

City of Regina



REPORT TO EXECUTIVE LEADERSHIP TEAM – DECISION ITEM
TITLE: Alternative Service Delivery of Asphalt
DATE PRESENTING TO ELT:
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ISSUE:

In 2009, the City of Regina examined a range of programs and services that might be candidates for alternative service delivery. Among them was the Asphalt Plant.

When ELT and Council reviewed the business cases of all the programs under examination, some were sent back to their home departments for further review.

This item reports back to ELT the results of that further review and provides recommendations regarding the potential of alternative service delivery for the Asphalt Plant.

RECOMMENDATION:

1. Continue operating the City owned Asphalt Plant as a key component of the internal roads paving and maintenance activities.
2. Direct the Director of Transportation and Material Services to develop a plan to introduce self-tendering whereby the City of Regina asphalt plant and paving services has the capacity to bid on paving projects of the City of Regina where such competitive tendering is required (e.g. roadway renewal where funding is sourced from other levels of government).
3. Direct the Manager of Asphalt Production and Materials Engineering to recommend a plan to increase revenue generation by the Asphalt Plant through the provision of materials to the private sector.
4. Direct the General Manager of Public Works to report to the Public Works Committee and Council on ELT's approval of these recommendations and ask for their endorsement.

CONCLUSION:

Alternative Service Delivery options represent viable mechanisms for municipalities to reduce costs. Such mechanisms are varied in nature (from divesting/closure to Public Private Partnerships to privatizing or establishing a special operating company). The choices must be analysed based on the particular circumstances of the venture and the existing market conditions.

An external consultant reviewed the City of Regina's Asphalt Plant operations and compared them to paving practices in other cities. Options were assessed across all of the variations of alternative service delivery. The conclusion of that review was that, because of market conditions, where demand for asphalt consistently exceeds the supply, the City of Regina is able to pave for less per kilometre than most other jurisdictions because it produces its own asphalt.

As the City attempts to close the gap between expected services and our ability to deliver them, it is clear that disposing of the Asphalt Plant only widens that gap. The City would pay more for asphalt and likely encounter delays in supply delivery, resulting in additional complications for customers (e.g. longer road closures, detours, etc.).

Because of the market conditions, there appears to be a revenue opportunity available. The private sector also on occasion sees supply short falls. Our review estimates that, if the Asphalt Plant were able to supply asphalt to the private sector when other supplies are not available, the City of Regina would see an additional \$200 K to \$300 K in net revenue. Asphalt Production and Materials Engineering has conducted some analysis on this issue and is examining options that are allowable under *The Cities Act* while remaining consistent with the City's desire to avoid competition with the private sector. These options could be developed into a business plan to present to ELT and Council.

BACKGROUND:

The City of Regina has produced asphalt mixes to meet internal needs for over 50 years.

In 2004 the Core Services Review it was recognized that services to plan, build and maintain roads are essential City activities. The opportunity to sell asphalt mixes to contractors in the private sector was identified as a potential improvement.

The prices for asphalt and paving services in Regina are growing faster than the City of Regina's internal cost to deliver these services.

On December 12, 2009 City Council, during the planning session, considered the report on alternative service delivery options for the City and the mini business case for alternative service delivery opportunity. City Council instructed the Administration to explore alternative service delivery options for asphalt production.

McNair Business Development Inc was engaged in 2010 to evaluate the City's asphalt production and paving operations and compare it to other options available to the City.

The recommendations in this report are derived from that analysis.

DISCUSSION:

To keep streets in good condition it is necessary to have:

1. sufficient funding to support a good street preservation program
2. cost effective and reliable supply of quality asphalt mixes and paving services.

City of Regina's options for asphalt supply and paving include internal services as well as external contractors. The City asphalt plant currently operates at 60-70% capacity supplying asphalt mixes to internal crews for approximately 70-75 % of the capital program and almost 100% of the maintenance program. The balance of the capital program is delivered by private contractors.

Most cities in Canada do not have their own asphalt plants or paving crews. City of Regina is one of only three municipalities in Western Canada, along with Vancouver and Calgary, which operates its own asphalt plant. City of Calgary and City of Vancouver produce mixes for internal and external markets, generating net revenue for the municipality.

The rationale for the City to buy its first asphalt plant 50 years ago and to expand the plant 33 years ago was the inadequate capacity of the local market to support City needs at a reasonable cost.

Regina is just entering another period of high construction activity with no sign of a new player entering the market. Indeed, the two major road paving contractors in the city operate their own asphalt plants. Any smaller contractors must source their asphalt from these firms, which are also competitors for the City's road paving business. In these circumstances, the supply of asphalt for smaller contractors has been a challenge. The City Asphalt Plant has been approached as a possible supplier.

There are two scenarios under which closing down City operations may benefit the City:

1. If the cost to produce asphalt in-house is higher than to purchase it from contractors. This condition is only beneficial if the competition is strong enough to maintain low market prices and secure supply in the long term
2. If the money from the sale of the assets (or business) generates higher revenue over the life of the assets than any savings that might accrue from supplying asphalt in-house

McNair Business Development Inc. was engaged to conduct a peer review, a market assessment and to evaluate various asphalt production models to determine the best fit for Regina market conditions. Phase I of this study was limited to comparing of the City of Regina operations to that of peer cities that either 1) own their asphalt plant now, or 2) have owned their own asphalt plant in the past and now entirely rely on contracted services for asphalt supply and paving. No external contractors or suppliers were engaged in the first phase of this study.

The three strategic alternatives were considered in McNair review:

1. Closing the asphalt plant
2. Maintaining status quo.
3. Expanding asphalt operation by increasing internal programs and/or by selling asphalt mixes to external contractors and public entities

McNair's study (attached in Appendix A) concluded that the City's ownership and operation of the asphalt plant is good for the City taxpayers. Internal costs compare favourably to similar

products in the private sector. They also advised that by owning the plant the City has some control over the cost and supply of asphalt mixes. Regina has similar internal cost to the other two cities (Calgary and Vancouver) that produce their own asphalt mixes in western Canada. All three cities' production cost compares favourably to their private market competition.

Cost of Production

City of Saskatoon and City of Winnipeg experience provides valuable information. Both cities sold their asphalt plants in 1992-1993. City of Saskatoon also closed the internal paving operation and has relied since then entirely on contractors. The rationale for getting out of asphalt business was based on economics, as it was cheaper to buy asphalt from contractors than to produce it in house at the time. In both cases the companies that purchased the assets did not start new local operations.

City of Saskatoon's plant assets ended up in South America within a year. The vacant spot in the market was never filled, which resulted in lower competition and price escalation.

City of Winnipeg's experience was different. As there was already very strong competition in both aggregate supply and asphalt supply market, closing the City plant did not have negative impact on the price of asphalt mix or paving.

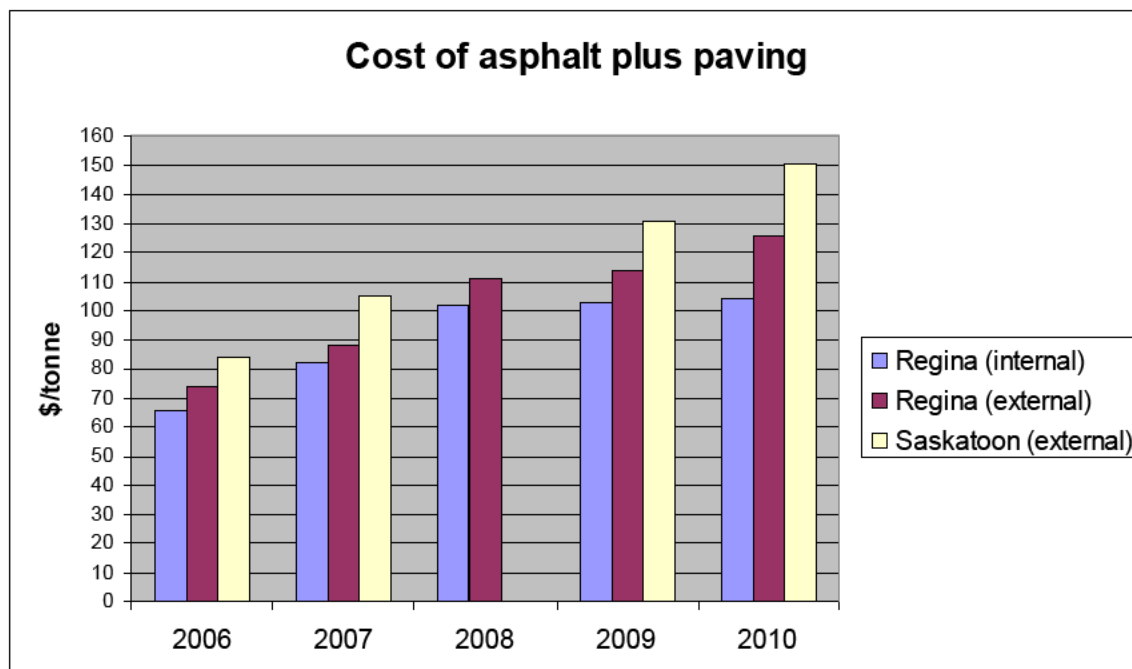
The current private competition in asphalt paving industry in Regina, with two bigger contractors bidding on municipal work, is very similar to Saskatoon's market. The competition is limited by availability of asphalt mixes. It is believed that if other competitors were to enter the market, they would likely have to be asphalt producers in addition to be paving contractors.

One example to support this is from a McNair interview with TBS Paving, a Toronto based paving (only) company, which tried to establish business in Saskatchewan. TBS Paving officials described both the Regina and Saskatoon's asphalt supply market as protectionist and decided to return to Ontario. 18(1)(b)&(c) , the local contractor 18(1)(b)&(c) , reported to us similar experience in the past and has sought the opportunity to buy asphalt mixes from the City.

Any new company would have to have find access to a quality granular materials source as well. This could be an issue for both Regina and Saskatoon.

Regina and Saskatoon markets are very similar (low competition in asphalt mix producing, paving and aggregate supply industry). It is worth comparing the asphalt and paving prices in these markets over the last few years to have an indication of what Regina prices would look like if City of Regina closed its asphalt plant.

For this comparison, the corporate overhead was not included in the calculations of the internal cost, as it is very unlikely that corporate costs would be reduced in the event that the asphalt production and paving operations were closed. That cost would be shifted to different areas, such as the cost of detail design, tendering, contract administration, inspection, project management and billing. The City of Regina and City of Saskatoon cost associated with management of external work was also excluded to allow for fair comparison.



The above chart shows that having an internal asphalt supply and paving operation provides lower paving cost as compared to contracted out work. It also shows that having internal asphalt supply had positive impact on Regina market prices as compared to Saskatoon prices, where lack of competition from municipal operations resulted in faster price growth.

The internal cost of producing asphalt and paving in Regina has increased from 2006 to 2010 by 52%. Through the same time period the prices paid to external contractors in Regina has increased by 70% and in Saskatoon by 79%.

The cost of internal operation (asphalt supply plus paving services) was 25% (or 1.69 M) lower in 2010 than the prices paid to the external contractor for the same services. A big portion of these savings is a direct result of the lower cost of internally produced asphalt mixes.

Potential Return on the Sale of the Asphalt Plant

Should the City consider selling asphalt plant, the return on investment of the sale proceeds would have to compensate for the lost savings generated by internal production.

Selling the asphalt plant and paving operations as a business would require three elements:

1. customers
2. operating personnel with good knowledge of the plant
3. sources of material supply

The City Asphalt Plant and paving operations do not currently operate as business, but rather as sole provider of products and services to itself. Thus, no customers are available to transfer to the potential buyer.

Section 37 of *The Trade Union Act* requires that any transfer of a business would also include the transfer of any existing collective agreement so that employees are protected. However, this proposition might make the business less attractive to the market. Regardless of the protections of *The Trade Union Act*, it is unknown whether the current staff would accept the

jobs with a new owner, or if the new owner would have to hire and train new operators. The City plant is quite unique, and recruitment may pose a problem.

Supply of quality granular materials may be an issue for all asphalt producers as the deposits of high quality materials within reasonable distance from Regina are depleting quickly because of increased construction activity. This may affect not only the price but also the availability of asphalt mixes to the City.

The City asphalt plant uses steel slag as substitute for a portion of the crushed rock component of the asphalt mix. It requires very good understanding of slag properties to properly design the slag based asphalt mixes. That expertise is not available from consulting engineering firms in Saskatchewan and very few producers have that expertise in Canada. It is therefore likely that a potential buyer of the asphalt plant would have to rely on natural aggregates hauled from 100 km distance. This would add to the cost of production and result in higher, less competitive prices. The conditions under which the City might be able to sell the Asphalt Plant business are poor.

A more likely scenario would be that the assets of the plant would be sold and moved. The market value of asphalt plant assets was estimated in 2010 at \$500K by Ameripave, the trader of asphalt related equipment. This return is less than the premium the City would have to pay to contractors in a year if the services were purchased externally.

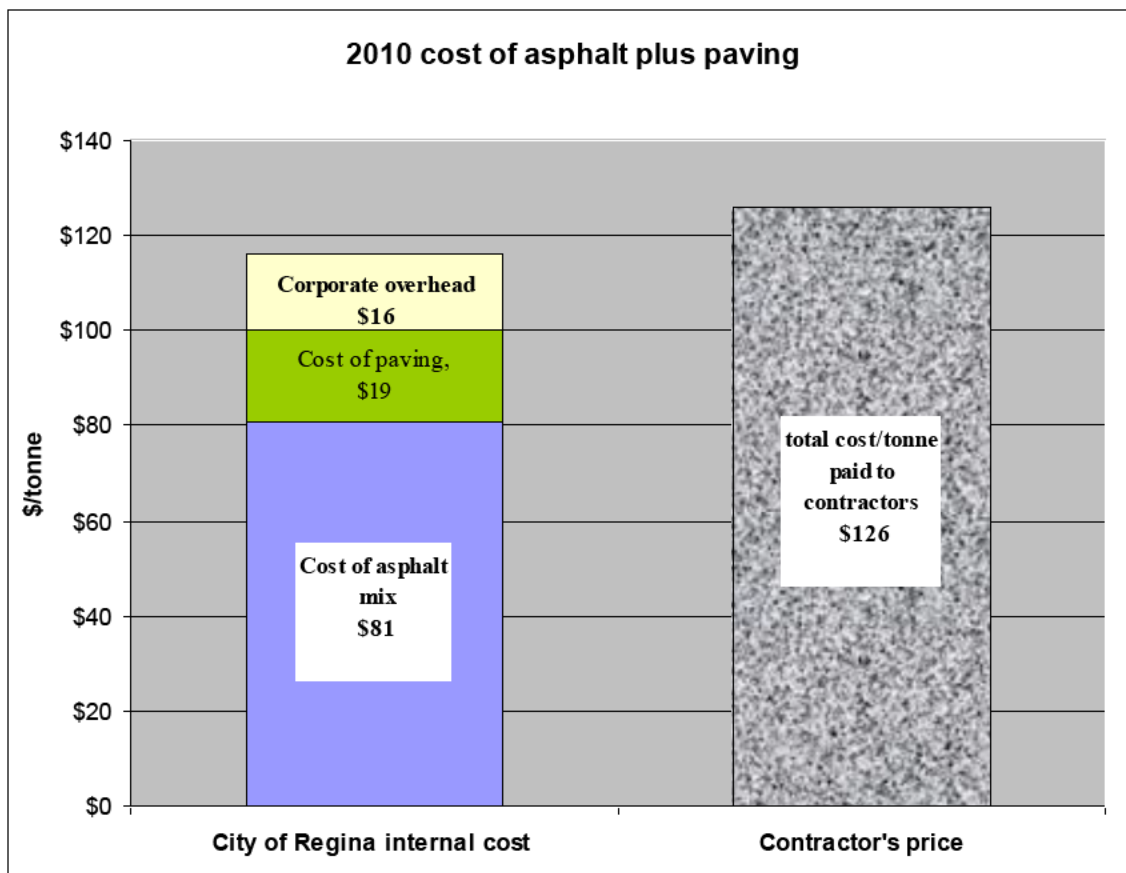
Based on the above, selling the plant is not a feasible alternative.

Expanding Production

The City asphalt plant currently operates at 60-70% capacity. It is cost effective and extra capacity is available. There is an opportunity to expand City operations to full capacity.

Options:

1. Supply 100% of the asphalt mix for all road infrastructure renewal by the City of Regina. This would require that, where the City of Regina does not have the capacity to undertake its own paving, tenders be issued for paving services only. Contractors would be required to use the asphalt produced by the City of Regina Asphalt Plant. Such use would reduce the cost of paving overall, but would likely run into resistance from contractors that produce "all-in" services because they have their own asphalt plants.
2. Supply 100% of the asphalt mix and paving services for all road infrastructure renewal. With improved scheduling and concrete tendering, it is likely that existing paving operations at the City of Regina also has excess capacity. A significant amount of road renewal work is subsidized by other levels of government. These subsidies require that contracts for road renewal be issued by tender. If the City were to expand its services to meet 100% of the demand for asphalt and paving, we would have to also develop the capacity to self-tender our services. The end result of moving the City into a self-tendering process on its own jobs would be a more competitive tendering environment. If a private contractor won the tender, the City would see real savings. It is recommended that the Transportation and Materials Services develop the capacity to self-tender. The cost analysis is provided in the chart below.



3. Offer asphalt excess capacity for sale to the private sector. Perhaps the most controversial of options available to respond to the excess capacity of the asphalt plant is to offer asphalt for sale to the private sector or to other public entities (e.g. the Government of Saskatchewan). As indicated earlier in the analysis, the supply of asphalt material is a concern in the current market. Small paving contractors do not have ready access to an asphalt supply. While there is no desire to compete with the local private sector, the City of Regina could play a role in addressing the asphalt supply. To avoid perceptions of competing with the local private sector, it is recommended that the Asphalt Plant establish prices for the private sector slightly above the local market rate. In this case, the private sector would only purchase from the City if no other supply were available. This may create opportunities for smaller contractors without their own asphalt plant to enter the local market.

This option also brings with it some legal considerations. Under the terms of *The Cities Act*, there are limits regarding the fees that cities are able to assess, however this limitation applies only to fees for licensing and inspecting. Cities have the same rights under law as a “natural person”. This may entitle them to enter into a business and charge for services, including earning a profit for those services. It is the opinion of the City Solicitor’s Office that if the City was to enter into a business to earn a profit, we would also have to demonstrate that that business serves the broader purposes of municipalities under the law. These include:

- (a) to provide good government;
- (b) to provide services, facilities and other things that, in the opinion of council, are necessary and desirable for all or a part of the city;

- (c) to develop and maintain a safe and viable community;
- (d) to foster economic, social and environmental well-being;
- (e) to provide wise stewardship of public assets.

While further analysis on this issue is required, it may be that, if the profits of the asphalt selling business are reinvested into municipal endeavours, these conditions could be met. 21(a)

RECOMMENDATION IMPLICATIONS

a) Financial

Maintaining current ownership of asphalt plant and paving services saves the City \$1.69M (this is based on 2010 internal unit cost, 2010 production of 65,000 tonnes of asphalt mix and the prices paid to the low bid on the 2010 road infrastructure renewal package).

If the City were to use existing capacity to produce 100% of its asphalt mixes and meet 100% of its paving requirements internally, we would save additional 500K annually.

Selling asphalt mixes at \$2 above market prices would generate additional 250K (this is based on 20,000 tonnes sold and 2010 prices).

b) Environmental

Maintaining and potentially expanding internal production of asphalt mixes and paving operations will have positive impact on the environment. The City plant is centrally located (shorter trips from the plant to the Regina paving jobs), has an efficient dust recovery system, is energy efficient and uses steel slag which reduces hauling distance and extends the life of the gravel pits.

c) Strategic

Maintaining the ownership of the asphalt plant and potentially expanding the services to fully serve all City paving needs, would reduce costs. The expansion of asphalt sales into the private sector would increase revenues. These two initiatives are entirely consistent with ELT's 2012 strategic focus, to close the gap.

d) Evaluation Criteria

The recommendation to keep the asphalt plant and paving operation and potentially expand the operations to fulfill 100% of City paving needs was based on the best value for the taxpayers' money.

e) Other

Maintaining status quo would have no additional impacts on the City. Expanding City operation, which would mean less work or lower profits for the two main contractors, may result in forming a lobby through the Saskatchewan Heavy Construction

Association to prevent any action that would increase competition in paving industry in Regina.

The City of Regina would ensure that corporate overhead costs are included in City bids to make the process as fair as possible and try to alleviate some of the criticisms that may be raised through these lobby efforts.

COMMUNICATIONS:

Maintaining status quo would not require any communication. Expanding operation and bidding on City road infrastructure renewal packages funded by other levels of government would require communication with the Province of Saskatchewan to get approval to self-tender. As the fuel tax guidelines require that the City do not inform the competitors of the intention to bid on City projects, the communication with City Council has to occur explaining the rationale for self tender, seeking feedback and approval.

ATTACHMENTS:

Appendix A: McNair report

Appendix B: Alternative Service Delivery '101' report

Appendix C: Mini Business Case for alternative Service Delivery (ASD) Opportunity

FOR DISCUSSION



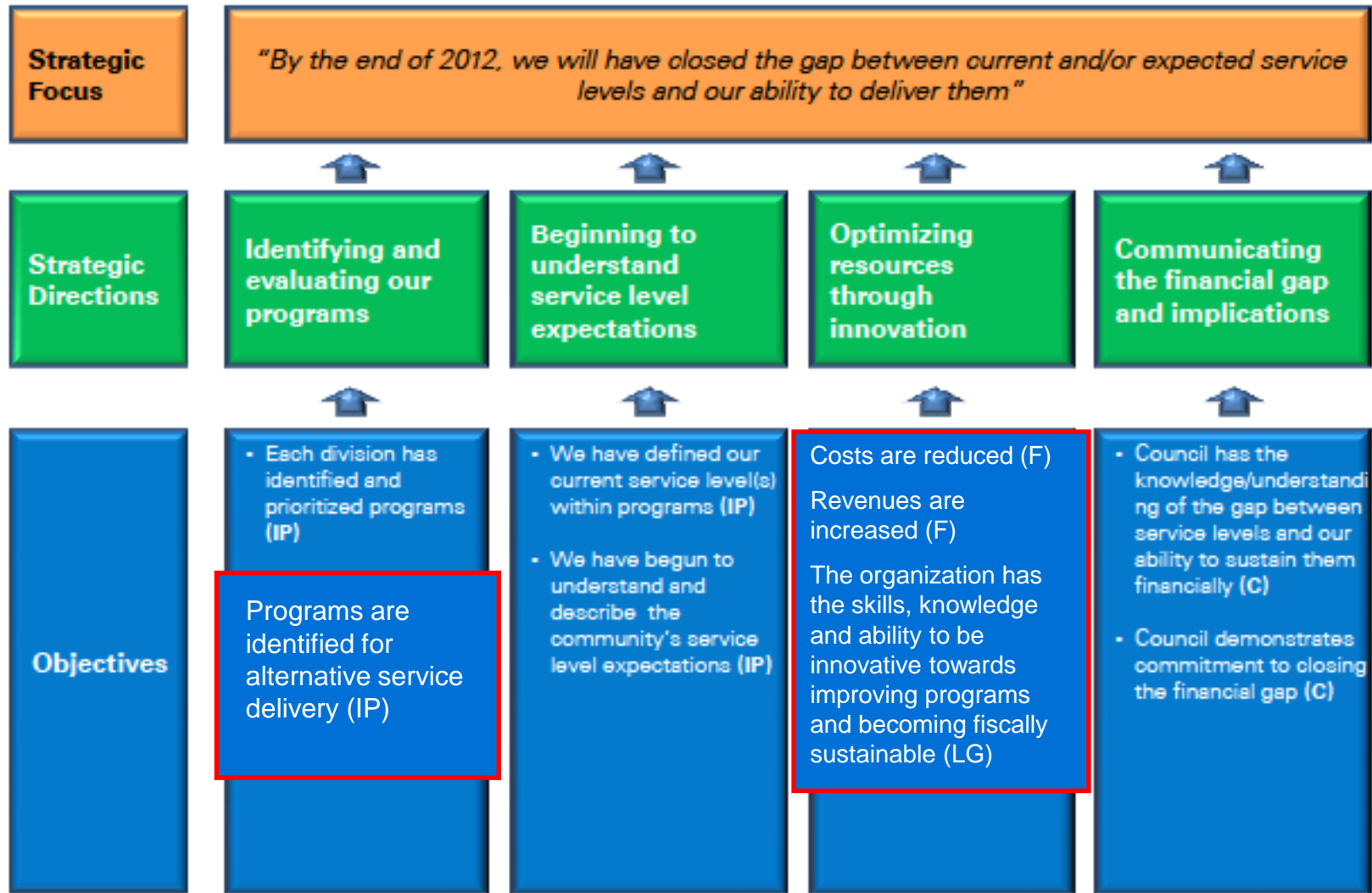
Asphalt Production Delivery Models



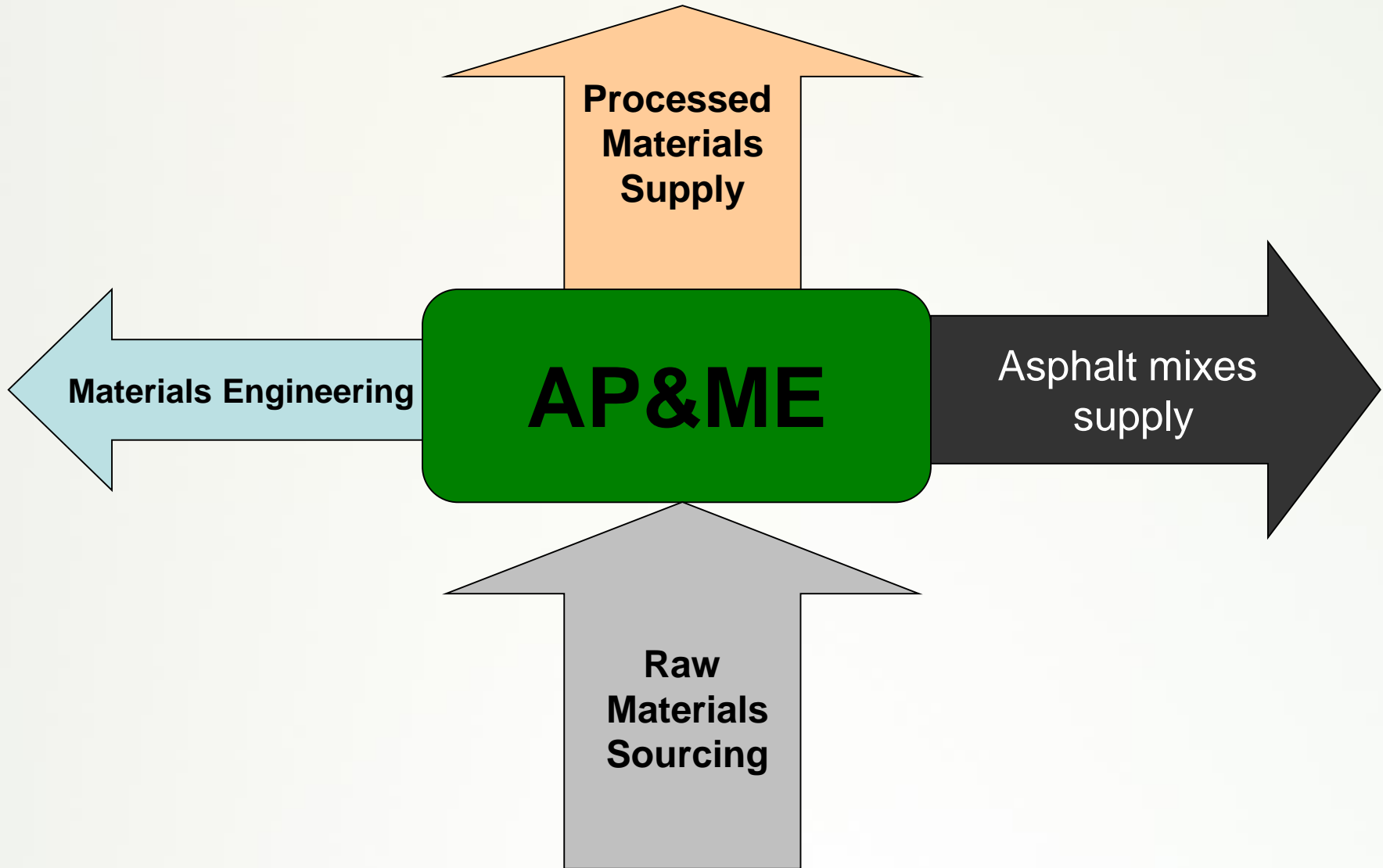
Agenda

- Supporting Strategic Focus for 2012
- Asphalt Plant as a part of:
 - Asphalt Production and Materials Engineering Branch
 - Road construction value chain
- City of Regina asphalt production versus models used by other cities
- Asphalt Production Delivery Options considered:
 - 1. Status quo
 - 2. Plant closure (purchase asphalt externally)
 - 3. Expansion
- Opportunities to reduce the financial gap
- Recommendations

Strategic Focus for 2012

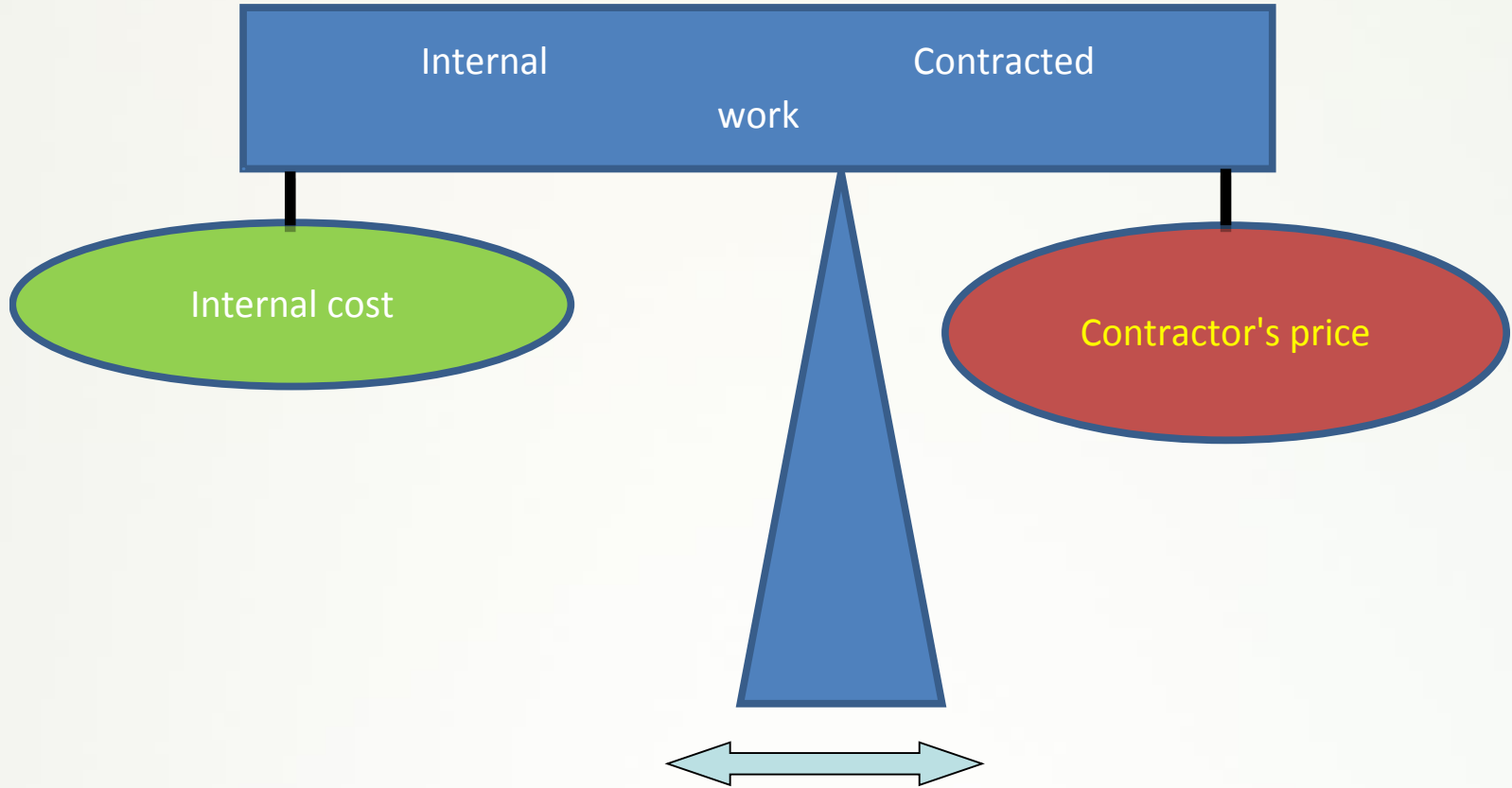


Strategy Map Perspectives: Financial (F), Client (C), Internal Process (IP), Learning & Growth (LG)





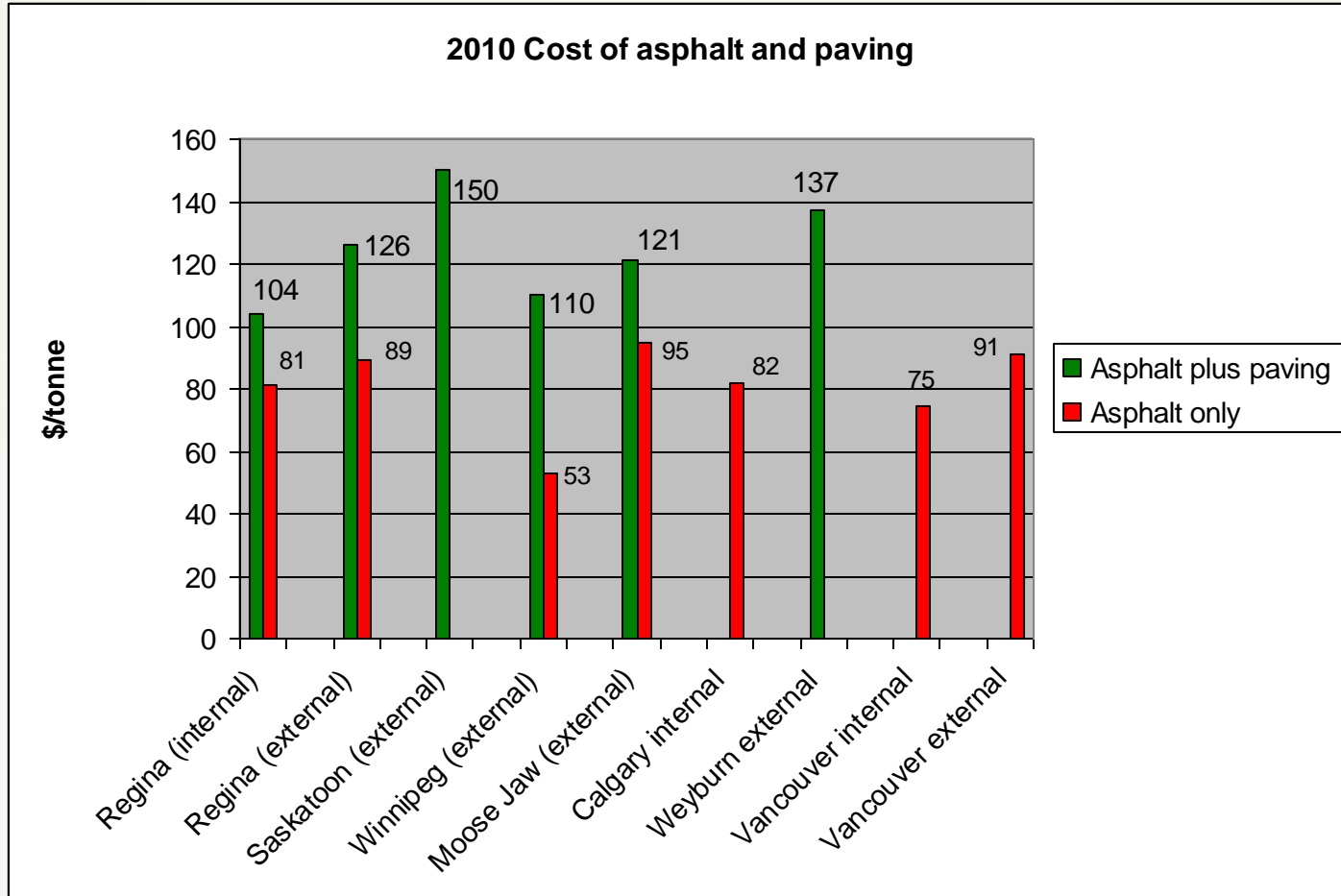
Current Service Delivery Model



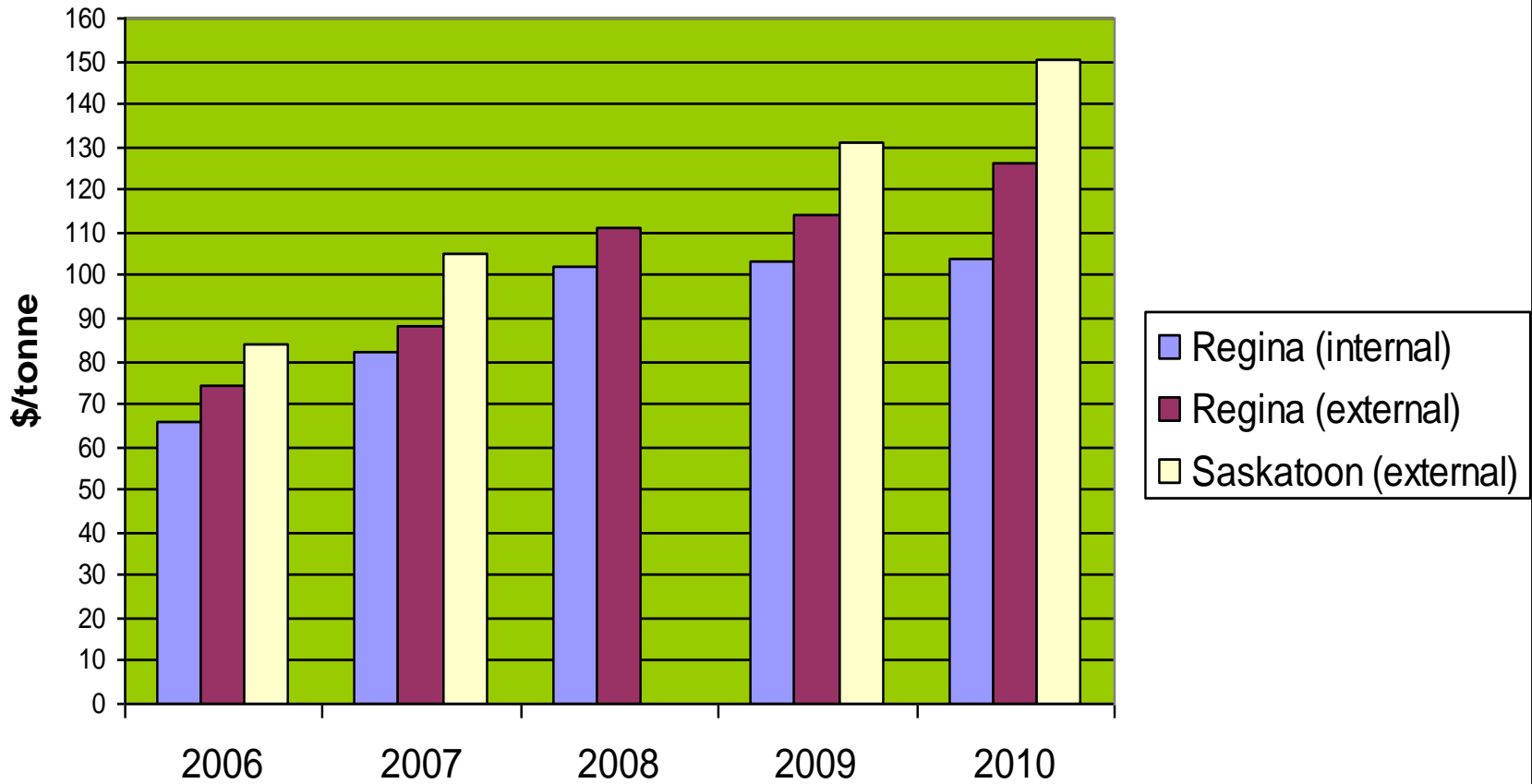
Peer Review

	Regina	Moose Jaw	Saskatoon	Winnipeg	Weyburn	Calgary	Vancouver
City owns asphalt plant	Yes	No	No	No	No	Yes	Yes
Tonnes/year produced by City plant	70K	N/A	N/A	N/A	N/A	150K	100K
Internal paving/patching by City crews	70K	Patching	Unknown	30K	0	120K	100K
Tonnes/year sold externally	0	N/A	N/A	N/A	N/A	30K	2K
Number of private asphalt plants in the City	3*	1	3*	5	0	5+	Unknown
Number of contractors bidding on City jobs	2-3	1	2-3	7-10	1-2	5-10	Unknown

Note: * Regina and Saskatoon #s include small plants



Cost of asphalt plus paving



Service Delivery Option 1: Status Quo

Benefits:

- Some control over the cost
- Secure and customized supply
- Flexibility
- Knowledge exist to support the innovation
- PST exemption on City purchased aggregates used for its own needs

Disadvantages:

- No opportunity to generate revenue
- Plant capacity not fully utilized

Service Delivery Option 2: Plant closure & purchase asphalt externally

Benefits:

- One time revenue (\$500K-\$2M)

Disadvantages:

- Higher annual cost of externally purchased asphalt mixes (\$500K - \$1M)
- Lost opportunity for asphalt mix innovations and revenue generation
- Low market value of asphalt plant assets
- Low business value of City asphalt plant
 - no transferable customers
 - inheritance of the existing collective agreements
 - uniqueness of the City plant
 - limited access to aggregate supply
- Risk of temporary asphalt supply shortages
- Negative impact on efficiency and effectiveness of City internal paving operations
- Negative impact on the morale of City employees

Service Delivery Option 3: Expansion

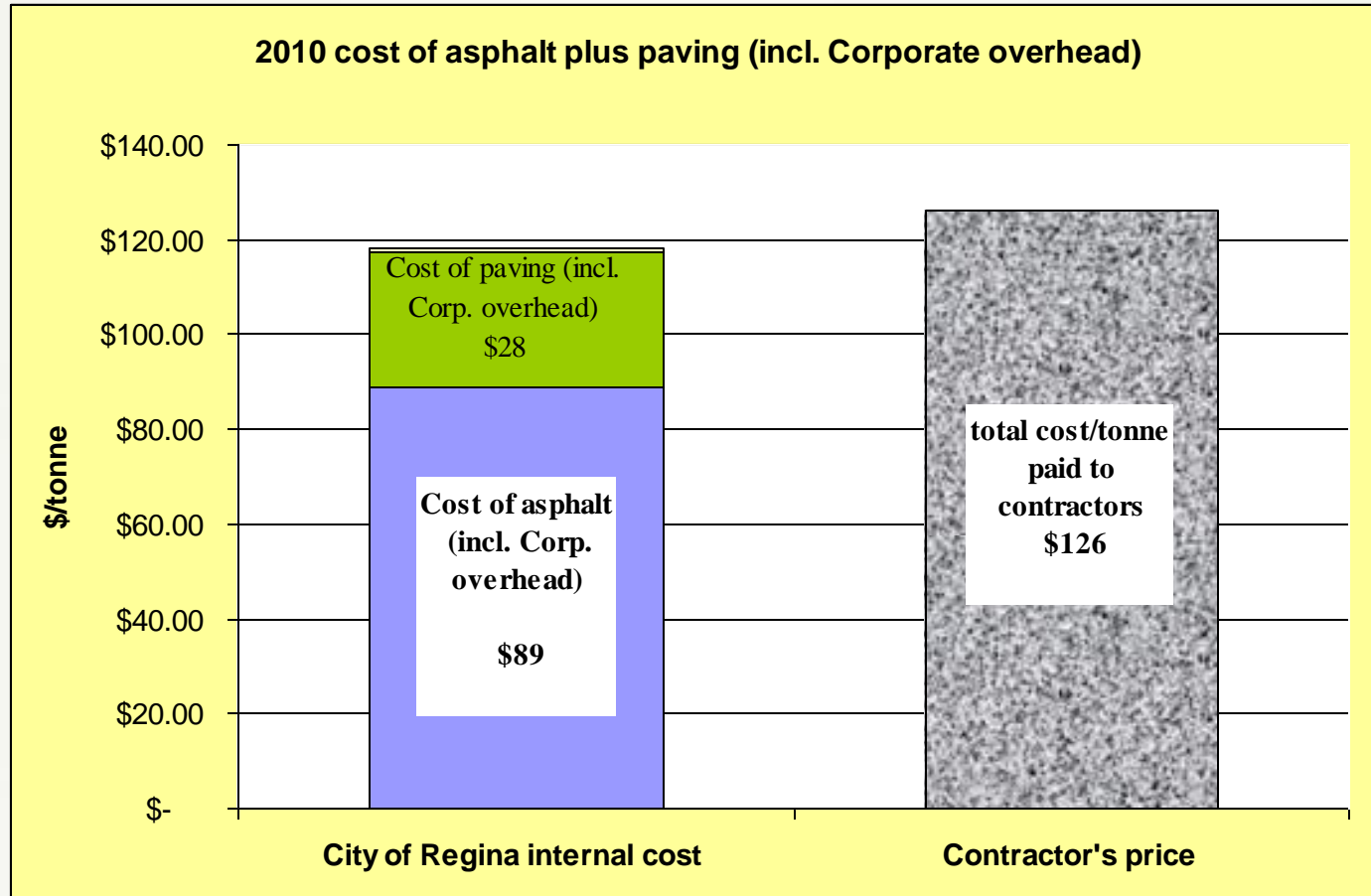
Benefits:

- Revenue generation
- Cost reduction
- Full utilization of the plant
- Support for Community needs (when market supply is lower than demand)

Disadvantages:

- City would have to face strong lobby from Heavy Construction Association
- Perception that City is unfairly competing with private sector

Potential for Public Works Managed Competition



Closing the gap – opportunities

1. Supply 100% of the asphalt mix for all City road infrastructure renewal.
2. Optimize the capacity of the City asphalt plant and paving operations.
3. Offer asphalt excess capacity for sale to the private sector. This option requires:
 - a) demonstration that the business serves the broader purpose of municipalities
 - b) City Council approval.

Recommendations

1. Continue operating the City owned Asphalt Plant (strategic objective: cost reduction, innovation).
2. Develop a plan to introduce self-tendering (strategic objective: cost reduction).
3. Develop a plan to provide materials to the private sector (strategic objective: revenue generation).
4. Ask the Public Works Committee and Council for their endorsement of the ELT approved recommendations.

Thank you

Mini Business Case for Alternative Service Delivery (ASD) Opportunity

Title of Opportunity: Asphalt production plant options
Type of Opportunity: Divestiture or Economy of scale competitive advantage opportunities

Opportunity Description and Scope

The City currently produces over 95% of the asphalt required for the yearly paving and pavement maintenance (crack filling & pothole patching) activities performed by City paving crews. This amounts to a total of approximately 70,000 tonnes of asphalt production per year.

External paving contractors match or exceed the volume of internal paving work. This split of internal and contracted work is due to the ability to leverage 3rd party funding for the contracted work, and to gain access to the specialized paving capabilities of the external companies.

As asphalt can be purchased from private firms (currently 5% is purchased externally per year) and the City indirectly pays for the asphalt supplied on contracted work, it is valid to ask if the taxpayers of Regina are getting good value for City-produced asphalt, compared to asphalt provided by external companies.

Excluded from this analysis:

- 1) The three gravel pits owned and managed by the branch that produces asphalt.
- 2) The granular landscape materials managed by the branch on the same site as the asphalt plant. Both the gravel pits and landscape materials operations are financially separate from the asphalt plant, though they share facilities space and some staff split their responsibilities between the activities.
- 3) The option of having external paving companies working on City of Regina contracts use asphalt produced by the City. These companies would continue to supply their own asphalt.
- 4) The asphalt testing lab and field inspection functions.

Current State Description

The asphalt plant currently operates out of a cost recovery (aka: 620) fund, and has a reserve fund for capital projects. This means that (minus some limited overhead costs) the cost of producing the asphalt is passed on to other City departments, and makes comparisons between the prices of internally and externally produced asphalt possible.

19 full and part time staff in the Asphalt Production and Field Services branch. 3.5 FTEs employed for the production of asphalt.

The physical plant is capable of running 24/7 with no additional capital costs; only additional operation staff would be required. Currently the plant produces asphalt for 4-6 hours per day, with start-up and shutdown time each day. Running the plant for longer hours per day is preferable because it would spread the start-up and shutdown costs over more tonnes of product and reduce the operational risks associated with these large heating and cooling swings.

Within Regina, there are two other asphalt producers, both of which are smaller than the City's operation. Preliminary investigation suggests that purchasing asphalt externally by internal paving crews becomes uneconomical. The external producers are able to price the asphalt supply and paving activities such that they make the same profit, but the comparison of the paving activity alone is always in favour of the external company.

Asphalt supply service level criteria:

- *Access*: Excellent. Located in middle of the city. Open May to Nov at 8-12 hours per day, 6 days per week with the option to negotiate additional or adjusted hours.
- *Communication*: Good. Any option that moves asphalt production outside of the City organization would impede communication.
- *Competence*: Good. Have in-house labs for testing and mix design. Other suppliers use 3rd party testing. The City staff have been mostly successful modifying mix design on the spot if needed as a result of raw material change. Largest plant in the city.
- *Credibility & Reliability*: Good. Price, volume, and quality match commitments.
- *Timeliness*: Good. The average waiting time for pick up of product is less than 1 minute, where waits of 20-30 minutes are common at the external suppliers. Minor delays experienced when producing a special mix or during plant repairs.
- *Responsiveness*: Good. Will adjust the mix to respond to field results and variance in material supply. Will adjust production schedule to match paving crew schedule.
- *Fairness*: Not Applicable; currently only have one internal customer.
- *Sustainability/Long term service delivery*: Good. Fully funded with sufficient reserve fund. No forecasted service delivery or capacity bottlenecks.
- *Price*: Average to Good. The economic analysis depends heavily on assumptions. At one extreme, the externally supplied asphalt is only 5% more expensive. At the other extreme, externally supplied asphalt is 25% more expensive. Assuming the City had purchased all asphalt from external suppliers in 2009, the costs would have been 10% to 15% more expensive.

Note that the internal asphalt prices do not cover soft overhead such as the services provide by the finance, payroll, IT and HR departments. Facilities and capital asset costs are included, so the soft overhead is likely in the 3% - 7% range, which makes the true cost competitive with the price the City receives from external suppliers.

It could be argued that the external suppliers would reduce their unit costs if they were producing asphalt for the City of Regina, but the observation that Saskatoon currently pays approximately 10% more for asphalt than the City of Regina suggests that without competition from the City's asphalt plant, prices would stabilize near the +15% to +25% range, not the +0% to +10% range.

Rationale for Analyzing / Considering Other Options

Service/Cost improvement potential

The existing service is superior to external suppliers in almost all service aspects, and provides an overall service level advantage.

Because the service being delivered is acceptable, the options to be explored will be how to maximize the financial benefits of this service.

Potential Future-State Options (to Analyze Further)

- 1) *Divestiture*: Sell the asphalt plant assets for a one time large revenue influx.
The City has a permanent need for asphalt supply. Once the plant is sold, all asphalt would be purchased externally at a cost higher than it can now be produced. Would require a sale price of at least \$7M at 3% interest (above inflation) to provide a \$220k annuity indefinitely to match the low-end estimate of the existing economic value. The currently estimated sale price is \$2-\$3 million, which is far below the break even point.
- 2) *Reduce unit costs*: Expand production by 30,000 tonnes.
 - This expansion would reduce the unit costs by approximately \$2.17 / tonne, which would save \$163k per year on the currently used 75,000 tonnes.
 - Expanded service may justify expanding the casual staff at the plant, which would reduce overtime costs.

- The expanded production could be used internally, sold externally or a mix of these two options. The combined cost savings and profit is estimated to be between \$83k (at 7% soft overhead), \$172k (at 3% overhead) and up to \$500k if selling at the external market prices (\$90/tonne) with 3% overhead.
 - The balance between internal use and external sales will have to be part of a more extensive analysis that evaluates the local demand for asphalt.
- 3) *Double the plant production:* This would drive the unit cost of asphalt down by approximately \$3.80 and would double the current savings of \$500k / year, if it was used internally. This would either require the City to expand the internal paving and concrete work capacity or find a stable market for the additional 75,000 tonnes. The existing asphalt plant can support this production level; the assumption is that the plant would operate on expanded hours.

Groups Affected by Opportunity

The Asphalt Production and Field Services Branch: Increase in staff by up to 3 casuals is within the existing management and facilities capabilities of the branch. Some additional demand for scheduling and coordination with customers and suppliers due to 25% to 35% increase in volume. Some marketing effort would be required to sell asphalt externally.

Roadway Operations: The Asphalt Services and Concrete Services branches have the capability to handle ~50% more work with small staff additions and without significant capital costs; which may reduce the unit costs in these branches.

Local 21/CMM: Options that increases staffing levels would be favoured. Selling the plant would eliminate positions, some of which are unique to the branch.

Private asphalt suppliers: They would likely prefer the elimination of this service, so they can have additional sales from the City. Direct competition for private sales would be unpopular with these stakeholders.

Paving contractors without asphalt production: Currently, paving contractors without their own asphalt plants can not competitively bid on large contracts because they must buy asphalt from their competitors. They would be in favour of external sales.

Taxpayers: Likely do not care where the asphalt is produced. They likely would prefer any option that decreases the cost of the service (road paving), increasing the amount of funds available for other projects.

Issues / Considerations

There are three other municipalities in western Canada that have asphalt production plants: Calgary, Edmonton and Vancouver. Calgary and Edmonton each produce less than 100,000 tonnes/year for maintenance activities. They contract out major construction. Vancouver examined the economics approximately 10 years ago and found it made sense to expand their operation and to sell some asphalt externally. They now produce between 100k and 120k tonnes / year for major construction, maintenance and sales. The varied solutions suggest that local economics and policies are significant factors in determining what level of service is provided.

Asphalt production is a very specialized, small and localized industry. The branch staff must understand both the technology and financial (commodities purchasing) aspects of the business.

Selling asphalt externally may result in the other suppliers no longer providing a preferred price to the City of Regina when the City needs short term supply. This would result in an increased cost

for the approximately 5% of asphalt the City purchases, or potentially the inability to fill those orders, resulting in delays in paving.

Competing externally may destabilize the local asphalt production and paving industries. It is unclear what long term impact this would have on local companies. The local companies may modernize to better compete with the City plant, changing the profitability of the operation. External competition will likely reduce the profitability of the local companies.

Any option that includes selling asphalt externally will require policy creation to define how the additional revenue is allocated between the asphalt plant reserve fund and general operating fund. The revenue from the current occasional sale of small amounts of asphalt is transferred to the asphalt reserve fund.

Although asphalt production is not a “core” service of a municipality, road construction and maintenance are core services. Roadway paving with municipal crews is less viable if the municipality purchases the asphalt, because local suppliers can use their paving service as a loss-leader to undercut the City’s internal paving costs, making their profits on asphalt supply.

Risks / Mitigation Strategies

Commodity price fluctuations: Approximately 5% of the unit cost of asphalt is electricity and natural gas costs. The liquid asphalt costs are approximately 50% of the unit cost. Fluctuations in the prices of these commodities could marginally change the profitability of the service.

Materials liability: Existing testing and sampling provides sufficient liability protection.

Related Initiatives

Federal and provincial funding with contracting out requirements: Options that increase the amount of paving work done by internal forces will decrease the amount of capital dollars eligible for these grants. It will need to be examined if any of the options presented here drive the leveraging effect of the external funds low enough to justify spending the 3rd party funding on infrastructure other than roads.

Costs & Benefits

Estimated One-Time Savings (\$)	Estimated Annual Savings (\$)	Estimated One-Time Revenue Realization (\$)	Estimated Annual Revenue Realization (\$)
Option 1) Divestiture <u>One Time Costs:</u> Legal and financial costs of sale of the facility. <u>One Time Revenue:</u> \$2M - \$3M <u>Annual Savings:</u> Loss of at least \$220k / year due to the need to purchase asphalt from external suppliers at a higher price than we can produce it. <u>Annual Revenue:</u> None, unless one-time revenue is invested.			
Option 2) Increase production by 30,000 tonnes, to 105,000 tonnes / year. <u>One Time Costs:</u> None. Existing plant can support this production level. <u>One Time Revenue:</u> None. <u>Annual Savings:</u> Between \$163k and \$213k / year from not having to purchase asphalt from external suppliers <u>Annual Revenue:</u> \$83k (at 7% soft overhead), \$172k (at 3% overhead) and up to \$500k if selling			

at market prices.

Option 3) Double production.

One Time Costs: None. Existing plant can support this production level.

One Time Revenue: None.

Annual Savings: \$285k unit cost savings on the existing production of 75,000 tonnes, plus additional cost savings of between \$166k and \$344k if the additional production is used internally.

Annual Revenue: Up to \$1.5M if additional production is sold externally at market rates instead of being used internally.

Proposed Next Steps		
#	Brief Description of Major Activities and Sub-Activities.	Estimated Cost to Perform Activity (\$)
1	Assess market for external buyers for City produced asphalt. Need to do the assessment for the entire expansion to mitigate the risk of potentially not being able to expand the internal paving and concrete capabilities.	\$20,000
2	Assess the market value of the asphalt plant, to determine if divestiture is viable.	\$5,000
3	Quantify the soft overhead costs of the asphalt plant to provide accurate revenue forecasts for sale to external parties.	3 internal person-weeks.
Total:		