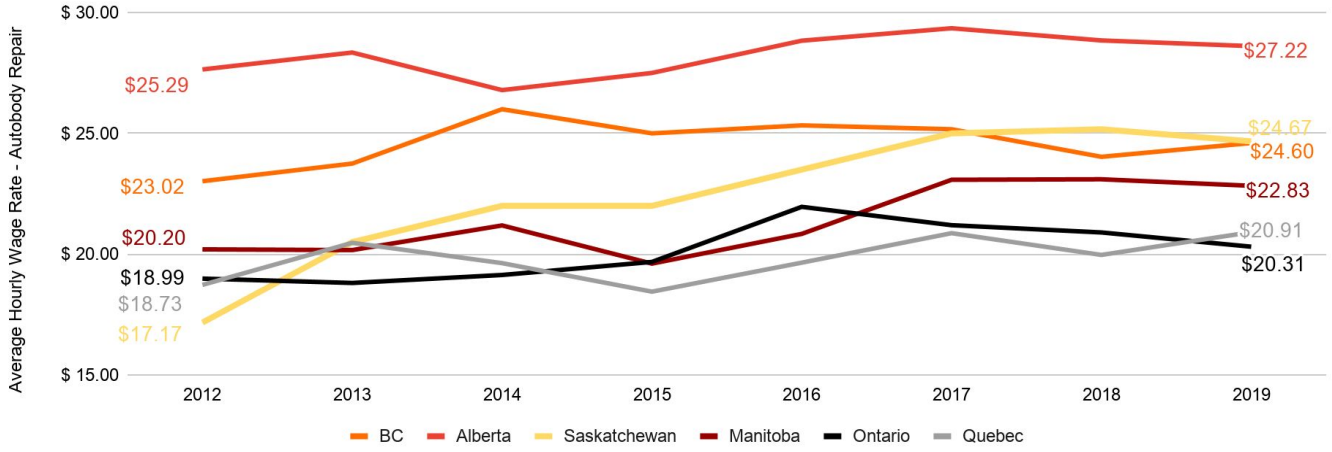
Please note the total number of technicians in the above graph does not match the number of hourly or flat rate technicians due to differences in the number of responses.

Technician compensation in BC has historically trailed Alberta, but exceeds other provinces

The average wage for a technician employed by a Collision Repair facility under an hourly rate structure varies by province. The Canadian Job Bank publishes hourly wage rates by the National Occupation Classification (NOC) for each province. PwC analyzed publicly available information for NOC 7322 - Motor Vehicle Autobody Repairers, which accounts for technicians that restore vehicle body parts, repaint body surfaces and metal repairers. The wage rate does not include additional forms of compensation, such as bonuses or benefits paid at the facility's discretion.

The highest average hourly wage rate paid in Canada was in Alberta, which increased from $25.29 in 2012 to $27.22 in 2019. The wage paid to technicians in BC was also higher than most Canada provinces, reaching $24.60 in 2019. This exceeded the rates paid in Manitoba, Ontario and Quebec for the past eight years, and fell slightly below Saskatchewan in 2019. When considered alongside the labour availability concerns for skilled technicians, it appears that BC Collision Repair facilities may be paying higher rates in order to attract and retain skilled workers.

Average Hourly Wage Rate for Technicians - Canada Breakdown



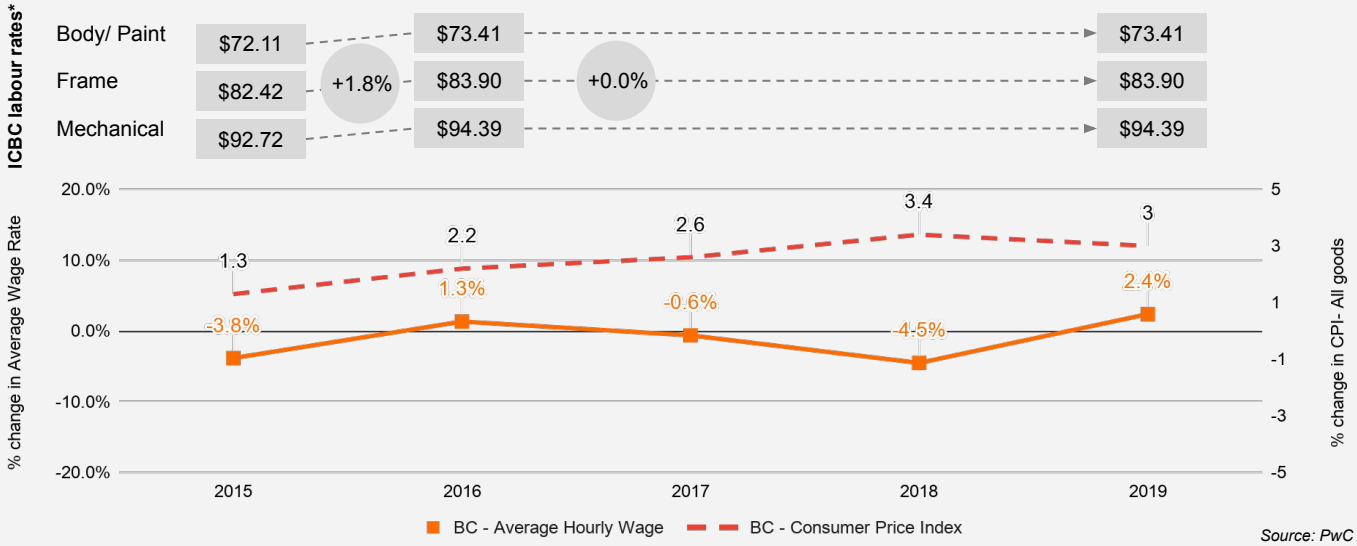
Source: PwC Analysis

Compensation for technicians in BC increased with CPI

Technician wages were compared to the Consumer Price Index (CPI) to assess the relationship between compensation and the price of goods and services in BC. Despite fluctuations, the hourly wage rate in BC increased along with CPI over the past five years. This suggests that Collision Repair facilities in BC have adjusted their wages to account for the cost of living. Between 2018 and 2019, technician wages in BC rose by 2.4% and the CPI in BC increased by 3 points.

There was been little change in the rate paid by ICBC to Collision Repair facilities per hour of work over the same time period. Collision Repair program participants receive the same rates for body and paint, frame and mechanical labour today as in 2016. The last increase provided by ICBC was in 2016.

Average Change in Hourly Wage at BC Collision Facility vs. Change in Consumer Price Index (CPI)



Source: PwC Analysis
**Rates shown apply to c.a.r. Shop VALET participants*

Profitability

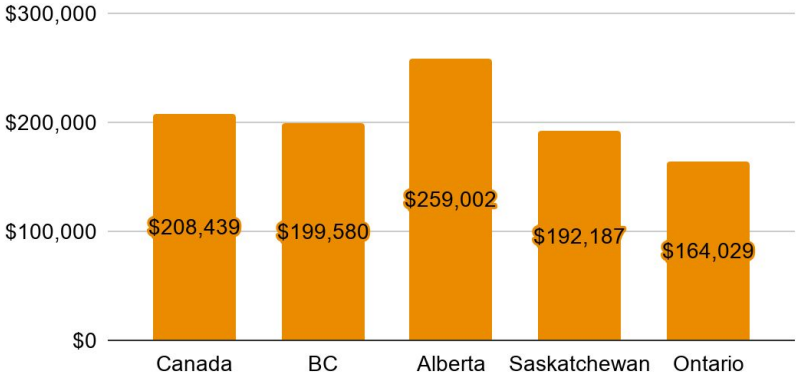
Revenue productivity slightly below the Canadian average

Revenue per employee is a common metric used to track changes in operational efficiency. Average revenue generated per employee at Collision Repair facility in BC was $199,580 in 2019, slightly below the national average of $206,439. Facilities in Alberta reported the highest revenue productivity with over $250,000 generated per employee, while Ontario was the lowest at $164,029. Revenue per employee in BC outperformed Saskatchewan, another public province with public insurance, which had an average revenue of $192,187 in 2019. No benchmarks were available for Manitoba.

Given that technicians represent a significant portion of a Collision Repair facility's total workforce, revenue per technician was also calculated. Across BC, revenue per technician and employee both increased between 2017 and 2018 and fell in 2019.

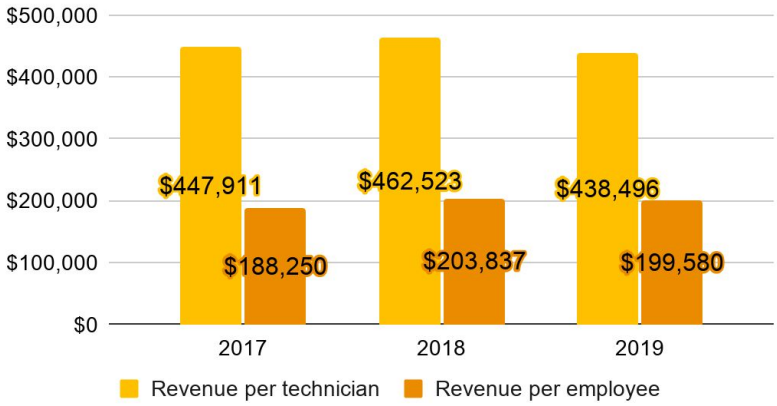
Decreases are consistent with the fall in overall facility revenue from $2.4 to $2.3 million, indicating the decline in productivity may be connected to sales volumes.

Canada Collision Repair Revenue Per Employee by Province (2019)



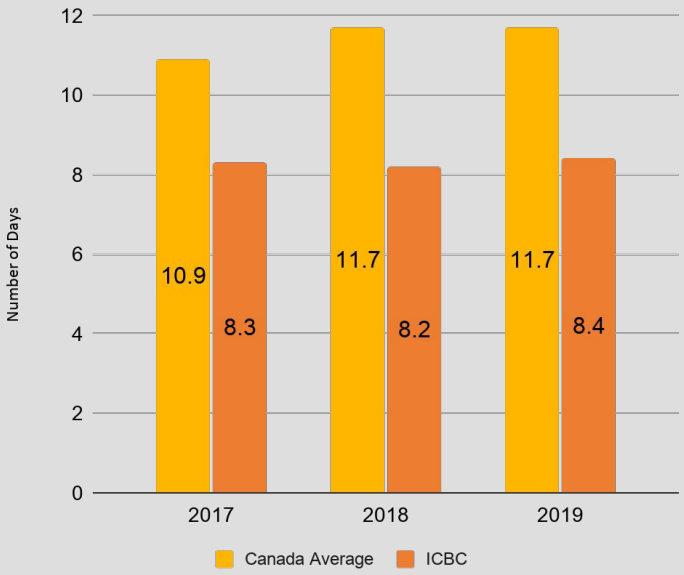
Source: PwC Analysis

BC Collision Repair Revenue by Employee Type



Source: PwC Analysis

BC Collision Repair Cycle Time - Length of Rental



Source: ICBC, Autohouse Technologies

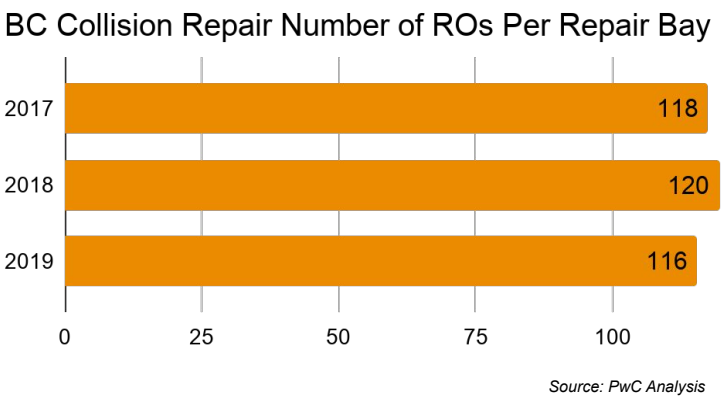
Source: Press reader, DesRosier Automotive Consultants, PwC Analysis

Increasing cycle time in BC and Canada

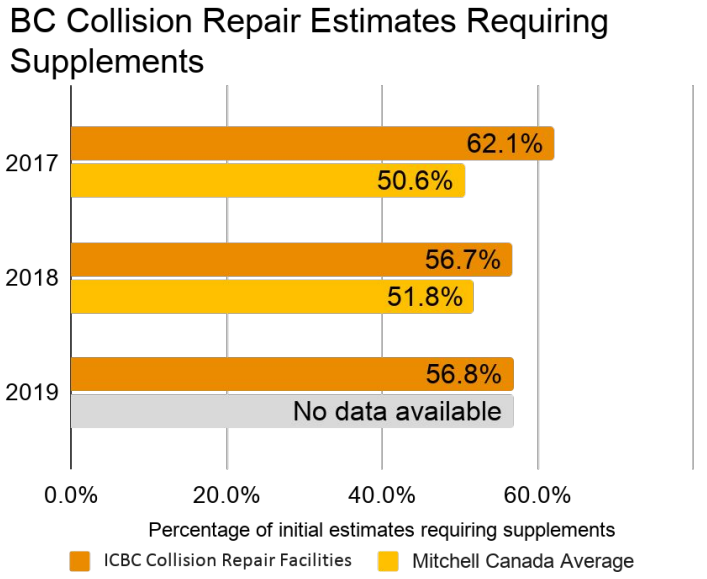
Length of vehicle rental was used to measure the overall cycle time of a repair. It is calculated as the number of days between the date the customer first received a rental vehicle and the date it was returned to pick-up their repaired vehicle. It is a common industry metric used to track the efficiency of a repair and a facility's ability to meet customer needs.

Average cycle time increased over the past three years for Collision Repair facilities in BC. From 2017 to 2018, cycle time decreased by 0.1 days to 8.2 days. This figure increased in 2019, indicating that Collision Repair facilities were unable to lower average cycle time to previous levels.

The average length of rental at an ICBC Collision Repair facility was consistently 2 to 3 days below the national average. Part of this is expected, as ICBC requires the use of courtesy cars/ATS, which would lower the overall length of rental. However, it still appears that Collision Repair facilities in BC are outperforming the rest of Canada in terms of efficiency.



Source: PwC Analysis



Source: ICBC, Mitchell International

Changes in productivity on the shop floor

The number of repair orders (ROs) performed per repair bay is a metric used to track the throughput of a Collision Repair Facility and is an indicator of repair efficiency.

The number of ROs performed per repair bay varied slightly over the past three years at Collision Repair facilities in BC. There are, on average, eight repair bays operated by a single Collision Repair facility in BC. The number of ROs per repair bay reached a peak in 2018 with 120 ROs, and fell to 116 in 2019. These small fluctuations indicate minimal change in the productivity per repair bay.

Improved estimate efficiency

A supplemental estimate is required if the technician uncovers additional damage after beginning their work and needs to modify their repair plan. Initial estimate efficiency is used to track the accuracy of the first estimate provided by a Collision Repair facility compared to the final estimate. This metric can be reviewed in conjunction with average cycle time to assess operational efficiency.

The percentage of initial estimates requiring supplements at ICBC Collision Repair facilities decreased between 2017 and 2019, indicating an improvement in initial estimate efficiency.

ICBC's initial estimate efficiency was above the Canadian average in 2017 and 2018. When considered alongside average cycle time, it can be deduced that, while the number of repair estimates requiring supplements is improving, the overall complexity of repair processes may be contributing to recent increases in repair duration in 2018 and 2019.

Summary of observations - Collision Repair

Declining profitability, with differences across region, size and ownership

The profitability of a Collision Repair facility in BC has fallen to below the Canadian average. However, this decline was not uniformly experienced across the province. Statistically significant differences in EBITDA across regions, facility size and ownership type demonstrate variation in financial health and performance of Collision Repair facilities.

Rising labour costs are eroding gross profit margins

Labour is the largest direct cost paid by Collision Repair facilities, and is becoming less profitable. Facilities have kept pace with the cost of living in the province but in order to retain skilled technicians they are increasing hourly wage rates. Gross profit margins on Labour declined over the three years reported, and the continued sparsity of labour will continue to adversely impact facility profitability.

OEM Parts margins are falling, and the Aftermarket is becoming more profitable

As the number of OE requirements accelerates, declining profitability of OEM parts poses a growing challenge for Collision Repair facilities in BC. Relative to OEM, the profitability of Aftermarket parts steadily increased over the past three years. While these margins were more than three times stronger than OEM, demand for OE will continue to rise, eroding total parts margins.

Growing administrative and training cost pressures

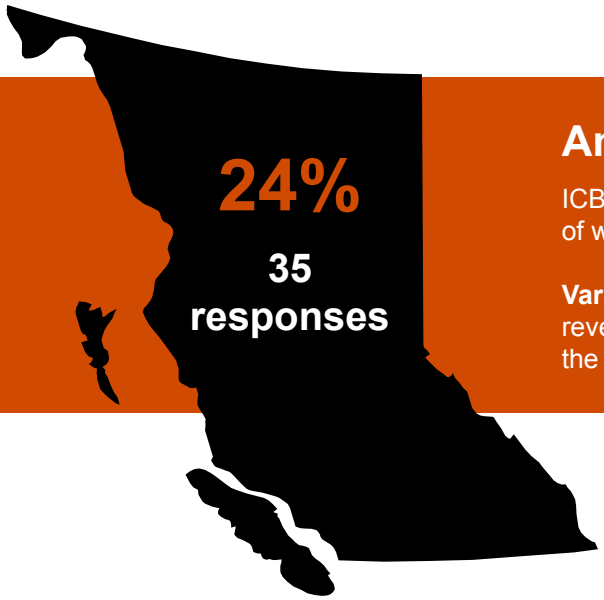
Indirect costs of a Collision Repair facility in BC are higher than the Canadian average due to administration and training requirements. Administrative requirements associated with ICBC programs, such as estimating procedures, have contributed to cost increases at facilities across the province, particularly with respect to staffing and operations. Training costs recently increased, and will continue to grow as facilities make investments to upskill their workforce and adjust their accounting procedures to accurately capture additional investments in training programs and certifications.

Falling headcount of Apprentices and Technicians

Declines in the average number Technical staff suggests that Collision Repair facilities in BC may be facing challenges recruiting new Technicians as their workforce retires. Similar decreases in the average number of Apprentices creates the potential to further exasperate this challenge by limiting the supply of future talent.

Investments in technology and operational efficiency are improving profitability

There was a strong, positive correlation between Collision Repair facilities who indicated they made investments in technology and their profitability. Looking ahead, facilities who make investments in the equipment required to repair the technology in newer vehicles will be able to maintain competitiveness. There was also a strong, positive correlation between Collision Repair facilities who implemented initiatives to improve operational efficiency and profitability, indicating that the introduction of new programs, such as Lean Six Sigma, generated cost reductions and improvements to EBITDA.



Analysis findings: Dual Repair

ICBC's Dual facility population is made up of **147 individual facilities**, of which **35 responded to the Repair Industry Survey.**

Varied participation across suppliers based on size (represented by revenue) with **little reporting of Glass revenues and COGS**, limiting the ability to generate insights on overall facility profitability.

Lower Mainland

- **11 responses out of 63 ICBC suppliers (17%)**
- Responses were even across all ownership structures, led by Large MSOs

Northern Interior

- **7 responses out of 16 suppliers (44%)**
- Respondents comprised mostly of Independents and Small MSOs
- Over 40% did not report their total revenues

Southern Interior

- **9 respondents out of 40 suppliers (23%)**
- Respondents comprised of only Independents and Large MSOs

Vancouver Island

- **8 respondents out of 28 suppliers (29%)**
- Large proportion of Independents, and largest representation of Dealerships

Independent | Large MSO | Small MSO | Dealer | Banner/Franchise

Region	Responses	% of ICBC suppliers
Lower Mainland	11	**17%**
Northern Interior	7	**44%**
Southern Interior	9	**23%**
Vancouver Island	8	**29%**

Pricing

Similar revenue breakdown to Collision facilities, except for Paint and Materials

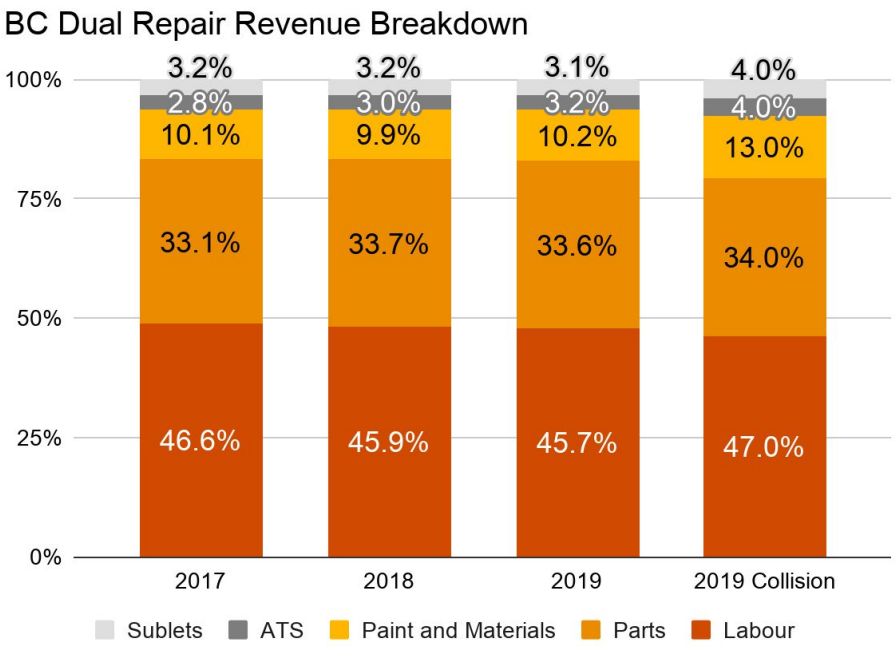
Dual facilities in BC reported larger total revenues relative to Collision. In 2019, the average revenue reported for a Dual facility in BC was $2,960,003 compared to $2,318,637 for Collision. Dual facilities also did not experience the same decrease in total revenue between 2018 and 2019 as their Collision counterparts, indicating that they have been able to more steadily generate revenue from other sources.

The revenue breakdown of a Dual facility is similar to a Collision facility, with minor differences in Paint & Materials. Paint & Materials revenue comprised 10.2% of a Dual facility's total revenue in 2019, relative to 13.0% for Collision facilities in the same year. This indicates that Paint & Materials are a larger source of business for Collision facilities relative to Dual. Additional differences in revenue breakdowns exist for Alternate Transportation Services (ATS) and Sublets, both of which were roughly one percentage point higher among Collision facilities.

Upon speaking with the Industry Working Group (IWG), it was determined that the revenue products listed above include revenues from glass Labour and Parts. According to the IWG, a majority of Dual facilities' shop management systems and accounting practices bundle collision and glass revenues together, and therefore, they were unable to split revenues between collision and glass when providing data in the Repair Industry Survey.

Average facility revenue		
	Collision	Dual
2017	$2,321,960	$2,827,483
2018	$2,412,203	$2,938,937
2019	$2,318,637	$2,960,003

Source: PwC Analysis



Source: PwC Analysis

Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of revenue: 21 in 2017, 21 in 2018 and 21 in 2019.

Repair costs

Cost structure nearly identical to a Collision facility

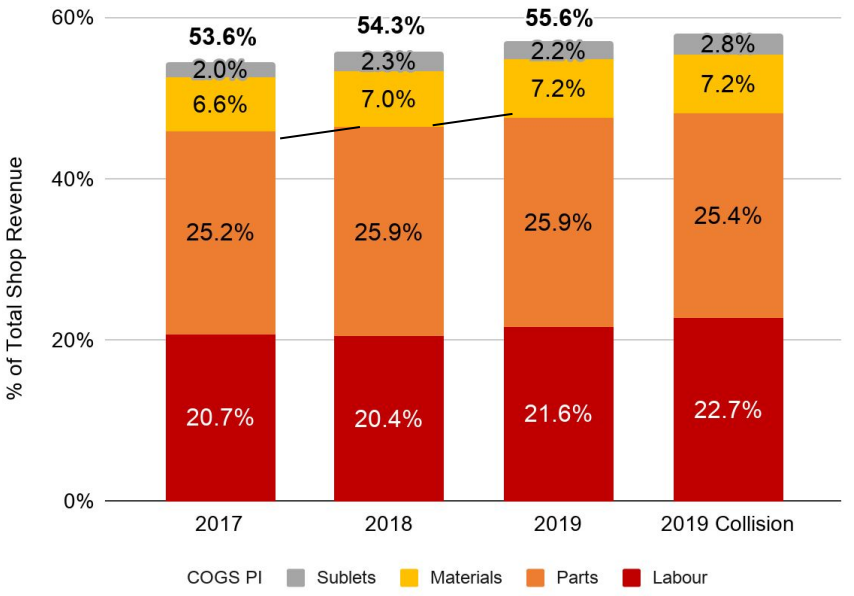
Parts and Labour comprise the majority of direct costs for Dual facilities, representing roughly 87% of total direct costs in 2019. Direct costs increased by 1.3 percentage points from 2018 to 2019, largely due to an increase in Labour.

Direct costs for Dual facilities in BC were below Collision in 2019, representing 55.8% of total revenue. Labour costs at a Dual facility in BC were 1.1 percentage points below Collision in 2019, while Parts costs were 0.5 percentage points above Collision.

Paint & Materials costs represent the same proportion of total revenue as Collision.

Similar to pricing, industry representatives revealed that the minor differences in Parts and Labour between Collision and Dual can be attributed to the bundling of collision and glass costs. Paint & Materials were provided separately.

BC Dual Repair Direct Cost Breakdown



Source: PwC Analysis

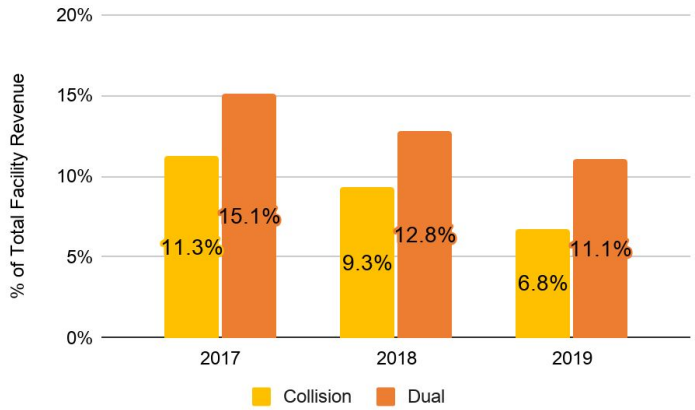
Please note that totals from survey data may not match data observed in the breakdown due to differences in the number of responses. All numbers have been rounded to the nearest whole number. Number of facilities that provided a breakdown of cost: 20 in 2017, 21 in 2018 and 21 in 2019.

Profitability

Dual facilities have been more profitable than Collision

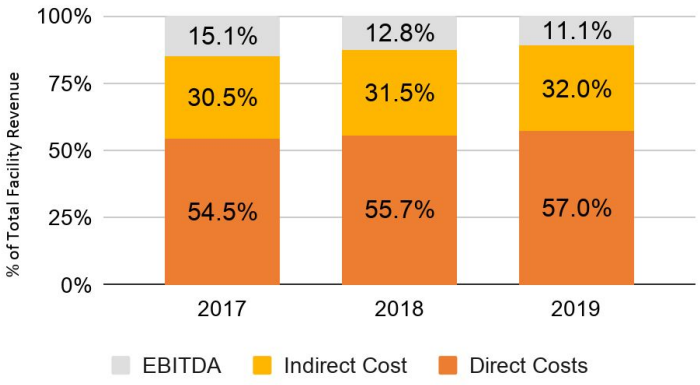
Dual facility profitability outperformed Collision over the past three years. While both experienced declines, Dual facilities were able to maintain stronger profit margins, contributing to 11.1% EBITDA in 2019. The largest operational distinction between the two facilities is their Auto Glass businesses, which could be contributing to differences in EBITDA. However, PwC did not receive sufficient data from the Industry Repair Survey to report on the profitability of Glass facilities.

BC Collision vs. Dual Repair Profitability



Source: PwC Analysis

BC Dual Repair Profitability



Source: PwC Analysis

Despite growing revenues, the EBITDA of a Dual Repair facility in BC declined by 4 percentage points over the past three years. This was roughly a similar three-year drop in profitability experienced by Collision Repair facilities, who fell from 11.3% in 2017 to 6.8% in 2019. Given that average revenue for a Dual facility increased steadily between 2017 and 2019, the decline in profitability can be attributed to increases in both direct and indirect costs.

Differences in profit margins across Labour, Parts and Paint & Materials

Detailed breakdowns of the profit margins associated with Labour, Parts and Paint & Materials illustrate additional differences in profitability between Collision and Dual facilities in BC between 2017 and 2019..

Labour profit margins: Dual facilities reported slightly higher gross profit margins compared to Collision, earning 52.6% gross profit on Labour in 2019.

Parts profit margins: Gross profit margins were consistently three to four percentage points lower for Dual facilities compared to Collision. Dual earned 22.4% gross profit on Parts in 2019, where Collision gross profit was 25.6%.

Paint & Materials profit margins: Dual facilities earned significantly smaller gross profits on Paint & Materials relative to Collision. In 2019, Collision facilities earned an average gross profit of 38.3%, while Dual earned 27.7%. This can be attributed to Paint & Materials being used for only the Collision aspect of the Dual business. As a result, Paint & Materials would make up a smaller proportion of the facility's total revenues when compared to a Collision only facility.

Breakdown of Gross Profit Margins - Collision vs. Dual Repair
(All years, Gross Profit Margin as % of Total Facility Revenue)

	Collision Gross Profit Margins			Dual Gross Profit Margins		
	2017	2018	2019	2017	2018	2019
Labour	55.6%	54.8%	52.3%	55.3%	55.6%	52.6%
Parts	25.7%	27.0%	25.6%	22.9%	22.2%	22.4%
Paint & Materials	35.5%	38.6%	38.3%	28.2%	24.9%	27.7%

Source: PwC Analysis

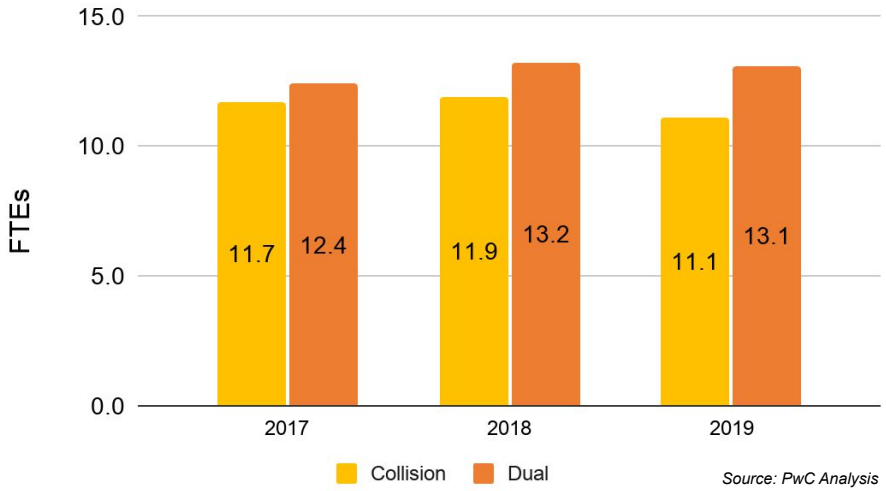
Workforce

Larger staff counts at Dual facilities relative to Collision

Due to the size of their operations, Dual facilities in BC have larger headcounts when compared to Collision. A Dual repair facility employed an average of 13.1 FTEs in 2019, an additional 2.0 FTEs compared to Collision who had an average of 11.1.

The number of staff at a Dual facility increased over the past three years, while it slightly decreased for Collision. Between 2017 and 2019, the number of FTEs at a Dual facility increased by 0.7. The average number of Collision Repair facilities decreased by 0.6 FTEs over the same time period, indicating that the impact of the shortage of skilled technicians may be less pronounced at Dual facilities.

Collision vs. Dual Repair Facility - Average Number of Staff

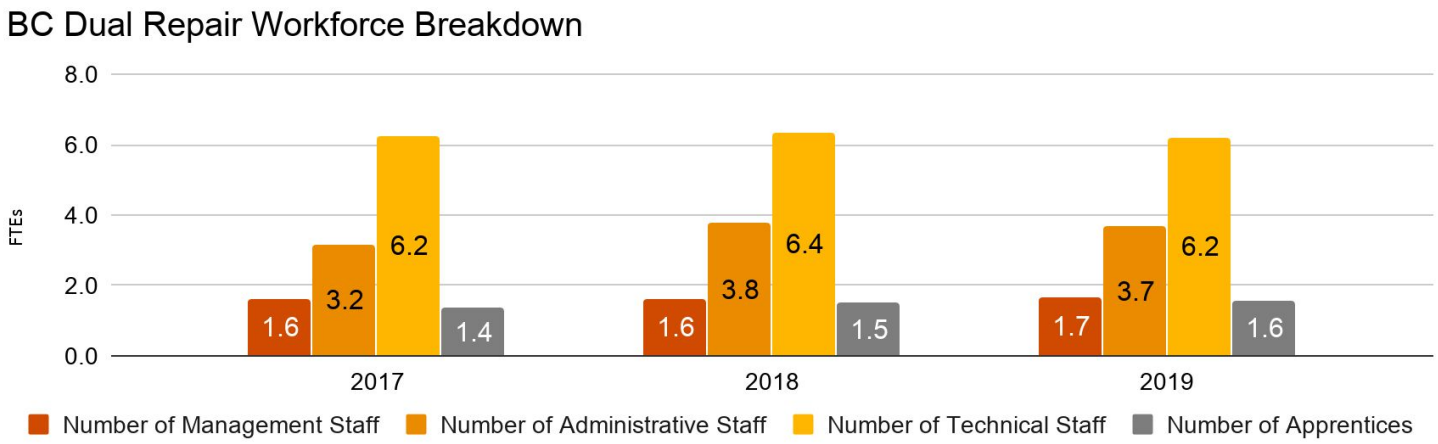


Source: PwC Analysis

Increasing use of Apprentice labour, and rising Administrative work

Similar to Collision, Technical staff represent the largest FTE count at a Dual facility. Dual facilities in BC had an average of 6.2 Technicians in 2019, representing 47% of their overall workforce.

However, unlike Collision facilities, Dual facilities reported annual increases in the number of Administrative staff and Apprentices. Industry representatives indicated that these differences can be attributed to their broader scope of operations and services provided in the market, such as Auto Glass repair and replacement.



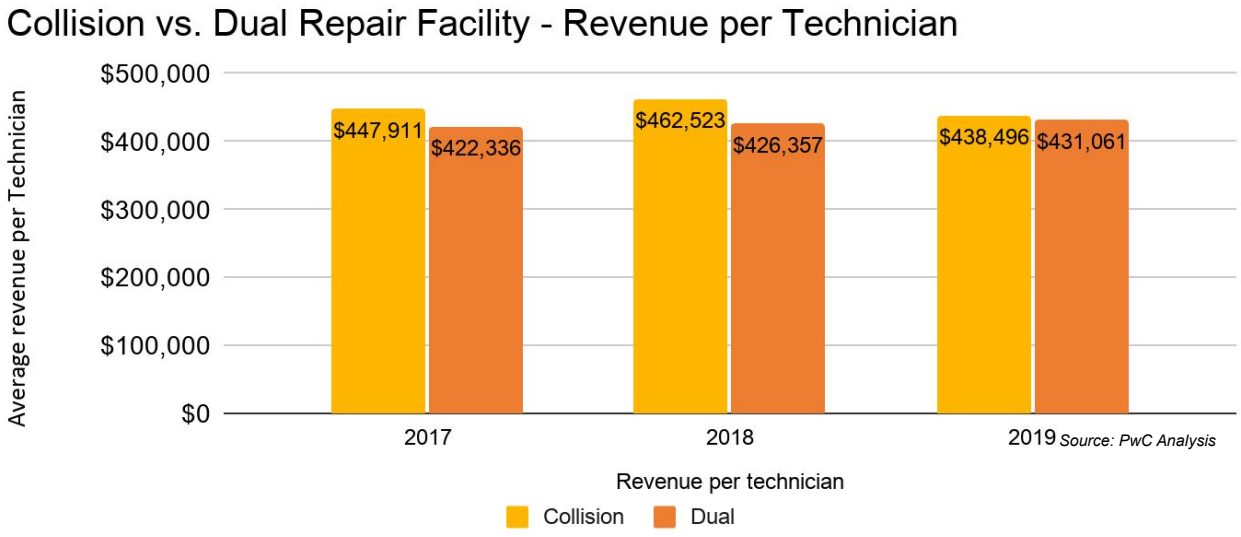
Please note that totals may not match data observed in the breakdown due due to differences in the number of responses. All numbers have been rounded to the nearest whole number.

Source: PwC Analysis

Efficiency

Increasing revenue per technician

Revenue per technician at a Dual facility in BC fell below the average for Collision facilities for the past three years. Between 2017 and 2019, the average revenue earned by a technician employed by a Dual facility increased by an roughly 1% per year to $431,061, representing an improvement in employee productivity. This finding was unique to Dual facilities, as Collision reported a decline in average revenue per technician of 1% per year over the same time period. Increases in revenue per technician at Dual facilities may be attributed to the steady increases in average facility revenues between 2017 and 2019.



Summary of observations - Dual Repair

Higher average profitability than Collision Repair

While profitability of a Dual Repair facility in BC also declined, average EBITDA remains higher than Collision (11.1% in 2019 versus 6.8%). Differences in profitability can be attributed to the broader range of services Dual facilities provide in the BC market, such as Auto Glass. Dual facilities may be able to generate stronger profit margins from other lines of business, contributing to overall stronger EBITDA.

Smaller profit margins on Parts and Paint & Materials

Profit margins on Parts are lower at a Dual Repair facility relative to Collision. Auto Glass Parts are often included in the total cost of Parts, creating an additional cost for Dual facilities that may be lowering overall Parts margins.

Paint & Materials generate a smaller portion of overall facility revenue at a Dual Repair facility compared to Collision. These services are more specific to Collision Repair, and smaller profit margins may be associated with Dual facilities performing these services less often.

Higher overall headcounts and growth in Apprentices

Unlike Collision, Dual Repair facilities in BC did not experience a decline in headcount. A higher number of Technicians indicates that Dual facilities may not be facing the same challenges. Dual facilities also reported an increase in the number of Apprentices, suggesting that they may be taking a different approach to their training programs in order to develop and build a supply of future talent.

Market overview: Auto Glass

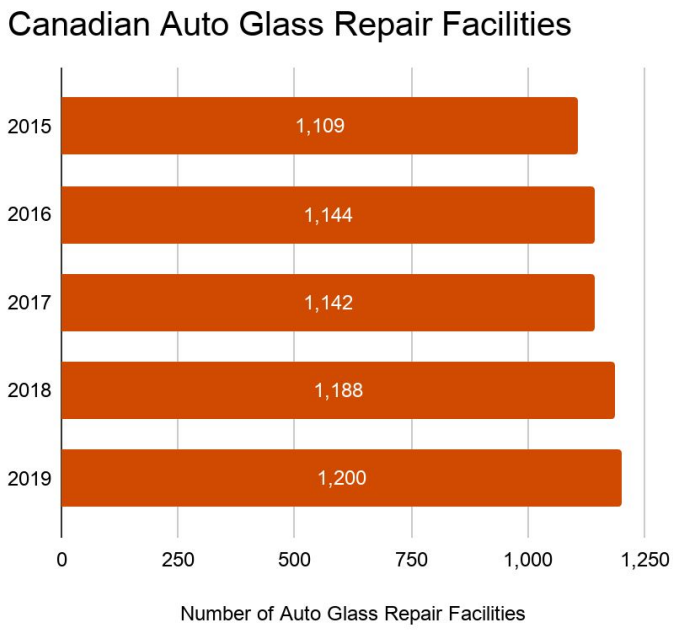
Auto Glass in Canada

Distinct from Collision Repair market in Canada

The Canadian Auto Glass market can be defined separately from Collision Repair due to the distinct services it performs for the glass parts on a vehicle. Glass services are often focused on repair, replacement and tinting of windshields and other pieces of glass on a vehicle, such as back glass and door glass.

There are roughly 1,200 Auto Glass facilities across Canada. The number of facilities performing Auto Glass services in Canada has grown steadily since 2015 at an average growth rate of 2% per year.

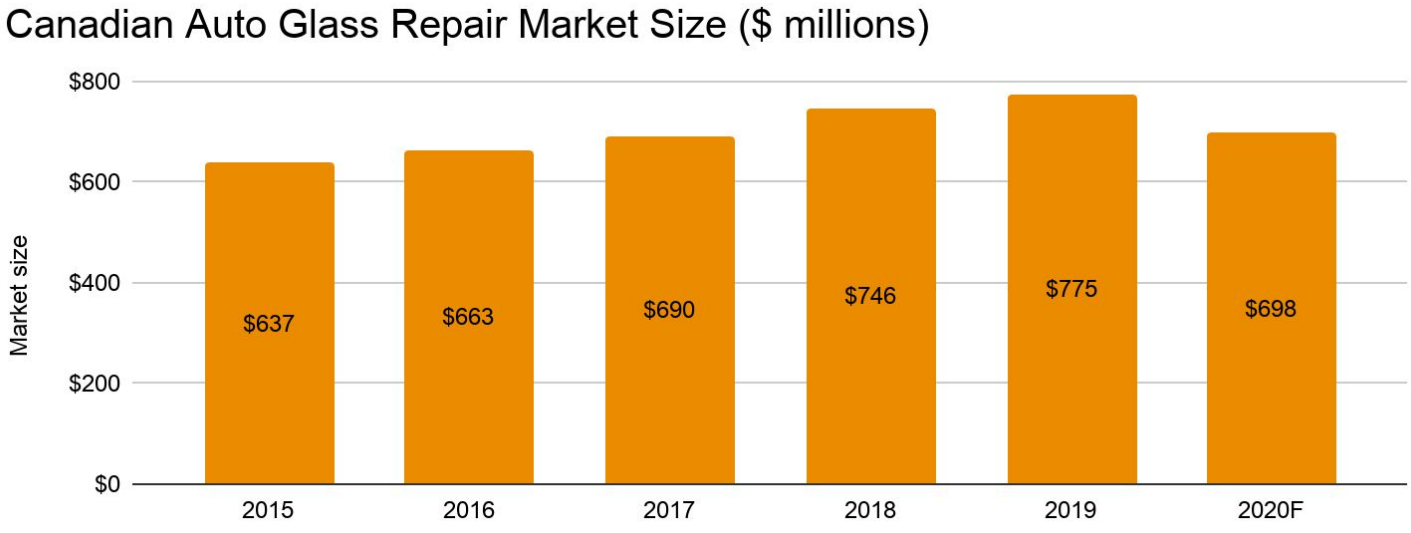
Flying objects and changes in weather are the two major factors impacting the volume of repair and replacement jobs. Due to Canada's geographic diversity, high temperature variances contribute to the deterioration of glass layers. This deterioration often starts as a small crack and the damage is often accelerated by high temperature variances, eventually warranting a repair or replacement.



Source: IBIS World, Automotive Industries Association of Canada

Strong growth across Canada

The Canadian Glass Repair market is valued at roughly $775 million, and has grown between 2 and 4% per year since 2015. This growth exceeds the increase in the number of facilities over the same time period, suggesting that the average revenue per location has grown.



Source: IBIS World, Statistics Canada. PwC Analysis

The Glass Repair market outperformed its Collision counterpart, which had an average annual growth rate of 2% over the same time period. Similar to Collision Repair, PwC anticipated the Glass Repair market to decline in 2020 due to the economic downturn associated with COVID-19 and then recover after 2021. Conversations with industry representatives indicated that the decline in the market due to COVID-19 could be between 10 and 15%.

Auto Glass services and the impact to auto insurers

Auto Glass facilities provide two common types of repairs: repair and replacement. Repair refers to fixing chips in a windshield or other glass panes by filling the damaged area with a resin to restore it to its original strength. Due to the safety hazards associated with a damaged windshield, the conditions in which a vehicle should not be driven are often legal requirements set by provincial transportation ministries. Conversely, replacement refers to the substitution of a damaged windshield or other glass panes for a new one. Aside from requiring more expensive glass parts, replacement can require additional labour work to install and calibrate the Advanced Driver-Assistance Systems (ADAS) present in a vehicle. These factors create significant differences in the cost of glass repair versus replacement.

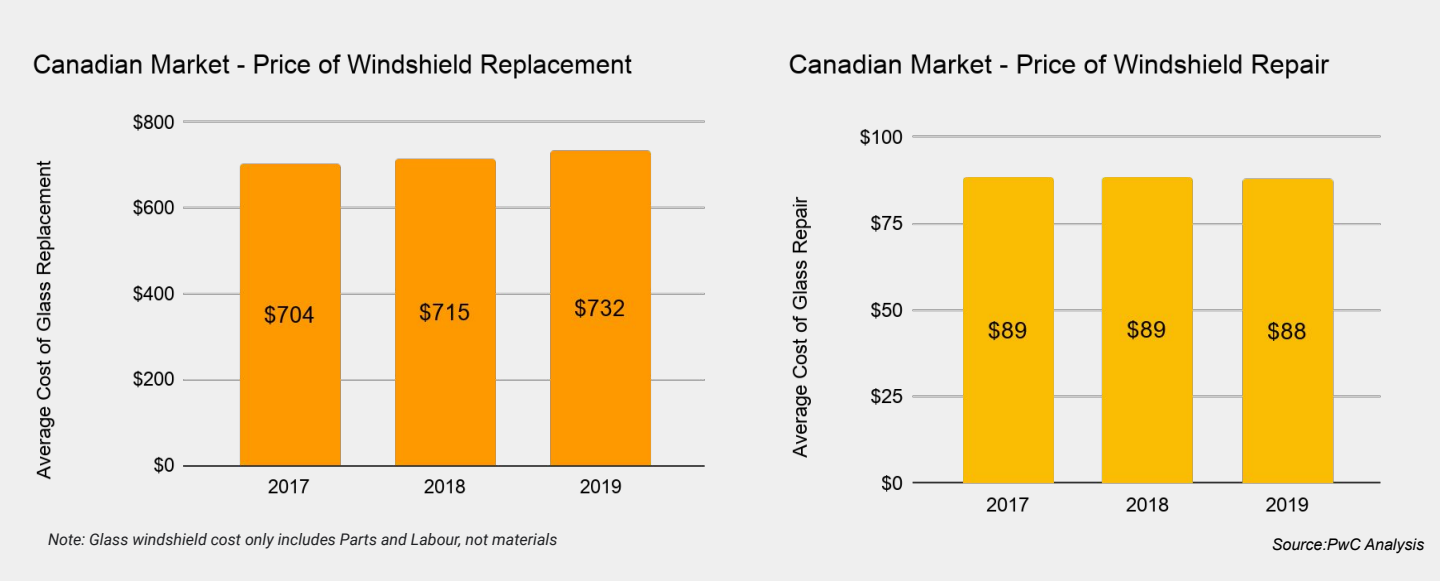
Calibrations following a windshield replacement are becoming increasingly complex for Auto Glass facilities due to the rising prevalence of ADAS, which often rely on cameras mounted to the windshield. In addition to the labour and material required to remove and refit a new glass windshield, vehicles equipped with ADAS must be repaired with specific calibration procedures and equipment.

There are two types of calibrations performed in the Auto Glass market - static and dynamic. A static calibration uses specialized calibration equipment and conditions which may include aiming target, wheel alignment equipment or diagnostic tools. This process is carried out without driving the vehicle. Dynamic calibration of ADAS sensors means driving the vehicle on the road under a specific set of conditions that follow the manufacturer's prescribed method.

	Glass Repair	Glass Replacement
Services provided	Chipped windshield Chips on side windshields or other laminated panes	Large cracks on windshield Smashed windows or back panes
Typical payment type	Cash or Insurance	Insurance

Rising prices of Auto Glass replacements, slowing growth of repairs

Auto Glass replacement prices continue to rise due to increased complexity associated with performing repair work. The average price of windshield replacement in Canada reached $732 in 2019, and grew by an average of 2% per year since 2017. The price per windshield repair remained relatively constant over the same period, likely due to the coverage limits enforced by auto insurers. Insurers in Canada set a fee per repair (e.g. windshield chip fee) or an overall cap on the total number of repairs. These prices do not include mouldings, other material costs, deductibles or taxes.



Note: Glass windshield cost only includes Parts and Labour, not materials

Source:PwC Analysis

ADAS components, such as forward collision alerts and blind-spot warning systems have become common features in new vehicles to reduce the chances of accidents. They are influencing the complexity and price associated with glass windshield replacement. According to report from Belron Canada, there are 3.7 million vehicles equipped with these features on the road today. Belron projects this figure to grow rapidly, estimating that 80% of new vehicles will contain a forward-facing digital camera. This growth suggests there may be further increases in the price of glass replacement.

Glass Parts and Labour pricing

Auto Glass Parts and Labour prices are influenced by Mitchell International's National Auto Glass Specifications (NAGS) division. This division publishes information that is used by facilities and insurers as benchmarks to set parts price and labour times for Auto Glass repairs. When establishing rates, insurers apply a discount to the NAGS benchmarks to determine the amount facilities receive.

Private insurance markets, such as Ontario and Alberta, are unique, with differences in regulation across provinces. Rates are established in individual agreements between insurance providers and apply to specific Auto Glass facilities. In public markets, rates are established by the insurer and applied to all facilities. Private insurers negotiate discounts to NAGS with the Auto Glass industry, which are then applied to the rates paid by insurers during a claim.

Province	NAGS Discount
BC	25%
Saskatchewan	18%
Manitoba	20%

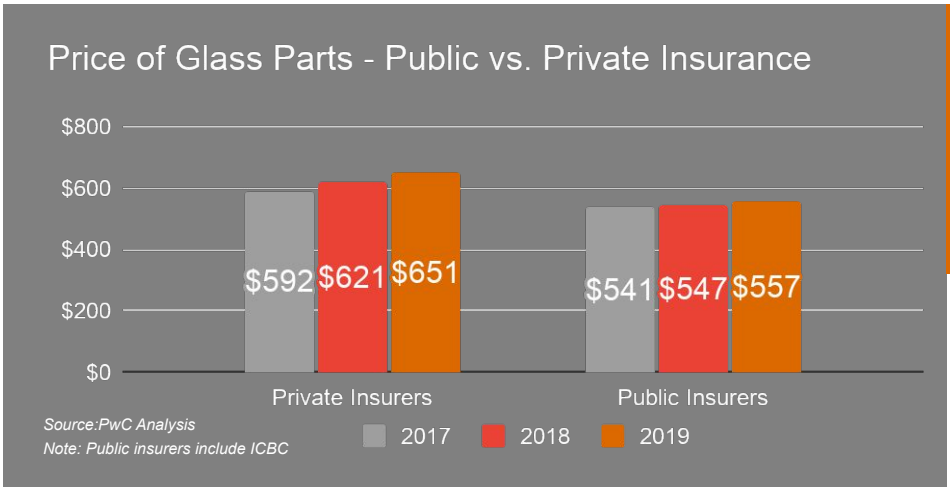
In order to comply with federal competition laws ICBC sets parts rates without negotiation, and utilized other methods such as third party reviews and research to align rates with industry best practices. As a result, the NAGS discount varies between ICBC and other provinces. The largest NAGS discount among public insurers is applied in BC, and the smallest is in Saskatchewan. This indicates that ICBC pays the lowest glass Parts rates among the public auto insurers.

Private and public insurance carriers also price Labour differently. Public insurers set hourly rates using the posted NAGS labour times. While some private insurers use this approach, most define specific pay structures, such as flat-rate models, with Glass facilities. Similar to Parts, this contrast in approaches has contributed to differences in Glass Labour pricing across Canada.

Glass Parts prices are higher in private insurance models

The average price of Parts has increased in both public and private insurance, and appears to be higher in private insurance. These prices reflect the average Parts rates paid by Canadian insurers for glass windshield replacements only. They do not include mouldings, other material costs, deductibles or taxes.

The price of Parts among private insurers increased by an average of 5% per year from 2017 to 2019. The annual increase among public insurers was smaller, at 1%. Higher prices paid by private insurers could be attributed to differences in windshield repair regulation between provinces.

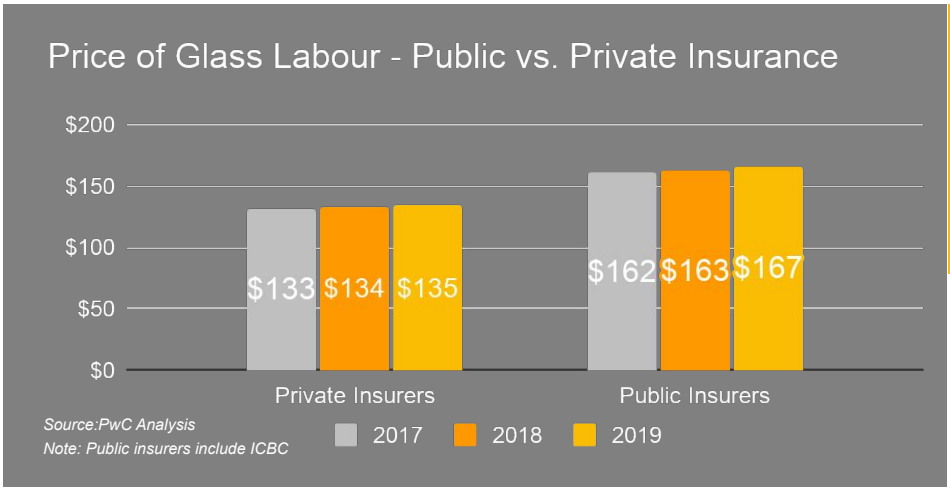


It also suggests that private insurers may be paying higher prices due to the number of players negotiating individual contracts, or the application of a smaller NAGS discount relative to public insurers.

Public insurers pay more for Glass Labour

While Labour is becoming more expensive for all insurers, it appears that public insurers are paying more than private insurers. In 2019, the average price of Labour for a windshield replacement claim among public insurers was $167. By comparison, the average price among private insurers was only $135. Both prices have steadily increased by an average of 1 to 2% per year for the past three years.

These findings suggest that public insurers may be applying larger discounts on Parts relative to private insurers to compensate for a higher Labour prices.

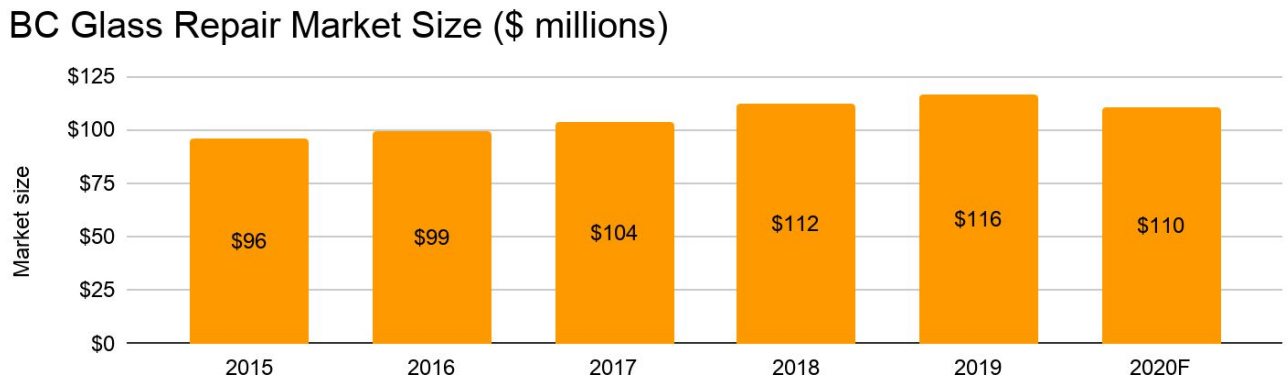


Auto Glass in British Columbia

Growth faster than rest of Canada

The Auto Glass market in BC has grown slightly ahead of the rest of Canada over the past five years, Since 2012, the Auto Glass market in BC grew by an average rate of 5%, ahead of the 4% figure for the total Canadian market.

Conversations with industry representatives suggest that this growth can be attributed to increases in the number of vehicles, which is fueled by population increases due to immigration. Looking ahead, industry representatives are anticipating a decline in the BC Auto Glass market due to poor results from the economic downturn caused by COVID-19. It was forecasted that the size of the Auto Glass market in the province would shrink to $110 million by the end of 2020.



Source: IBIS World, Statistics Canada. PwC Analysis

Recent increases in the number of Auto Glass jobs performed

Aside from the rising cost of repairs, growth in the Auto Glass market in BC can be attributed to an increase in the number of repair and replacement jobs performed by facilities.The number of jobs performed increased by an average of 7% per year between 2015 and 2019. This includes repairs and replacements across the insurance, cash and other markets. Based on similar projections, the number of Auto Glass jobs performed in BC was expected to decline to 275,000 in 2020.

2015	2016	2017	2018	2019	2020F
248,000	256,000	303,000	333,000	326,000	275,000

Auto Glass in the ICBC environment

Source: PwC Analysis

Auto Glass facilities in British Columbia sit in a unique position within Canada, as one of three provinces operating in public auto insurance system. Auto Glass facilities must be accredited by ICBC in order to perform glass repair or replacement jobs and bill ICBC directly. This program recognizes facilities that achieve and maintain high standards for customer service and quality repairs.

In March 2020, ICBC introduced a new program for Auto Glass facilities following a thorough consultation period with industry. The program was designed to ensure customers receive efficient, cost-effective, safe, quality repairs and replacements. It was also designed to provide Auto Glass facilities with access to business systems and software to efficiently invoice repair orders. It was implemented to recognize the investments Auto Glass facilities have made in training and equipment to improve productivity and service for ICBC customers.

This program had the same focus as Collision Repair, and introduced three staged levels to support Auto Glass facilities in the ICBC supplier program - Assessment Period, Tier 2 and Tier 1.

April 1, 2020 Onward	April 1, 2021 & beyond	
Assessment Period	**Tier 2**	**Tier 1**
KPI data collected during 12-month period from all Auto Glass facilities. All new suppliers will be part of a 12-month assessment period.	Auto Glass facilities whose KPIs meet the minimum ICBC's performance and volume thresholds	Auto Glass facilities whose KPIs meet a fixed percentage of highest performing participants in the program

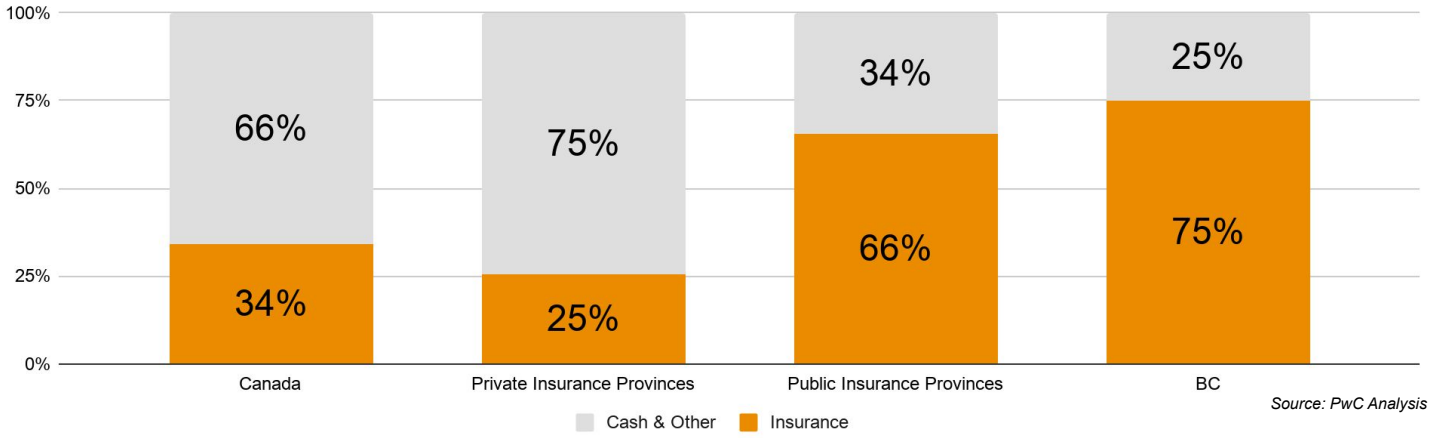
Given the recent introduction of the program, existing Glass Express program participants were placed in Tier 2 and are providing data to ICBC to calculate the KPIs that will be used to assess performance and determine tiering. These KPIs include cost control, QA and customer satisfaction.

ICBC represents a large share of the BC Auto Glass market

There are differences in the structure of the Canadian and BC Auto Glass markets. Regions with predominantly public insurance models have a smaller cash market relative to regions with private insurance. On average, the insurance market represents two thirds of glass repair and replacement jobs performed in provinces with public auto insurance. The composition of the insurance and cash market segments is significantly different in provinces with private insurance.

The size of the insurance segment in BC is the largest in Canada, with revenues from insurance comprising three quarters of the total BC market. This can be attributed to differences in regulation between public and private markets. Private provinces, such as Quebec or Alberta, do not require the same level of coverage as BC.

Auto Glass Repair & Replacement - Market Breakdown



Source: PwC Analysis

Decreasing blended cost per Auto Glass claim at ICBC relative to other Public auto insurers

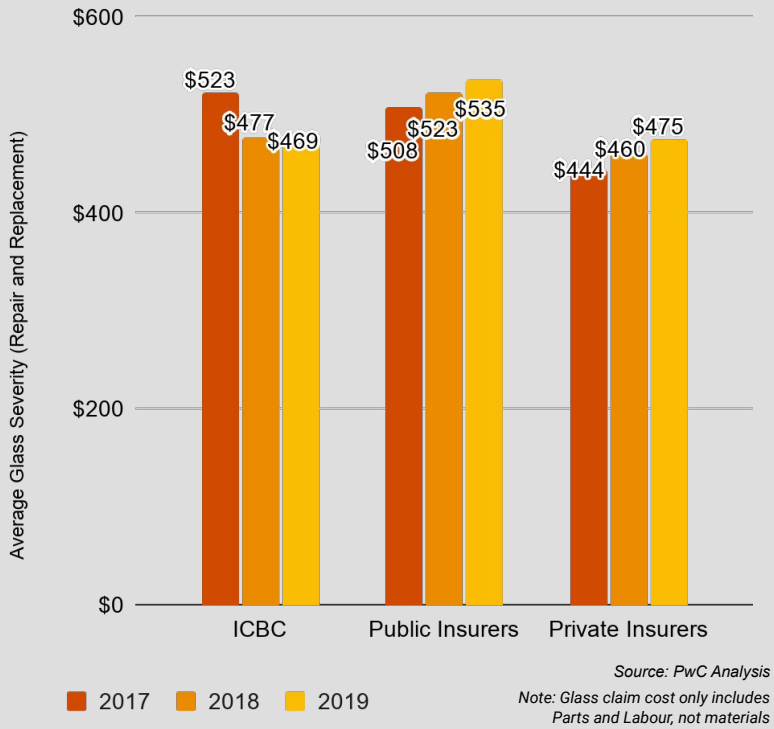
Using Parts and Labour costs, and the repair ratio from other Canadian insurers, PwC calculated an average cost of a windshield claim as a blend between replacement and repair. The average blended cost per windshield claim paid by ICBC was $469 in 2019.

In 2017, ICBC paid more, on average, than both public and private insurers for a windshield claim. However, this amount decreased by an average of 10% per year over the past three years to below the average for public and private insurers.

ICBC introduced a Glass Windshield Repair program in 2017, which likely contributed to the high blended windshield cost per claim in that year. In June 2018, ICBC made made changes to reduce cost pressure associated with Auto Glass claims, and updated their pricing and moulding allowance requirements.

ICBC increased their Parts discount to 25% off the National Auto Glass Specification (NAGS) benchmark price. This change was applied to Auto Glass repair facilities in order to align to market trends reported by other auto insurers in Canada, and directly impacted ICBC's blended windshield cost per claim in 2018 and 2019.

Blended Windshield Cost Per Claim by Insurer Type



Source: PwC Analysis

Note: Glass claim cost only includes Parts and Labour, not materials

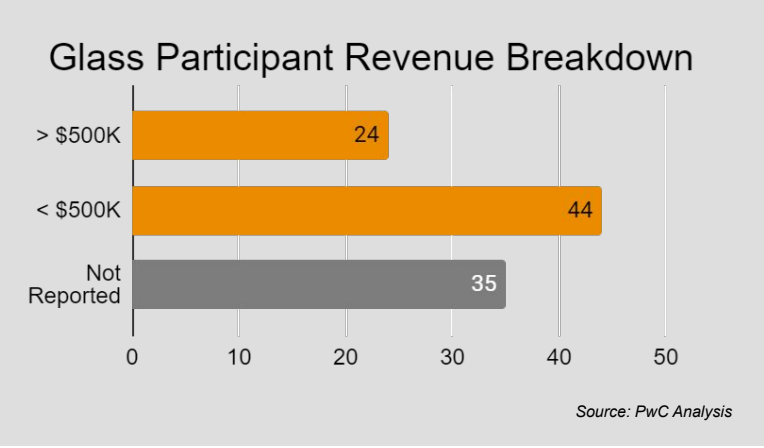
Insufficient reporting of financial information impacted financial analysis

Roughly one third of Auto Glass facilities participated in the Repair Industry Survey. Of the Auto Glass facilities that participated, the majority were larger facilities with total revenues of more than $500,000 per year in 2019.

While they provided information related to their general operations, workforce and facility efficiency, they did not provide sufficient financial data. For example, a third of Auto Glass facilities did not provide their total revenue. This was higher in the Southern Interior and Northern Interior, where 50% and 70% of facilities did not report total revenue, respectively.

Aside from total revenue, participating Auto Glass facilities did not provide further breakdowns of their revenues or costs, for labour or parts. The majority of the indicators used to assess the financial health and performance of the Auto Glass industry required revenue and cost details to be generated. Therefore, PwC was unable to generate detailed findings to the same extent as Collision and Dual facilities.

The following diagram depicts a breakdown of Auto Glass facility responses in the Repair Industry Survey. It outlines the response rates for critical pieces of financial information.



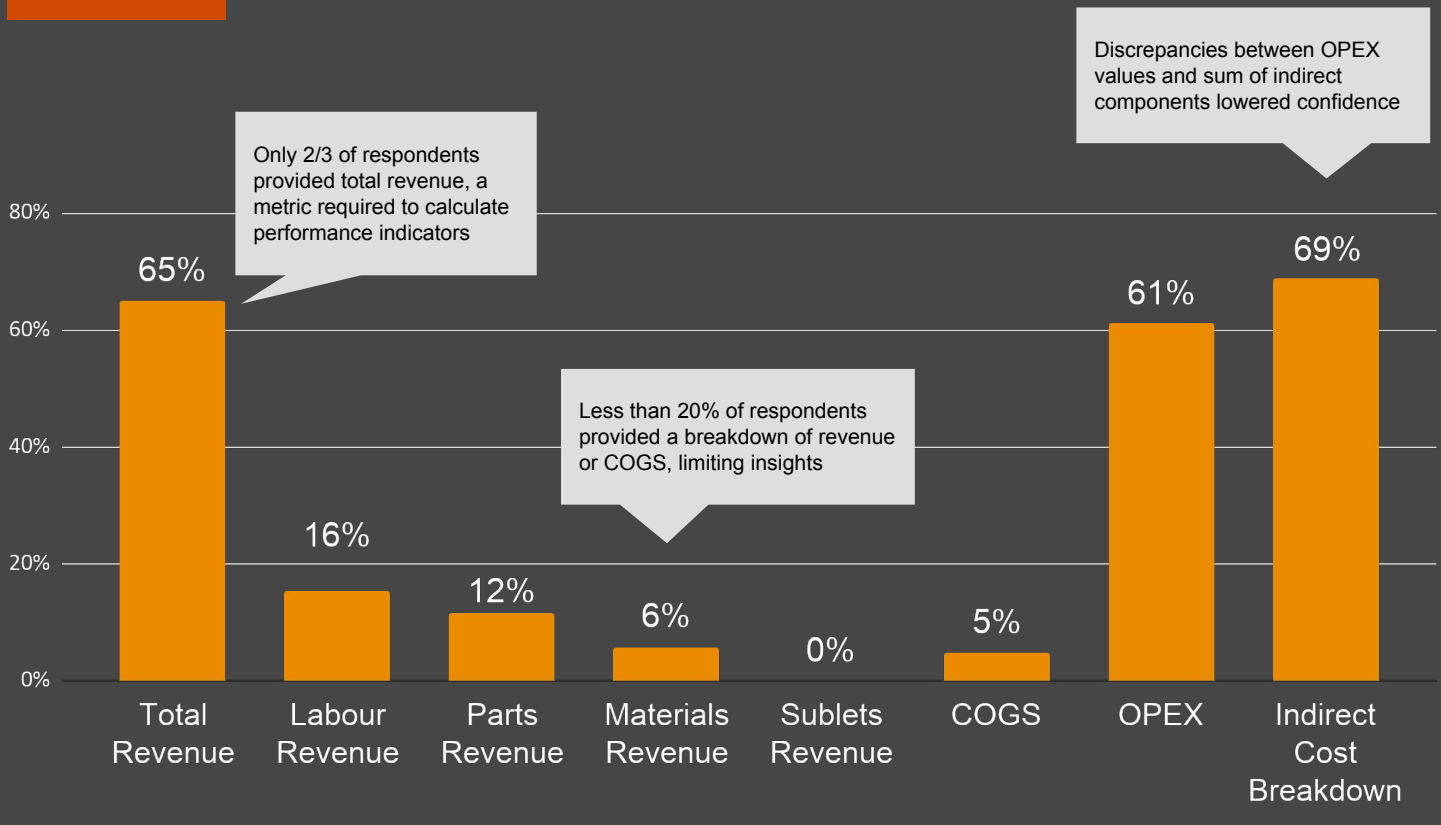
Source: PwC Analysis

Breakdown of survey responses
(percentage of total Glass responses)

299 facilities participating in Glass program

103 responses

197 did not respond



Source: PwC Analysis

Automotive Repair Industry Trends

Industry trends overview

This section provides an overview of the forces shaping the Collision Repair and Auto Glass industries in Canada, while also considering the profound changes the Canadian and international economy has faced in the past twelve months. With a broad perspective of seeking to understand how business and consumer behaviour will change in the future, this analysis also brings together the perspectives of both the suppliers and insurers operating in the current environment.

To perform a fulsome view of the industry, PwC used information gathered from the following sources:

- BC suppliers participating in the Repair Industry Survey
- Interviews with national collision and glass suppliers
- Interviews with insurers across Canada (including public insurers, mutuals, and international carriers)
- Industry reports (e.g. Mitchell Annual Report, Romans Group, IBIS World)

COVID-19 impacts

The immediate impact

Aside from serious implications for people's health, COVID-19 (coronavirus) brought significant impacts to Canadian businesses and the economy. This medical crisis of unprecedented scale thrust governments into response mode and led to restrictions to mitigate risks to Canada's health system.

Fast-moving and unexpected changes implemented to curb the spread of COVID-19 generated new market pressures for companies across sectors in the Canadian economy. Companies found themselves adapting their workforce, operations and supply chains to remain sustainable and profitable. As these business activities shifted, many companies experienced shock impacts to their profitability. Canada's real gross domestic product (GDP) fell by 11.5% between March and June, which represented the greatest fall in a single quarter since Statistics Canada data first became published in 1961.

At the consumer level, joblessness across the Canadian economy reached record highs, creating real financial strain for households. Canada's unemployment rose to a high of 13.7% in May, surpassing the 8.7% reached during the 2008/2009 recession.

"Equipment requirements and training requirements will put a tremendous strain on an already difficult time due to COVID-19. Currently, with the government assistance, and not having paid myself a wage since March, we are barely breaking even"

Supplier perspective

Looking ahead at the 'new normal'

The return of economic activity has indicated that the journey to recovery is underway. The most recent available figures indicate that Canada's real GDP grew by 8.9% in the third quarter of 2020, however, GDP forecasts are not predicting a full return to normal for the next 4 to 5 quarters.

The labour market has also shown signs of recovery. Canada's unemployment rate continues to fall, reaching 9.0% in September. The number of temporary layoffs has declined in recent months, and more employed Canadians find themselves preparing to head back to work. However, history indicates that this recovery will be slow - it took almost nine years after the 2008/2009 recession before Canada's unemployment rate returned to normal.

As the economy begins to re-activate, activity in many sectors remains heavily impacted by government restrictions, contributing to sustained uncertainty. Companies are still experiencing significant profitability challenges that will take time to address. Looking ahead to the 'new normal', companies will shift their focus to longer-term impacts as a result of the pandemic. Further changes will be required to reset operations, adapt products and pursue new marketing and sales activities to build customer loyalty.

Source: Statistics Canada, Indeed Hiring Lab

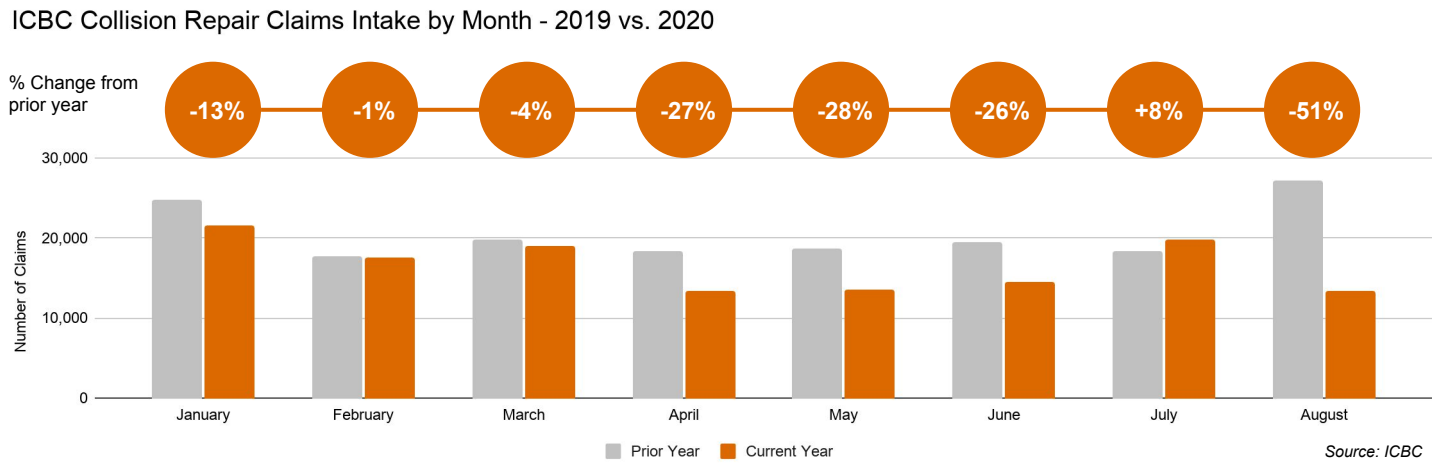
Segments of employed individuals changed their commuting behaviour and experienced changes in purchasing a personal vehicle rather than taking public transit. Particularly, individuals working in urban centers who traditionally relied on public transit/ rideshare as a primary mode of transportation, young millenials who want greater control of their hygiene, and high income individuals with household income of at least 80,000 CAD, are prime candidates to enter the personal vehicle market. Despite these changes, the aggregated driving propensity or “auto wallet” spend is expected to reduce by 8% overall in BC.

COVID-19 and the Automobile Industry in BC

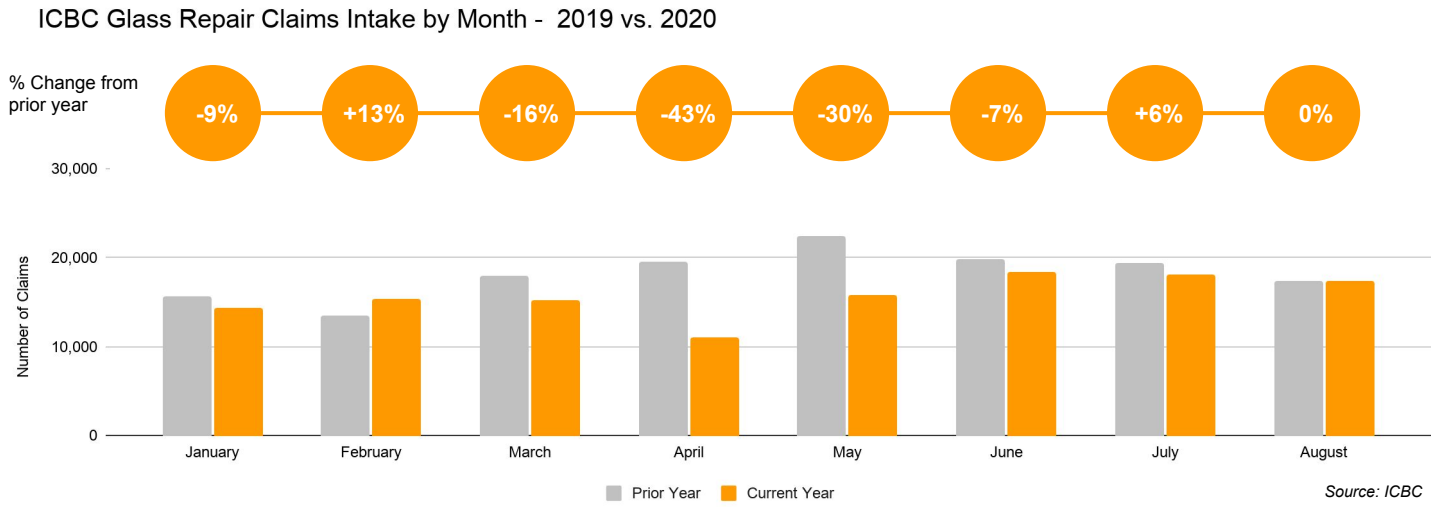
The immediate impact to the automobile industry has been a reduction in driving through a combination of joblessness and the move to remote working. Pre-COVID, an estimated 34% of employed individuals in BC (~930,000) drove to work, with that number varying between 18% to 47% across different neighbourhoods in the province. The reduction in driving was felt immediately following the restrictions that were put in place in March and April, with ICBC experiencing a dramatic decrease in the number of claims reported. In March and April 2020, the number of claims fell by roughly 45% relative to 2019. While this number has increased as the province rolled out the BC Restart Plan, the impact of this decrease was immediately felt by the Collision Repair and Auto Glass industries. Given the direct impact claims volume has on material damage spend, the findings contained in this report should not be taken out of context, understanding that all figures reported from respondents were pre-COVID. Future benchmarks and projections will need to consider the industry financial health and performance in 2020.

Recent data from ICBC suggests that the impact of COVID-19 on ICBC material damage claims were not evenly distributed across Collision and Glass. Over the past eight months, the monthly intake of Collision Repair claims averaged 18% below the prior year, while Glass claims were 12% below.

Collision Repair claims fluctuated heavily between April and August relative to 2019. In July, Collision Repair claims grew 8% higher than the prior year, followed by a 51% decline in August, the largest monthly decline reported to date.



Glass Repair claims also fluctuated heavily, but during different months. The largest change was in April, where Glass Repair claims fell by 43% relative to the prior year, followed by an additional decrease of 30% in May 2020.



Macroeconomic forces

Introducing Industry 4.0

Across Canada, companies are experiencing profound shifts in their business models as a result of the end-to-end digitization of operations, referred to as Industry 4.0. Industry 4.0 encompasses the digitization and data integration of the value chain: offering digital products and services, operating connected physical and virtual assets, integrating operations, building partnerships and optimizing customer facing activities.

In a 2018 Global Digital Operations Study, PwC explored Industry 4.0 in detail, surveying over 1,1155 manufacturing executives in 26 countries, covering a wide gamut of sectors including automotive, electronics, industrial equipment, process industries and consumer goods. PwC determined that companies are at various stages of their transformation to Industry 4.0 - some are digital novices, whereas others are innovators who have progressed well beyond process automation and networking.

Impacts on the automotive repair industry

PwC's Digital Operations Study identified that the automotive industry has been heavily impacted by the shift to Industry 4.0, including many players who have implemented innovative solutions across their marketplace and facilities. Digital disruption and innovation has transformed the industry's traditional model - electric vehicles, embedded safety-related technologies, sensors to monitor performance in real-time and shifts to software-driven repair equipment are shaping the future of the Canadian automotive industry.

Looking ahead, PwC identified five main trends impacting the future of the Canadian automotive industry:

1. **Enhanced vehicle sophistication**
   Increasingly technologically advanced vehicles continue to be manufactured (e.g. electric vehicles, connected cars, ADAS equipped cars etc.) and will continue to evolve in the short and long term.

2. **Complex repair planning process including OEM repair procedures**
   New vehicle types and technologies are adding complexity to the repair planning process, such as estimating and calibrations. A rising number of OEM certification programs are heightening complexity by requiring facilities to adapt to guidelines specific to each manufacturer.

3. **Evolving customer expectations**
   Sources suggest that millennials will represent more than 45% of the potential car-buying cohort in 2025. This group brings a set of new expectations, raising the bar on what a best-in-class digital customer experience looks like. Other industries, including auto repair, will need to further digitize their interactions with customers.

4. **Changing workforce**:
   There is general consensus within industry that technicians have become increasingly difficult to find. This is driven by an aging workforce, increasing requirements for specific and evolving technical skill sets, a negative perception of potential job upside, and a high turnover rate.

5. **Accelerating industry consolidation**:
   Since 2012, the market share held by Canada's largest 10 facilities has grown by over 50%,indicating increased industry consolidation. It is anticipated that private equity acquisitions of auto repair facilities will continue at this pace.

Source: McKinsey & Company, Automotive Industries Association of Canada, PwC Analysis

1 Enhanced vehicle sophistication

Passenger vehicles are significantly more advanced than their predecessors. Rapid advances in technology, such as Artificial Intelligence, Internet of Things, and 5G, are being incorporated into vehicles to increase safety and adapt to changing customer preferences. These advancements have contributed to an increased level of complexity and sophistication.

Connected cars

The vision of a connected car has become a reality. Vehicles have the ability to collect data from hundreds of sensors to improve performance and the driver experience. Gartner Research estimates that a quarter billion vehicles on the road today can connect to the internet, opening up additional data sharing possibilities with manufacturers, repair facilities and insurers. For example, the use of telematics, also referred to as usage-based insurance (UBI) in passenger vehicles has grown in popularity as a data sharing activity that has had a positive impact on safety and performance. The global connected car market is expected to surpass $220 billion by 2025.

Electric vehicles (EVs)

The number of electric vehicles (EVs) on the road continues to grow in Canada. The number of EVs registered grew by 125% between 2017 and 2018. The majority of this growth comes from three provinces - Quebec, Ontario and British Columbia, where EVs have seen the highest popularity. In British Columbia, electric vehicles (including plug-in hybrids) made up 9% of all vehicles on the road in 2019, the highest per-capita of any North American province or state.

Advanced Driver Assistance Systems (ADAS)

AI and machine learning are driving the growth of Advanced Driver Assistance Systems (ADAS), which are becoming increasingly common features in new vehicles due to their ability to improve safety. ADAS functionality, such as automated parking and blindspot sensors, are projected to grow at 23% annually. Extrapolating 2019 numbers from external sources suggests that one in five cars in Canada will be equipped with a front camera by the end of 2020. This means that technicians will require extensive technical knowledge to calibrate these systems during a repair.

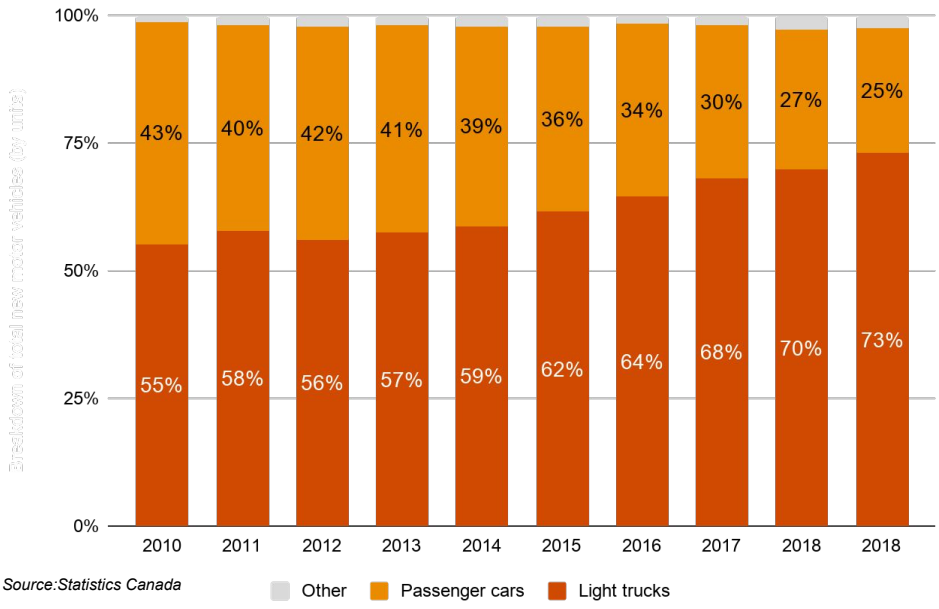
Source: Gartner Research, Allied Market Research, Electric Mobility Canada, Vancouver Sun, Businesswire, Collision Repair Magazine

Insurer perspectives:

"Innovations in vehicle construction and automation are accelerating, we need to work with our direct repair partners to make sure they have the training, tools and equipment necessary to provide customers with quality collision repairs, completed in accordance with the manufacturers recommendations. Insurers can contribute to supplier capabilities with programs designed to require training and technology that ensures a safe repair, in addition to monitoring cost of repairs and cycle time"

"The rising cost of repair due to complexity of the vehicle has become a major focus as we monitor claims costs. Auto physical damage has become a greater priority than it ever was in the past. We relate the rising costs in repairs to the prevalence of ADAS, which is more and more common, and is starting to limit which suppliers can fix the parts"

Vehicle Type Breakdown in BC by Year



Source:Statistics Canada

Change in vehicle types

The popularity of light trucks and SUVs relative to traditional passenger vehicles has increased in BC over the past 10 years. In 2010, the number of light trucks and passenger vehicles was relatively evenly distributed, at 55% and 43% respectively. However, a gap has formed with light trucks dominating the new vehicle sales market in BC, representing 73% of new motor vehicles sold in 2019. This shift places new demands on the automotive repair industry, as the average price of an SUV or light truck in Canada is about $10,000 more than a passenger car, indicating they may be more expensive to repair.

Source: Globe and Mail

We are investing in aluminium repair equipment to be able bring in a wider range of customers with different vehicle types"

Supplier perspective

2 Complex repair planning process

New vehicle types and technologies are impacting repair complexity and the cost of parts.The repair planning process is being transformed to account for a growing number of OEM requirements established by vehicle manufacturers. These changes necessitate a need for repair facilities to invest in new materials, capital equipment, training and administrative processes to safely perform the repair.

OEM requirements

OEM repair procedures have become mainstream in recent years. Independent facilities, dealerships, MSOs and Banner/Franchise networks are pursuing certifications from vehicle manufacturers in order to perform repairs according to their specifications. Vehicle manufacturers continue to drive this trend, and recent research from Romans Group estimates that there are up to 10,000 OEM certification programs in North America. As these requirements continue to proliferate, repair facilities will need to invest significantly in training and equipment if they want to continue to repair a wide variety of vehicles.

The number of OEM requirements facing repair facilities is projected to continue growing as insurers and other intermediaries begin to recognize their importance. Insurers are tracking the certifications offered by repair facilities in order to improve standardization with the introduction of certified repair programs. Information providers such as Mitchell and Audatex are working to capture additional information during the estimating process that can be used to support repair planning. This heightened focus on OEM certifications from these organizations places greater responsibility on facilities to follow approved repair procedures with trained personnel and speciality equipment.

Supplier perspectives:

"It's important to recognize that safe and proper repairs, especially on high end vehicles and brands with OEM certification programs is a big investment for facilities. This investment is what will help ensure the long-term health of the industry and prevent us from being left behind as technology and materials in vehicles continue to evolve."

"If facilities are not rewarded for investing in OEM certification and therefore committed to safe repairs, facilities will not make that investment. Our industry needs to stay up to date with new materials and technologies in vehicles today and take responsibility for the increased liability that comes along with that. ICBC can and should be a big part of that."

Repair complexity

As vehicle complexity heightens, so do the repairs. Repair and replacement of electronic parts requires facilities to utilize new computer systems and equipment throughout the repair processes. For example, pre-repair diagnostics typically include scanning to identify DTC's (Diagnostic Trouble Codes) and plan for the repair. Diagnostic and scanning procedures differ depending on the vehicle manufacturer and OEM certification, adding additional complexity for the technician. According to mPower by Mitchell, in 1965, a technician needed to understand 5,000 pages of service manuals to fix any automobile on the road. Today, that same technician must be able to decipher over 500,000 pages of technical text.

Use of new computer systems to perform scanning during repair planning may have an impact on supplemental estimates in future years. Supplemental estimates are issued by repair facilities when additional damage is discovered after the initial estimate is provided to the customer and insurer. However, the number of estimates requiring supplements in Canada has steadily increased over the past three years at an average of 1.3% per year.

Canadian Average	Q2 2016	Q2 2017	Q2 2018	CAGR
% of estimates requiring supplements	50.0%	50.6%	51.8%	1.3%

Source: mPower by Mitchell, Q2 Report data

Despite additional training complexity, some advances in technology have supported greater efficiencies in the repair process. Photo-based estimations are particularly impactful, as the administrative burden of estimating decreases and parts can be ordered ahead of a vehicle being dropped off, saving on rental costs and decreasing the time vehicles spend in-shop.

Insurer perspective:

"We are exploring the ability to capitalize on artificial intelligence in estimating. Estimating platforms are looking to create automated estimates using photos to understand damage. We expect to see a shift in AI moving from appraisers and estimators towards automation. It will benefit both insurers and suppliers, and elevates the human participation to understand what's changing and what needs to be focused on. Analytics is going to be key for organizations."

Supplier perspectives:

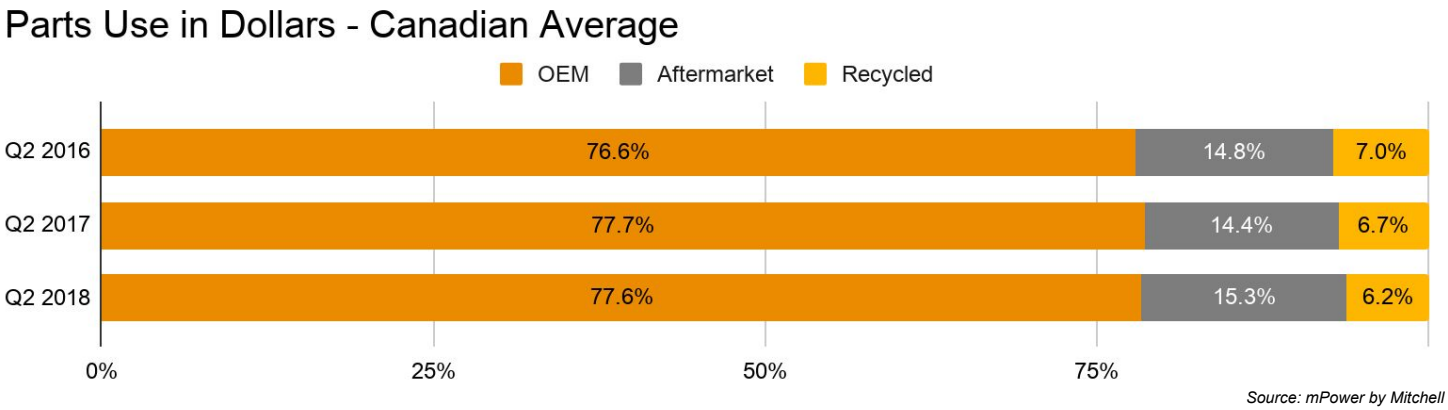
"We recognize that safe and proper repairs are of the highest importance. Making sure we have the right training for all of the OE programs is a big investment, but this is what will help ensure the long-term health of the industry and prevent the industry from being left behind as technology and materials in vehicles continue to evolve."

"As ADAS calibrations become more and more necessary, we may invest in the capacity to perform them in-house, instead of subletting to local dealerships. Aluminum repairs and electric vehicle technology are two areas that will require continued investment in equipment and training."

Cost of parts

Parts represent the largest driver of increasing repair costs. According to Mitchell, the cost of parts surpassed 50% of overall repair costs in 2019, up 2.0% from 2017, suggesting that parts will continue to be a primary contributing factor to rising costs. Parts can be classified as OEM, Aftermarket or Recycled, each of which play different roles in terms of their use in repair.

Due to rising OEM requirements, OEM parts represent a significant portion of the overall parts used in repairs. OEM parts use has increased over the past three years to 77.6% of the overall repair. Aftermarket parts (not made by OEMs), represent a lower cost alternative when performing replacements. Aftermarket parts use has also increased over the past three years to 15.3% of overall parts use.



Source: mPower by Mitchell

Reporting is based on Mitchell data for the Canadian Repair industry which is published on a quarterly basis.

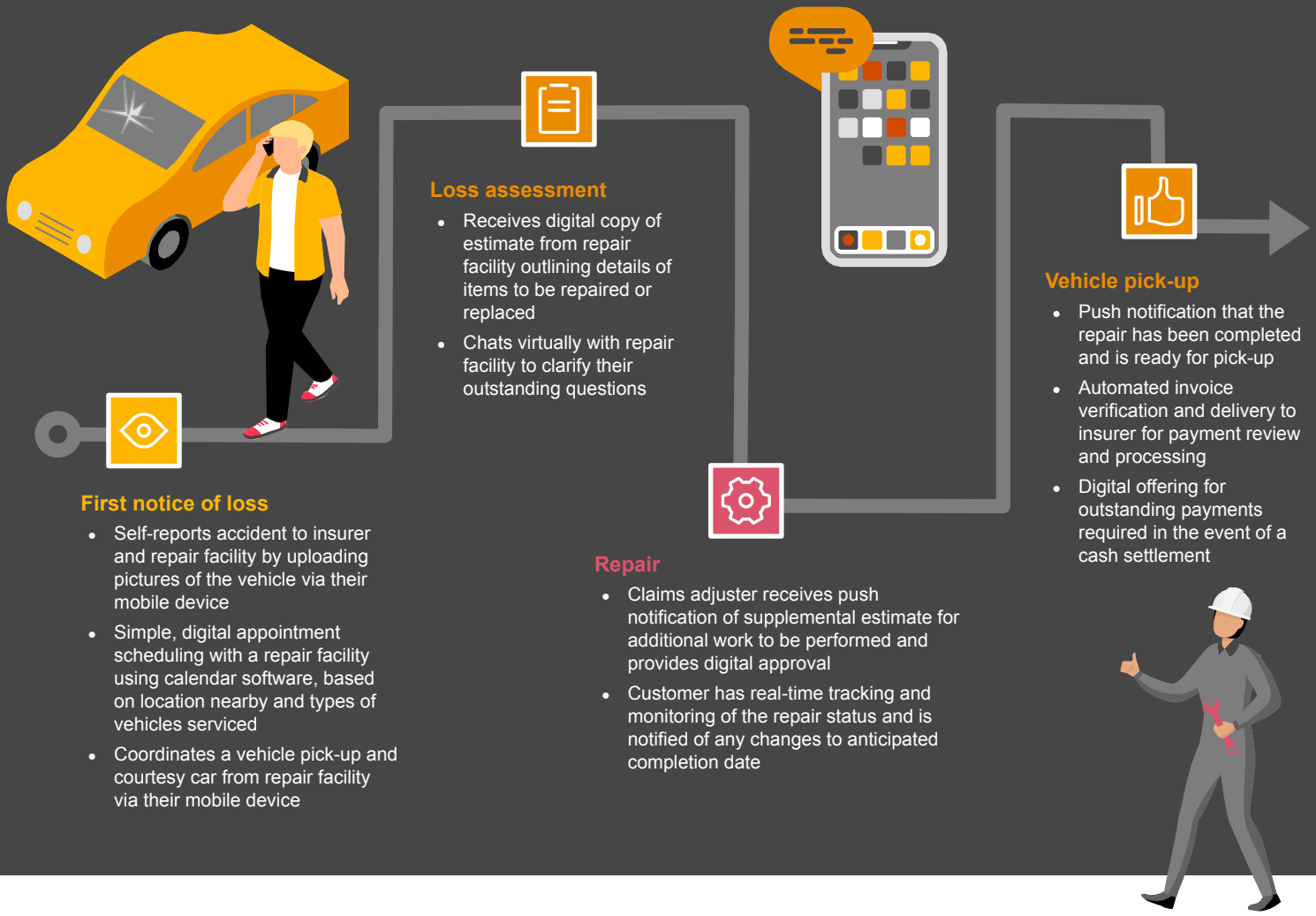
3 Evolving customer expectations

According to Acquire.io, millennials will account for approximately 45% of the car buying cohort by 2025, bringing a large, new wave of owners into the automotive industry. At the same time, insurers are combining digital capabilities to deliver an improved customer experience and achieve operational excellence. These disruptions have led to a fundamental change in service expectations, increasing the emphasis facilities place on their digital capabilities and end-to-end service offerings.

Digitizing the customer experience

Customer expectations for service have evolved as mobile browsing, location tracking, and live updates have become common capabilities for businesses to provide, regardless of industry. This is also true for insurance. Touchpoints throughout the customer's claim process are expected to be "digital first". Mobile technologies and online interfaces are changing interactions with insurers and repair facilities in order to meet these expectations. The end-to-end digitization of the customer journey has several implications, some of which involve interactions directly with the repair facility.

The customer experience of the future



First notice of loss

- Self-reports accident to insurer and repair facility by uploading pictures of the vehicle via their mobile device
- Simple, digital appointment scheduling with a repair facility using calendar software, based on location nearby and types of vehicles serviced
- Coordinates a vehicle pick-up and courtesy car from repair facility via their mobile device

Loss assessment

- Receives digital copy of estimate from repair facility outlining details of items to be repaired or replaced
- Chats virtually with repair facility to clarify their outstanding questions

Repair

- Claims adjuster receives push notification of supplemental estimate for additional work to be performed and provides digital approval
- Customer has real-time tracking and monitoring of the repair status and is notified of any changes to anticipated completion date

Vehicle pick-up

- Push notification that the repair has been completed and is ready for pick-up
- Automated invoice verification and delivery to insurer for payment review and processing
- Digital offering for outstanding payments required in the event of a cash settlement

"We are setting up a proper website to attract more customers. It is important for us to have a link directly with them, and having the ability to link to the insurer helps us to deliver services more smoothly to our customers."

Supplier perspective

New, innovative service models

In addition to the end-to-end digitization of their claims journey, customers are expecting a repair experience that closely mirrors other buying experiences. This means that repair facilities are taking a closer look at current service levels for opportunities to enhance the customer's overall experience. Multi-shop operators are winning large contracts with national insurers by re-organizing themselves into a "one stop shop" for the customer. This means that customers can drop their vehicle off at any one of multiple locations regardless of the repair issue. If the car needs to be transferred to a different location for service, paint, or calibration/scanning, this happens without any additional approvals.

Supplier perspective:

"In the current climate we are really focusing on providing our customers efficient and personalized service while trying to maintain a safe environment for our staff and patrons. We are really looking at ways to provide no-contact service that still allows us to give the service we need while minimizing risk."

New service models have also emerged to address gaps in the traditional repair model. For example, mobile repair and replacement has been introduced to improve convenience and efficiency. YourMechanic, a U.S.-based mobile repair network recently entered the Canadian market. It connects maintenance, diagnostic and repair service technicians with car owners to perform repairs at their homes or offices.

4 Changing workforce

The automotive repair industry is facing a labour market shortage. Heightened repair complexity has created new demands for technical skills from mechanics. Not having the right technicians limits the operational capacity available in many facilities, creating a backlog of repairs and longer cycle times, adversely affecting shop performance.

Supply shortage

With the average age of a technician approaching 50 years old, repair facilities find themselves struggling to fill the gap with new talent. According to a 2017 study conducted by the Automotive Industries Association (AIA) of Canada, 65% of the auto repair industry workforce is over the age of 30, and 57% possess five or more years of experience. Repair facilities are dependent on replacing retirees with tradespeople graduating from mechanical colleges, however, they have been unable to keep up. A report by the Canadian Automotive Repair and Service (CARS) in 2016 projected that demand in this sector outpaced supply by 3,000 people. To combat these challenges, facilities are re-examining their training and compensation strategies to recruit talent. For example, Boyd Group announced in their 2018 Annual Report that improved pay and benefits were used as a strategy to address the talent shortage at their facilities.

Shortage of skilled tradespeople is not an isolated issue. Other skilled trades, such as electricians, carpenters, and heavy equipment operators are also experience growing labour challenges. The Skilled Trades College of Canada estimates that an additional one million workers are currently needed across the country.

Addressing the large gap in the number of female versus male technicians may be part of the solution to tackling this shortage. According to a 2018 Workforce Study performed by AIA Canada, the ratio of female to male technicians or apprentices is 1:99. However, there are larger percentages of women in other positions. The study identified higher rates of female representation in non-technical roles, such as Estimators and Customer Service Representatives.

Source: Automotive Industries Association of Canada, Canadian Automotive Repair Services, Skilled Trades College of Canada

Female representation:

45% Customer Service

21% Estimator

13% Manager

1% Technician & Apprentice

The technician of the future - New skills

While there is still a demand for the skills associated with traditional technical work, the increasing prevalence of complex software components in newer vehicles warrants additional skills. Simply increasing the number of people in the workforce may not be sufficient to address the skilled labour shortage. In other words, maintaining the status quo is no longer an option. The AIA believes that the next generation of technicians must be able to balance traditional technical skills and computational problem solving skills to fix the complex software components in a vehicle.

Current skills	New skills
• Mechatronics & electronics • Programming • Robotics • Computer-aided design (CAD) • Advanced problem solving	• Advanced integrated technology • Basic engineering • Clean vehicle technology • Analytics • Leadership

Source: Automotive Industries Association of Canada

Insurer perspective:

"Labour demographics are changing: the traditional body repairman is getting older and older and they are not being replaced fast enough, the expertise is harder to find, resulting in longer wait times for customers."

Supplier perspectives:

"Our staff are all over sixty years old, this will mean that our shop will close soon as we we move into retirement."

"I have been in business over 30 years. In the last 5 years focus on innovation has been limited because my number one concern is finding staff. We have recruited international staff more easily than locals because there is a shortage in local talent."

"We have an aging workforce. Getting young people into the industry is a challenge."

5 Accelerating industry consolidation

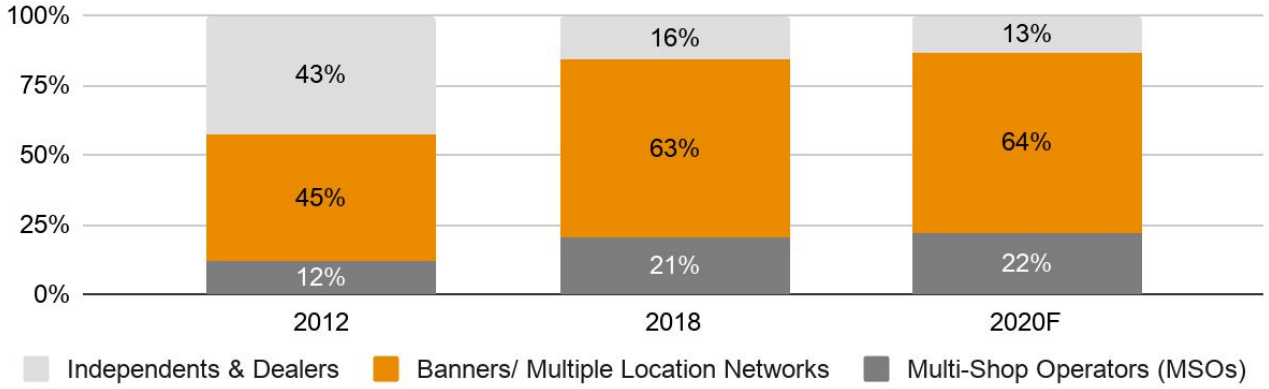
Evolving industry trends have increased capital investments required by facilities to remain competitive and profitable. Large Banners/Franchises and Multi-Shop Operators (MSOs) have the size and scale to handle these investments, and have experienced large increases in market share since 2012. These large players have also formed strategic partnerships with private equity firms to make further investments, grow market share and generate higher returns.

Canadian consolidation

The Canadian auto repair industry has experienced significant consolidation in recent years, with large players increasing scale and market share. Since their emergence, Banner/Franchise networks have grown their market position to almost a third of the market by revenue, with a growth rate of roughly 6% per year. MSOs have also grown, representing almost one quarter of the market. Independent facilities and Dealerships are expected to continue losing their market share as Banners/Franchises and MSOs continue their spree of consolidation. Some smaller independents are expected to sell or shut down as the owner/operators retire or they cannot price competitively relative to larger facilities. These changes will result in fewer, larger auto repair locations in population dense regions, with a focus on continuous improvements to operational efficiency.

Source: Romans Group, PwC Analysis

Canadian Market Breakdown by Collision Repair Facility Type



Source: Romans Group, PwC Analysis

Within the Banner/Franchise and MSO segments, the majority of revenue is controlled by a small number of players operating locations across multiple provinces and territories. The largest providers of Collision Repair services in Canada are Fix Auto World, Boyd Group, Craftsman Collision and Driven Brands Inc.

Many Banner/Franchises and MSOs are also diversifying their services in order to seize additional market opportunities.

Insurer perspectives:

"The whole industry is ripe for consolidation and we expect it to increase due to Covid. We believe in working with facilities who are already innovating, have a roadmap for the future, and really focus on customer experience."

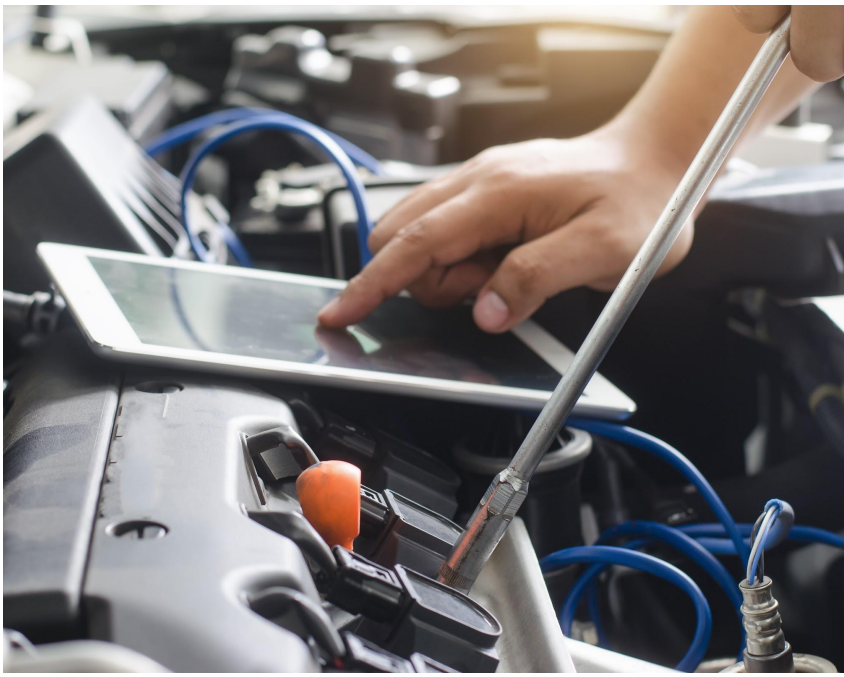
"The cost to enter the market has gone up because you need capital and you need expertise to function properly. High cost of entry is driving consolidation, but so is the way that insurers manage their vendors. Insurers are looking to work with suppliers that have the equipment, technology, and training to service new vehicles."

Private Equity involvement

The auto repair industry has received attention from private equity firms and investment funds, with many competing for opportunities to further consolidate the industry. These organizations are attracted to the industry because of its steadily growing market size and ability to handle economic downturns.

In certain cases, Banner/Franchises and MSOs have pursued support from these firms directly, recognizing the value they can provide in raising additional capital required to fuel growth. With sufficient capital, these repair providers have greater opportunities to leverage economies of scale and lower costs through operational efficiencies.

A snapshot of the Canadian industry consolidation activities that have occurred in recent years has been provided on the next page.



Banner/ Franchise or MSO	Investment Firm		Date
CARSTAR Maaco	Roark Capital Group	Driven Brands, owner of CARSTAR acquired Quebec-based Clairus Group, a vertically-integrated leader in automotive glass distribution, replacement and claims management, gaining access to nearly 3,000 locations across North America	November 2019
Caliber Collision	OMERS Private Equity Hellman & Friedman LLC	Ontario Municipal Employees' Retirement System (OMERS) agreed to sell majority interest in Caliber Collision Centres to Hellman & Friedman LLC, also merging Caliber Collision with ABRA Auto Body to form a conglomerate of over 1,000 locations in North America	December 2018
Lift Auto Group	Canadian Business Growth Fund (CBGF)	Lift Auto Group received an investment from the Canadian Business Growth Fund to support the expansion of their footprint in Western Canada, including a series of acquisitions in Alberta	October 2018
Fix Auto World	Caisse de Dépôt et Placement Québec	Fix Auto World purchased 11 Collision Repair and Auto Glass facilities, previously owned by the Skidmore Group with support from la Caisse de Depot et Placement in attempts to diversify its service offerings	February 2017
Glass Masters	Western Investment Company of Canada	Glass Masters, an Auto Glass company in Western Canada was partially purchased by Western Investment Company of Canada to expand in key markets	December 2016

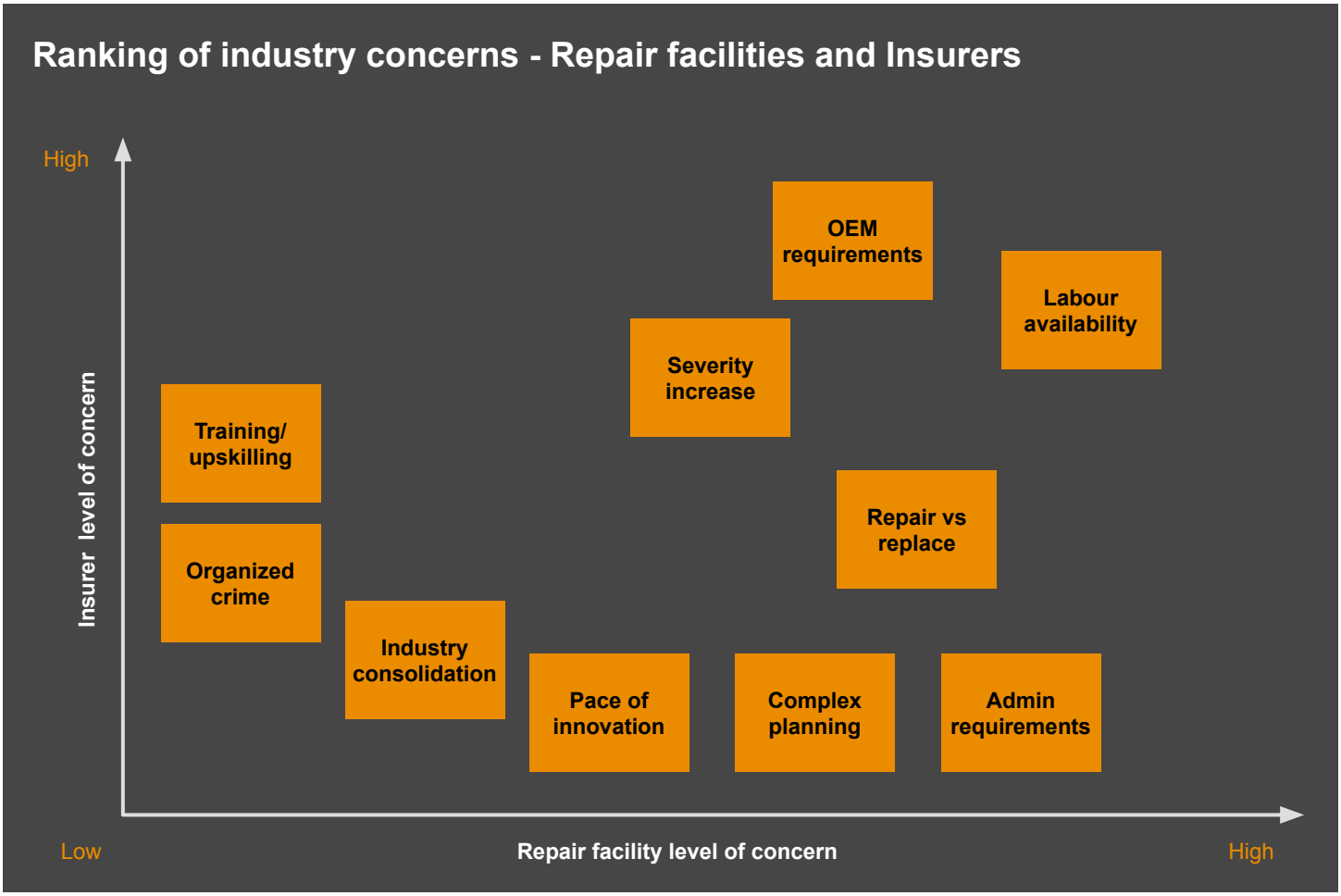
Source: PwC Analysis

Trends from the Supplier and Insurer's perspective

The Repair Industry Survey asked Collision and Dual facilities in BC to rank several industry concerns and trends impacting their business. To generate additional insights, PwC posed similar questions during surveys and interviews with P&C insurers across Canada. The tables below illustrate a breakdown of the results ranked from most concerning (first) to least concerning (last).

Shops	
Industry trend	**Impact ranking**
Labour Availability	**1**
Administrative Requirements	2
OEM Requirements	3
Replace vs. Repair	4
Complex Planning	5
Severity Increase	6
Pace of innovation	7
Consolidation	8
Other	9

Insurers	
Industry trend	**Impact ranking**
OEM Requirements	**1**
Labour Availability	2
Severity Increase	3
Training and Upskilling	4
Replace vs. Repair	5
Organized Crime	6
Vendor Consolidation	7
Other	8



Source: PwC Analysis

Mutual concern surrounding labour availability, OEM requirements and rising severity

Both Collision Repair facilities and Insurers ranked labour availability and OEM requirements as their most concerning industry trends. Labour availability ranked first for Collision Repair facilities in BC, with 30% of survey participants placing it as their most concerning trend. This indicates that sentiment in BC is aligned with the Canadian trend related to recruitment and retention of technicians. OEM requirements ranked second for Collision Repair facilities, and first for Insurers, indicating that the rising pressure from OEMs is being felt by both stakeholders. Unsurprisingly, both stakeholders indicated a mutual concern for severity increases, which aligns with the broader challenge of rising material damage claim costs.

Administrative requirements and complex planning a concern for BC Collision Repair facilities

BC Collision Repair facilities also reported concerns with planning and administrative requirements. After labour availability, administrative requirements were the second most concerning trend in BC, with 15% of survey participants placing it as their most concerning trend. While it was ranked fifth, complex planning was also a concern Collision Repair facilities indicated.

Training and upskilling also a concern for Insurers

Training and upskilling was ranked as the fourth most concerning trend by Canadian insurers. Similar to other industries, innovative insurance technologies have fundamentally transformed the nature of work, increasing the level of competition insurers are facing to acquire new skills and talent.

Appendix 2

Appendix 2 contents

Profitability analysis	94
Correlation analysis	102
Sentiment analysis	103
Repair Industry Survey	106
Key Performance Indicators	113
Industry Working Group	116
Validation Checks	117

1 Collision Repair EBITDA - Mean by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Mean	N	Mean	N	Mean	N
British Columbia	**362**	**11.3%**	**57**	**9.3%**	**60**	**6.8%**	**62**
Revenue not reported	24		0		0		0
Less than $1.5M	22	8.7%	7	5.0%	8	8.9%	10
$1.5 to $2.0M	24	9.0%	13	7.3%	14	2.9%	14
$2.0 to $2.5M	20	11.0%	15	10.4%	15	6.7%	15
Greater than $2.5M	31	12.7%	22	11.2%	23	8.1%	23
Banner/Franchise	18	11.9%	3	8.1%	3	1.2%	3
Large MSO	70	12.5%	31	11.2%	35	6.9%	34
Small MSO	9		0		0		0
Dealership	22	3.8%	1	0.8%	1	3.8%	1
Independent	243	8.8%	22	6.5%	21	7.2%	24
Lower Mainland	250	11.7%	39	9.6%	39	7.5%	41
Vancouver Island	43	8.4%	9	9.5%	9	8.5%	9
Southern Interior	48	9.2%	8	7.3%	9	1.3%	9
Northern Interior	21	17.0%	1	9.2%	3	7.2%	3

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

Statistically significant differences between strata

- Difference in EBITDA between Large MSOs and Independents were statistically significant in all years, with Large MSOs reporting lower EBITDA
- Difference in EBITDA between Lower Mainland and Southern Interior were statistically significant in 2019, with Lower Mainland reporting higher EBITDA

1 Collision Repair EBITDA - Median by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Median	N	Median	N	Median	N
British Columbia	**362**	**11.6%**	**57**	**10.3%**	**60**	**7.4%**	**62**
Revenue not reported	24		0		0		0
Less than $1.5M	22	11.5%	7	6.0%	8	9.1%	10
$1.5 to $2.0M	24	13.4%	13	7.3%	14	3.5%	14
$2.0 to $2.5M	20	12.2%	15	12.0%	15	7.1%	15
Greater than $2.5M	31	12.9%	22	12.2	23	8.3%	23
Banner/Franchise	18	14.0%	3	6.2%	3	4.1%	3
Large MSO	70	13.6%	31	12.0%	35	7.1%	34
Small MSO	9		0		0		0
Dealership	22	3.8%	1	0.8%	1	3.8%	1
Independent	243	9.8%	22	5.5%	21	9.0%	24
Lower Mainland	250	13.3%	39	11.7%	39	8.8%	41
Vancouver Island	43	6.3%	9	10.4%	9	8.9%	9
Southern Interior	48	11.8%	8	6.2%	9	3.0%	9
Northern Interior	21	17.0%	1	8.8%	3	4.0%	3

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

1 Dual Repair EBITDA - Mean by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Mean	N	Mean	N	Mean	N
British Columbia	**147**	**15.1%**	**16**	**12.8%**	**16**	**11.1%**	**17**
Revenue not reported	11		0		0		0
Less than $1.5M	10	18.0%	4	15.6%	4	15.9%	4
$1.5 to $2.0M	1	13.7%	1	12.7%	1	3.5%	1
$2.0 to $2.5M	2	16.0%	1	13.3%	1	15.1%	2
Greater than $2.5M	11	13.7%	10	11.3%	10	9.2%	10
Banner/Franchise	13	14.3%	2	10.6%	2	9.3%	3
Large MSO	33	18.4%	6	15.9%	6	13.1%	6
Small MSO	5	20.0%	2	19.3%	2	21.7%	2
Dealership	26		0		0		0
Independent	70	10.0%	6	7.7%	6	6.5%	6
Lower Mainland	63	17.6%	6	15.0%	6	11.9%	7
Vancouver Island	28	12.2%	4	8.3%	4	8.0%	4
Southern Interior	40	11.2%	4	10.0%	4	7.7%	4
Northern Interior	16	20.0%	2	19.3%	2	21.7%	2

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

1 Dual Repair EBITDA - Median by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Median	N	Median	N	Median	N
British Columbia	**147**	**14.0%**	**16**	**11.3%**	**16**	**9.5%**	**17**
Revenue not reported	11		0		0		0
Less than $1.5M	10	16.0%	4	11.8%	4	10.2%	4
$1.5 to $2.0M	1	13.7%	1	12.7%	1	3.5%	1
$2.0 to $2.5M	2	16.0%	1	13.3%	1	15.1%	2
Greater than $2.5M	11	13.4%	10	9.9%	10	9.5%	10
Banner/Franchise	13	14.3%	2	10.6%	2	8.9%	3
Large MSO	33	16.7%	6	14.5%	6	12.5%	6
Small MSO	5	20.0%	2	19.3%	2	21.7%	2
Dealership	26		0		0		0
Independent	70	9.6%	6	7.0%	6	6.3%	6
Lower Mainland	63	16.4%	6	13.0%	6	13.6%	7
Vancouver Island	28	14.2%	4	8.3%	4	8.9%	4
Southern Interior	40	10.2%	4	9.8%	4	7.8%	4
Northern Interior	16	20.0%	2	19.3%	2	21.7%	2

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

2 Collision Repair Gross Profit Margin - Mean by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Mean	N	Mean	N	Mean	N
British Columbia	**362**	**44.5%**	**56**	**43.6%**	**62**	**42.5%**	**69**
Revenue not reported	24		**0**		**0**		**0**
Less than $1.5M	22	46.9%	8	45.2%	9	43.2%	14
$1.5 to $2.0M	24	44.0%	10	41.2%	13	40.4%	14
$2.0 to $2.5M	20	44.9%	15	44.1%	15	43.1%	15
Greater than $2.5M	31	44.3%	23	44.1%	25	42.1%	26
Banner/Franchise	18	44.3%	3	47.9%	4	42.5%	4
Large MSO	70	44.7%	32	43.3%	37	41.7%	41
Small MSO	9		0		0		0
Dealership	22	37.8%	2	34.7%	2	36.6%	2
Independent	243	45.7%	19	44.3%	19	43.7%	22
Lower Mainland	250	45.1%	38	44.2%	39	43.2%	41
Vancouver Island	43	45.0%	8	47.0%	9	44.1%	10
Southern Interior	48	43.8%	9	41.0%	11	39.7%	13
Northern Interior	21	38.8%	1	35.5%	3	36.6%	5

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

Statistically significant differences between strata

- Difference in Gross Profit Margin between Large MSOs and Independents were statistically significant in all years, with Independents reporting higher Gross Profit Margins
- Difference in Gross Profit Margin between Lower Mainland and Vancouver Island and Lower Mainland and Southern Interior were statistically significant in all years, with Lower Mainland reporting higher Gross Profit Margins than Vancouver Island and Southern Interior

2 Collision Repair Gross Profit Margin - Median by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Median	N	Median	N	Median	N
British Columbia	**362**	**44.3%**	**56**	**44.6%**	**62**	**44.3%**	**69**
Revenue not reported	24		0		0		0
Less than $1.5M	22	46.9%	8	43.7%	9	42.8%	14
$1.5 to $2.0M	24	44.3%	10	42.3%	13	40.7%	14
$2.0 to $2.5M	20	44.9%	15	44.1%	15	43.7%	15
Greater than $2.5M	31	45.0%	23	44.7%	25	42.4%	26
Banner/Franchise	18	43.9%	3	44.0%	4	41.4%	4
Large MSO	70	44.9%	32	44.0%	37	42.1%	41
Small MSO	9		0		0		0
Dealership	22	37.8%	2	34.7%	2	36.6%	2
Independent	243	46.2%	19	46.7%	19	43.9%	22
Lower Mainland	250	45.8%	38	44.7%	39	43.2%	41
Vancouver Island	43	44.0%	8	44.3%	9	44.9%	10
Southern Interior	48	42.9%	9	42.3%	11	40.6%	13
Northern Interior	21	38.8%	1	35.9%	3	35.0%	5

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

2 Dual Repair Gross Profit Margin - Mean by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Mean	N	Mean	N	Mean	N
British Columbia	**147**	**46.4%**	**17**	**45.7%**	**18**	**44.4%**	**18**
Revenue not reported	11		0		0		0
Less than $1.5M	10	46.9%	6	45.7%	6	45.2%	6
$1.5 to $2.0M	1	49.0%	1	49.2%	1	48.3%	1
$2.0 to $2.5M	2	46.4%	1	52.2%	2	44.3%	2
Greater than $2.5M	11	45.6%	9	43.6%	9	43.7%	9
Banner/Franchise	13	46.1%	3	48.4%	4	44.7%	4
Large MSO	33	47.8%	5	45.8%	5	45.5%	5
Small MSO	5	52.5%	2	51.6%	2	52.0%	2
Dealership	26		0		0		0
Independent	70	43.6%	7	42.1%	7	41.6%	7
Lower Mainland	63	47.9%	5	48.7%	6	45.9%	6
Vancouver Island	28	41.4%	4	38.6%	4	39.3%	4
Southern Interior	40	46.4%	4	44.9%	4	44.4%	4
Northern Interior	16	49.1%	4	48.6%	4	47.9%	4

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

Statistically significant differences between strata

- Difference in Gross Profit Margin between Large MSOs and Independents were statistically significant in all years, with Independent shops reporting higher Gross Profit Margins
- Difference in Gross Profit Margin between Lower Mainland and Vancouver Island and Lower Mainland and Northern Interior were statistically significant in all years, with Lower Mainland reporting higher Gross Profit Margins than both Vancouver Island and Northern Interior

2 Dual Repair Gross Profit Margin - Median by Strata

Strata breakdown	Population	2017		2018		2019	
	Total N	Median	N	Median	N	Median	N
British Columbia	**147**	**50.8%**	**17**	**53.7%**	**18**	**50.8%**	**18**
Revenue not reported	11		0		0		0
Less than $1.5M	10	44.3%	6	43.7%	6	43.1%	6
$1.5 to $2.0M	1	49.0%	1	49.2%	1	48.3%	1
$2.0 to $2.5M	2	46.4%	1	52.2%	2	44.3%	2
Greater than $2.5M	11	46.5%	9	45.5%	9	42.9%	9
Banner/Franchise	13	44.9%	3	46.3%	4	44.2%	4
Large MSO	33	46.6%	5	46.2%	5	46.5%	5
Small MSO	5	52.5%	2	51.6%	2	52.0%	2
Dealership	26		0		0		0
Independent	70	43.9%	7	43.6%	7	41.3%	7
Lower Mainland	63	46.6%	5	46.3%	6	46.6%	6
Vancouver Island	28	40.8%	4	38.9%	4	39.4%	4
Southern Interior	40	46.2%	4	44.8%	4	45.3%	4
Northern Interior	16	45.8%	4	45.6%	4	43.8%	4

Rows colored in grey indicate that the number of responses for a certain strata (N) did not meet PwC's standard for participation relative to the strata's total population (N is 3 or less). This threshold was set as the minimum number of responses to estimate a correlation. PwC was unable to generate observations and insights on the mean and median for groups below this threshold.

3 Correlation Analysis

The following table display the strength of the correlation PwC observed between data attributes and performance indicators from the Repair Industry Survey. The table has been structure to illustrate whether a correlation was present between two attributes or performance indicators across 2017, 2018 and 2019.

The correlation coefficient, referred to as “Correlation R” measures the strength and direction of the relationship between these attributes and performance indicators.

How to interpret

Each row represents a different combination of attributes and performance indicators that were tested. The closer the Correlation R value is to either 1.000 or -1.000 indicates a strong relationship between the two variables. If the Correlation R value is close to 0, this indicates the absence of a relationship. The colour of the cells encode whether the correlation between the two attributes or performance indicators is negative or positive. Blue cells indicate a negative relationship, and red cells indicate a positive relationship. Correlation coefficients in bold indicate the relationship is statistically significant based on a p-value < 0.05.

Example: The correlation between Number of Collision ROs and Collision Labour Gross Margin as % of revenue has strengthened over the past three years. The Correlation R in 2017 was just above zero, at 0.060 and grew to 0.367 in 2019 where it was statistically significant. This indicates a growing positive relationship between the number of Collision ROs a Collision Repair facility completes and their Gross Margin on labour.

Correlation values

Attribute or Performance Indicator	Correlation R 2017	Correlation R 2018	Correlation R 2019
Flat rate technicians as % of workforce and EBITDA	**0.354**	**0.342**	0.008
Number of Collision ROs and EBITDA as % of revenue	0.056	0.034	0.079
Number of Collision ROs and Collision Labour Gross Margin as % of revenue	0.060	0.212	**0.367**
Recent investments in technology and EBITDA	0.099	**0.379**	0.240
Initiatives to improve operational efficiency and EBITDA	0.137	**0.338**	0.075
Initiatives to improve operational efficiency and Number of ROs/paint booth	0.229	0.214	**0.220**

Weak Positive — Strong Positive

4 Sentiment Analysis

The following word clouds were constructed to summarize the sentiment of the Collision Repair facilities based on the feedback that was provided in the text box portions of the Repair Industry Survey. The word cloud is used to visualize the most common keywords used by the facilities.

How to interpret

Three word clouds were prepared for the qualitative questions related to operational efficiency initiatives, the role ICBC can play in the future, and other comments/feedback. Each cloud is organized below by survey question below and the size of each keyword indicating its' frequency of use by respondents.

Are you pursuing initiatives to increase operational efficiency? If so, please describe

Collision and Dual Repair facilities are in the process of implementing repair planning and estimating process initiatives to improve efficiency. Auto Glass facilities are investing in new equipment and system upgrades to streamline services. All types of facilities indicated the importance of training technicians on repair procedures (e.g. I-Car training).

Thinking about the future, what innovations or investments are you interested in to improve your business? What role can ICBC play in supporting the achievement of this vision?

Collision Repair, Dual, and Auto Glass facilities are planning to invest further in OE-required equipment and training to improve their profitability. They are seeking financial support from ICBC for these investments, as well as an increase in labour rates to offset the rising staff cost associated with technical and administrative work. All types of facilities also indicated that ICBC could provide additional training on the estimating process.

Is there anything about your business you would like to share that has not been captured?

Facilities further emphasized the connection between cost increases and administrative requirements associated with ICBC procedures. They also noted a growing concerns regarding the shortage of skilled technicians and profitability challenges associated with hourly rate technicians.

5 Repair Industry Survey Questions

The following table outlines a copy of the questions in the Repair Industry Survey sent to Collision Repair, Dual and Auto Glass facilities. All facilities were asked the same set of general information questions (Name, Location, etc.), followed by additional question sectors applicable to their facility type (Collision, Glass, Dual).

How to interpret

The table lists each survey question, along with the corresponding question type and response choice that was made available to facilities. The questions have been organized by category and also identify which survey (Collision, Glass, Dual) they appeared.

Category	Survey type	Question	Type	Response choice(s)
General Info	Collision, Dual, Glass	Please provide the name of your repair shop	Free text field	N/A
		Please provide your shop's Facility ID number used to conduct business with ICBC (e.g. F012345)	Free text field	Free text with Fxxxxxx format validation
		Please specify the location (city) your shop is located in within British Columbia	Drop down list	All cities in BC
		Please specify the number of years your shop has been in operation	Drop down list	1, 2, 3...through to 20+
		Please select whether your shop rents or owns the space it operates in	Drop down list	Rent or Own
		Please select which complimentary services your shop offers (if any). Select all that apply.	Multi-select boxes	- Customer pickup / dropoff - Free WiFi - Customer / loyalty rewards - Car wash - Other (with free text)
		If your shop performs calibration services, please specify what percentage of calibrations are performed in-house?	Drop Down list: 1%-100% with "This shop does not provide calibration services" option.	Drop down select
	Collision, Dual	Please select which shop management system(s) you use for your shop. Do not select any systems used exclusively for estimating.	Multi-select boxes	- Mitchell Repair Centre - Shop Connect - ImEX - Other (with free text)
		Please enter the total number of repair ROs that include paint for the following years	Multi-select boxes for 2017, 2018, 2019	Numeric values only
		Please select the number of dedicated repair bays (excluding detailing) your shop has	Multi drop-down list for repair bays and paint booths.	1 to 30
		Please select the number of paint booths your shop has	Multi drop-down list for repair bays and paint booths.	1 to 30

5 Repair Industry Survey Questions

Category	Survey type	Question	Type	Response choice(s)
General Info	Collision, Dual	Please rank the following industry concerns or trends impacting your shop from most concerning (first) to least concerning (last)	Dynamic ranking box	- Labour availability - OEM requirements - Increase in replacement vs repairs - Increase in claims severity - Industry consolidation - Pace of innovation - Heightened complexity of repair planning - Increase in administrative requirements - Other (with free text)
	Dual, Glass	Please enter the number of glass ROs for the following years	Multi-select boxes for 2017, 2018, 2019	Numeric values only
		Please select which point of sale (POS) system(s) you use for your shop	Multi-select boxes	- GlassPacLS - Other (with free text)
		Please rank the following industry concerns or trends impacting your shop from most concerning (first) to least concerning (last)	Dynamic ranking box	- Labour availability - Industry consolidation - Pace of innovation - Time spent on pre-repair processes - Increase in administrative requirements - Other (with free text)

5 Repair Industry Survey Questions

Category	Survey type	Question	Type	Response choice(s)
Revenue	Collision, Dual, Glass	Please enter your total revenue from all sources for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Collision, Dual	Please enter your total revenue associated with collision repair labour (paint + body/frame + mechanical) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with paint labour for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with body/frame labour for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with mechanical labour (including scanning) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total revenue associated with collision repair parts (recycled + OEM + aftermarket) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with recycled parts for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with OEM parts for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with aftermarket parts for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total revenue associated with paint & related materials for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total revenue associated with Alternate Transportation Services (ATS) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Collision, Dual, Glass	Please enter your total revenue associated with sublets for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes

5 Repair Industry Survey Questions

Category	Survey type	Question	Type	Response choice(s)
Revenue	Glass	Please enter your total revenue associated with glass labour (including calibration) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total revenue associated with glass parts (OEM + aftermarket) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with OEM parts for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your revenue associated with aftermarket parts for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total revenue associated with additional glass materials (e.g. Urethane) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
Operating expenses	Collision, Dual, Glass	Please enter your total operating expenses from all sources for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total labour costs for management and administrative staff for the following years (fully loaded cost including salary, bonus and insurance benefits)	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your training expenses for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		If applicable, please enter your rent and property tax costs for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes for both Rent and Property Tax
		Please enter your total cost associated with Alternate Transport Services (ATS) for the following years (including rentals/leases, tires, insurance, fuel, repairs, etc.)	Multi Free text boxes for 2018, 2019, 2020	Free entry numeric boxes
		Please enter your the total admin / expenses from all sources for the following years, including: • Advertising, Promotion and Royalties • Disposal Costs • Repairs and Maintenance • Interest and Bank Charges • Telephone and Utilities • Professional and Business Fees • Delivery, Shipping and Warehouse • Travel • Insurance • IT - Software Subscriptions and Support • OEM Certification • Other costs	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes

Category	Survey type	Question	Type	Response choice(s)
Cost of goods sold	Collision, Dual	Please enter your total collision repair labour (paint + body/frame + mechanical) cost (fully loaded) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your paint labour cost (fully loaded) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your body/frame labour cost (fully loaded) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your mechanical labour (including scanning) cost (fully loaded) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your total collision repair parts cost (OEM + aftermarket + recycled) after rebates for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your OEM parts cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your Aftermarket parts cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your Recycled parts cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
		Please enter your paint & related materials cost for the following years	Multi Free text boxes for 2018, 2019, 2020	Free entry numeric boxes
	Collision, Dual, Glass	Please enter your sublets cost for the following years	Multi Free text boxes for 2018, 2019, 2020	Free entry numeric boxes

5 Repair Industry Survey Questions

Category	Survey type	Question	Type	Response choice(s)
Cost of goods sold	Glass	Please enter your total glass labour (including calibration) cost (fully loaded) for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Glass	Please enter your total glass parts (including rebates) cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Glass	Please enter your OEM parts cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Glass	Please enter your Aftermarket parts cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
	Glass	Please enter your total glass materials cost for the following years	Multi Free text boxes for 2017, 2018, 2019	Free entry numeric boxes
Capital expenses	Collision, Dual, Glass	Please enter your total undepreciated capital cost of equipment for the following years	Multi Free text boxes for 2015, 2016, 2017, 2018, 2019	Free entry numeric boxes
		Have you made recent investments in innovative technology in the last 5 years? For investments made in a given year, please also provide a brief description	Yes / No checkboxes for 2015, 2016, 2017, 2018, 2019	Each year has corresponding free text fields for descriptions

5 Repair Industry Survey Questions

Category	Survey type	Question	Type	Response choice(s)
Workforce	Collision, Dual, Glass	Please enter the number of staff by type for the following years: • Management • Administrative (Other support staff including janitorial, car cleaning, reception, detailers, etc) • Technical (estimating, bodymen, preppers, painter, mechanics) Apprentice	Multi Free text boxes for 2017, 2018, 2019 with the following categories: Management, Administrative, Technical, Apprentice	Free entry numeric text boxes
		Please enter the average fully loaded annual cost of staff by the types provided for the following years: • Management • Administrative (Other support staff including janitorial, car cleaning, reception, detailers, etc) • Technical (estimating, bodymen, preppers, painter, mechanics) Apprentice	Multi Free text boxes for 2017, 2018, 2019 with the following categories: Management, Administrative, Technical, Apprentice	Free entry numeric text boxes
		Please enter the number of flat rate and hourly technicians for the following years	Multi free text boxes for 2017, 2018, 2019 with the following categories: Flat and hourly	Free entry numeric text boxes
		Please enter the number of full time and part time employees for the following years	Multi Free text boxes for 2017, 2018, 2019 with the following categories: Full time and part time	Free entry numeric text boxes
Efficiency		Are you pursuing any initiatives to increase operational efficiency and quality? Please select all that apply	Multi-select boxes	- Lean - Six Sigma - Total Quality Management - Other (open text)
Future Considerations		Thinking about the future, what innovations or investments are you interested in to improve your business? What role can ICBC play in supporting the achievement of this vision?	Free text box	Free text box

6 Key Performance Indicators

The following key performance indicators were calculated to assess revenues, repair costs, profitability, workforce and operational efficiency of Collision Repair, Dual and Auto Glass facilities in BC. The tables follow outline the specific indicators calculated for each facility type.

Revenue (Pricing/ Rates)

Assessment goal: Examine a facility's revenue drivers (e.g. labour, parts), and the relative significance of their components (e.g. OEM vs. aftermarket) to understand differences in compensation by region, ownership structure and facility size

Collision & Dual	Glass

• Collision Labour revenue as % of total revenue
  ○ Paint labour revenue as % of labour revenue
  ○ Body / Frame / Mechanical labour revenue as % of labour revenue
• Collision Parts revenue as % of total revenue
  ○ OEM parts revenue as % of parts revenue
  ○ Aftermarket parts revenue as % of parts revenue
  ○ Recycled parts revenue as % of parts revenue
• Collision Paint & Materials revenue as % of total revenue
• ATS revenue as % of total revenue
• Sublets revenue as % of total revenue
	• Glass Labour revenue (including in-house calibration) as % of total revenue
	• Glass Parts revenue (including moldings) as % of total revenue
	  ○ OEM glass parts revenue as % of glass parts revenue
	  ○ Aftermarket glass parts revenue as % of glass parts revenue
	• Glass Materials (e.g. Urethane) rev. as % of total revenue
	• Sublets revenue (e.g. calibration, tinting, other) as % of total revenue

Repair Operating Costs

Assessment goal: Analyze a facility's key indirect cost drivers (operating and administrative cost), and the relative significance of their components to generate insights into differences in cost structure by region, ownership structure and size

Collision, Dual & Glass	Glass

• Total OPEX costs as % of total revenue
  ○ Management and administrative staff labour cost (salaries and benefits) as % of total OPEX costs
  ○ Training as % of total OPEX costs
  ○ Rent and property taxes as % of total OPEX costs
  ○ ATS / Courtesy Car cost as % of total OPEX costs
  ○ Disposal costs as % of total OPEX costs
  ○ Admin/other costs as % of total OPEX costs
	• Mobile fleet services cost as % of total OPEX costs

Cost of goods sold

Assessment goal: Analyze a facility's key direct cost drivers, and the relative significance of their components to generate insights into differences in costs of materials used to perform a repair by region, ownership structure and size

Collision & Dual	Glass

• Collision Labour cost as % of collision revenue
  ○ Paint labour as % of labour cost
  ○ Body / Frame / Mechanical labour as % of labour cost
• Collision Parts cost as % of collision revenue
  ○ OEM parts cost as % of parts cost
  ○ Aftermarket parts costs as % ot parts costs
  ○ Recycled parts costs as % of parts costs
  ○ Collision Paint & Materials cost as % of collision revenue
	• Glass Labour (including in-house calibration) cost as % of glass revenue
	• Glass Parts (including mouldings and rebates) cost as % of glass revenue
	  ○ OEM glass parts cost as % of glass parts cost
	  ○ Aftermarket glass parts cost as % of glass parts cost
	• Glass Materials (e.g. Urethane) as % of glass revenue
	• Sublets (e.g. calibration, tinting, other) as % of glass revenue

Profitability

Assessment goal: Examine a facility's gross profit, before operating expenses, and net profitability, excluding interest, tax, depreciation and amortization to determine average profit margin and uncover differences across regions, ownership structures and sizes

Collision, Dual & Glass	Collision & Dual	Glass

• Gross margin as % of revenue
• EBITDA as % of revenue
	• Total Collision gross margin as % of revenue
	• Collision Labour gross margin as % of revenue
	  ○ Paint labour gross margin as % of revenue
	  ○ Body/Frame/Mechanical labour gross margin as % of revenue
	• Collision Parts gross margin as % of revenue
	  ○ OEM parts gross margin as % of revenue
	  ○ Aftermarket parts gross margin as % of revenue
	  ○ Recycled parts gross margin as % of revenue
	• Collision Paint & Materials gross margin as % of revenue
		• Total Glass gross margin as % of revenue
		• Glass labour gross margin as % of revenue
		• Glass parts gross margin as % of revenue
		  ○ OEM glass parts gross margin as % of revenue
		  ○ Aftermarket glass parts gross margin as % of revenue
		• Glass materials gross margin as % of revenue

Workforce Efficiency

Assessment goal: Analyze the efficiency of a facility's workforce by looking at revenues and costs in relation to the total number of employees and by employee type (technical, administrative, etc.)

Collision, Dual & Glass

- Revenue by technical staff
- Revenue by employee
- Average annual cost of staff by type (including salary and benefits)

Operational Efficiency

Assessment goal: Analyze a facility's ability to provide consistent, efficient repairs and service by examining common industry metrics, and the metrics used by ICBC in their Collision Repair and Glass Repair programs.

Collision & Dual

- Number of repair ROs per dedicated repair bay (excluding detailing)
- Number of repair ROs per paint booth
- % estimates with supplements
- Initial estimate efficiency
- Average repair severity
- Key to key cycle time

Glass

- Number of glass WOs per technician
- Windshield repair ratio
- Average glass claim severity
- Failed windshield repair ratio

7 Industry Working Group

The following individuals were members of the post-implementation business review (PIBR) work group, or “Industry Working Group”, and provided input in the selection of the data attributes, design of the Repair Industry Survey and review of the findings. The individuals below were selected by ICBC prior to PwC’s involvement in the review.

Company / Organization	Industry
360 Collision	Collision
Automotive Retailers Association	Collision and Glass
Belron Canada	Glass
Boyd Autobody	Glass
Boyd Autobody	Collision
Capital Auto Glass	Glass
CARSTAR	Collision
Craftsman	Collision
Craftsman	Glass
Crystal Glass	Glass
Dawson Creek Collision	Collision
Fix Auto Miller Group	Collision
Glass Doctor	Glass
Jim Pattison Toyota	Collision
Kirmac Collision	Collision
Kirmac Collision	Glass
Lift Auto Group	Collision
NOVUS Auto Glass	Glass
Open Road / RAB	Collision

8 Validation Checks

The following validation checks were performed on the data provided by Collision and Dual Repair facilities as part of the Repair Industry Survey. These checks were performed to circumvent misleading information and eliminate bias. The output of the checks were either a percentage difference or a pass/fail score. In both cases, PwC contacted facilities with whose data failed any of these checks for clarification, and removed the anomaly if it could not be reconciled.

Category	Description	Output
Revenue	Check that total Collision Repair Labour revenue is equal to the sum of Body/Frame/Mechanical Labour and Paint Labour.	Percentage difference
Revenue	Check that total Collision Repair Parts revenue is equal to the sum of OEM, Aftermarket and Recycled Parts.	Percentage difference
Total costs	Check that the sum of all costs (direct and indirect) are equal to the total operating expenses provided.	Percentage difference
Indirect costs	Check that the sum of all indirect costs (salaries, rent, property taxes, etc.) are equal to the total expenses provided.	Percentage difference
Direct costs	Check that total Collision Repair Labour cost is equal to the sum of Body/Frame/Mechanical Labour and Paint Labour.	Percentage difference
Direct costs	Check that total Collision Repair Parts cost is equal to the sum of OEM, Aftermarket and Recycled Parts.	Percentage difference
Direct costs	Calculate total cost of goods sold, including Parts, Labour and Paint & Materials.	Pass or Fail
Profitability	Calculate total profitability by removing total costs from total revenue and identify cases of negative profitability.	Pass or Fail
Profitability	Calculate total profitability by removing direct and indirect costs from total revenue to further identify anomalies.	Pass or Fail
Workforce	Check that the total number of Management, Administrative, Technical and Apprentice staff is equal to the sum of full-time and part-time staff.	Percentage difference
Workforce	Check that the total number of technical staff is equal to the sum of flat-rate and hourly technicians.	Percentage difference

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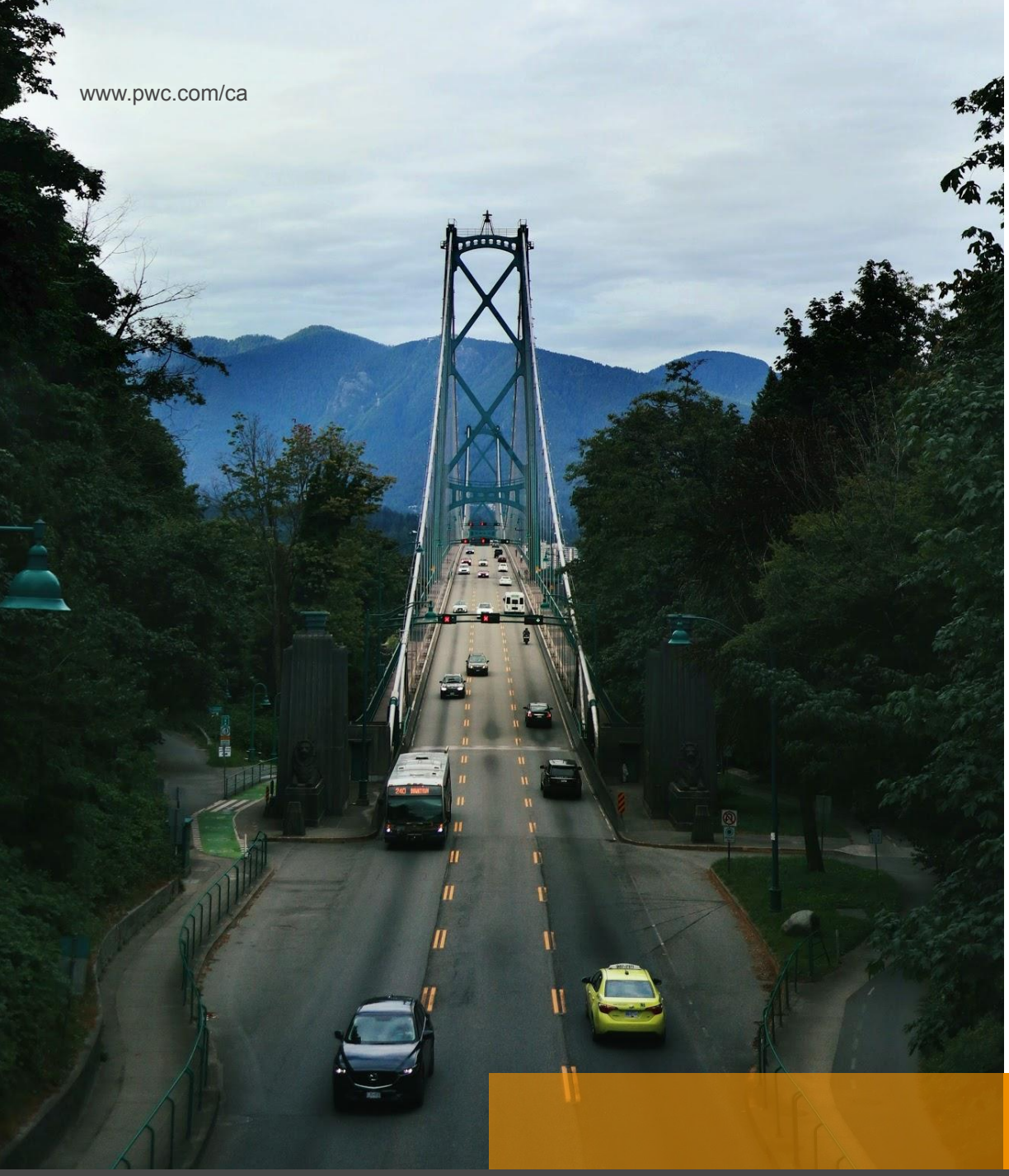

Thank you

pwc