
Municipally Operated MRFs: Blueprint for Full Producer Responsibility Transition

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1. Overview

This document provides guidance on how municipalities, operating waste diversion programs and material recovery facilities (MRFs), can evaluate if they should retain or opt out of the provision of service delivery with the implementation of Full Producer Responsibility (FPR).

This guidance document has been developed to provide a framework for decision making that any municipality can use. As such, the framework is not intended to provide, or outline, every possible action that should, or could, be taken to evaluate whether or not to remain in the service delivery business. Rather, this document is intended to articulate, at a high level, the activities that should be performed to facilitate the making of an informed decision.

The framework for decision making has been developed based on three core attributes of providing waste management service delivery:

1. Financial
2. Operational
3. Social

While the primary purpose of this document relates to municipal Blue Box program operations, synergies in decision making exist with other waste diversion/non-waste diversion programs. This is particularly relevant when it comes to services delivered or provided at multi-use/multi-function sites. To this end, the framework can apply across program lines and the decision to retain or divest the delivery of waste diversion services can be, by program/service delivery type, or for all waste diversion services.

The ultimate decision on whether to continue to provide Blue Box program services with would ultimately be based on individual municipal preferences (on each core attribute) and the risk tolerances associated with each.

Each core attribute should be assessed individually and in the absence of influence of the others attributes. Once an internal assessment of each has been completed, the

results should then be considered in relation to the others so as to arrive at an overall conclusion (i.e. whether to retain or exit from providing the service).

2. Assessment Components and Process

In order to objectively assess the Financial, Operational and Social attributes separately, several steps should be followed as outlined below. All of the steps should be considered compulsory. However, if the social component is determined not to be of significance locally, then it could be skipped.

- Step 1: Administration and Coordination
- Step 2: Financial Assessment (three parts)
- Step 3: Operational Assessment
- Step 4: Social Assessment

The sections below provide an explanation of the main points related to each step and the accompanying Excel workbook provides greater detail and ranking suggestions for these components. The information below is for guidance only and municipalities may require/elect to include other components to each step as deemed appropriate.

2.1 Step 1: Administration and Coordination

The intention of this step is to ensure that the necessary approvals to commence the project are in place and that an adequate budget, workplan and schedule have been prepared and approved. This step is critical to overall project management and coordination for all subsequent steps.

Logically, the project would normally be managed by a member of the solid waste management team. However, the project manager's role could be provided by any qualified employee provided significant solid waste division input is included. The following are the items recommended as part of this initial step:

- Prepare a Council report prior to the start of the project to articulate the purpose, intent, objectives, goals of the work and resources needed to ensure a thorough assessment,

- Determine the project team in terms of numbers, skill sets and clear roles/responsibilities,
- Fix a detailed and realistic project schedule which includes regular update reports for senior management and Council (see [Sample Timeline](#) template),
- Convene regular meetings throughout the project with project team members to discuss goals, objectives and to ensure that the works for each attribute are being actioned and completed, and
- Prepare a Council report at the end of the project to articulate the work done, the results and recommendations.

2.2 Step 2: Financial Assessment

The financial assessment includes three separate components that require evaluation:

- Equipment,
- Land/building, and
- Business valuation.

While inter-related, they should be assessed separately and independently from each other and from all other steps. The overall business valuation will include some/all elements of the equipment land and building valuations.

Equipment

The intention of the equipment current market valuation step is to ensure that all equipment required for the continuing operation of Blue Box service delivery is quantified in terms of condition/state of repair and local market value for an operating business. The equipment should not be valued based on forced sale, immediate liquidation or scrap disposal. The work should include an assessment of maintenance records for each major piece. At a high level, the objectives of the equipment assessment include:

- Determining the condition of each piece of equipment within the MRF/curbside (e.g. sorting equipment, conveyors, balers, weigh scales), and

- Determining the condition of all mobile equipment (e.g. collection equipment and mobile equipment at the MRF such as forklifts, skid-steers, loaders).

In completing this work, a [Request for Proposal](#) or tender document is likely needed to secure a qualified person/company to perform the equipment condition assessment. A template document is available on the CIF website for municipal use. The scope of work should cover all physical, mechanical and electric components of the equipment with the intention to report on:

- The status of each piece of equipment (e.g. poor, good, excellent),
- A cost estimate to repair or replace any equipment in need, and
- A cost estimate (and revenue component) and time estimate of what it would require to sell the equipment as an operating business or decommission the MRF and sell off the equipment.

As the results of each item above would be detailed, for overall evaluation purposes, the work required to complete this element should provide for a high-level equipment determination such as “poor”, “good”, “acceptable” or “unacceptable”. These high-level determinations would then be combined with the results of the other attributes, producing an overall picture of the business valuation leading to a recommendation to retain or divest the entire business or a specific service.

Land and Building

The intention of the Land & Building valuation step is to ensure that a clear picture of the net present value of the realty assets are known and quantified. At a high level, the objectives of this assessment include:

- Determining the current local property value,
- Assessing the condition of the building envelope,
- Assessing, as needed, the condition of site utilities, and
- Calculating/estimating the cost of repairs, replacements, and/or enhancements.

In completing this work, a Request for Proposal/Quotation document is likely needed to secure a qualified company to perform the assessments. A [template document](#) is available on the CIF website. As with the equipment attribute, the results of the

investigations are likely to be detailed and would need to be distilled into a single estimated current local market value for evaluation purposes.

For the purposes of overall evaluation, the work required to complete this element must deliver an overall/high level determination such as “poor” or “good”, along with an actual current market dollar value if sold as an ongoing business or converted to next best use. These high-level determinations could be scored and when combined with the results of the other attributes, would aid in producing an overall business evaluation leading to a recommendation to retain or divest or a combination of the two.

Business Valuation

The intention of the [Financial, Business Valuation](#) step is to determine an initial valuation of the business and the impact that the operation has on the municipal taxpayer both presently and into the future. This aspect includes analyzing information already known within the municipality from operating and capital costs, as well as projected revenues, in providing the service delivery. A financial accounting third-party is recommended to perform this task.

2.3 Step 3: Operational Assessment

The intention of the operational assessment is to determine how well utilized the facility/equipment is and to determine if/where/how changes could be made to enhance utilization and efficiency and thus maximize “business sale value”. The purpose here is to assess current operating levels compared to its theoretical maximum with the objective to determine if deficiencies are identified, what options exist to address them. For example, if a MRF is underutilized or does not have sufficient capacity to service municipalities in a local catchment area, it runs the risk of becoming a stranded asset through the transition to FPR. In such a case, options could include securing new tonnage or converting the facility into a transfer station or pre/partial sort facility.

The objectives of this assessment include:

- Determining historical inbound and outbound tonnage trends,
- Calculating future inbound and outbound tonnages (based on existing growth patterns),

- Determining the theoretical maximum that the system could manage then subtracting the forecasted values from this to calculate the current operating capacity, and
- Determining efficiencies and if the system can be expanded, and if so, would the expansion lead to greater operating efficiency/recovery.

2.4 Step 4: Social Assessment

The social assessment may be considered optional by some municipalities. However, if performed, the intention of this step is to determine if any non-financial or non-operational elements should be considered by decision-makers within the overall context of whether to retain or divest providing service delivery. The objectives of the social assessment would be:

- To determine if local job losses are possible or the local economy (e.g. local markets) is impacted by divesting the service, their impacts and mitigative strategies, and
- Determine how best to communicate with the public in advance of FPR transition.

This attribute could be evaluated in a variety of possible ways including formal and informal engagements with the public, e.g. surveys or open houses, web site feedback. If this attribute is evaluated, the results should be considered with the other attributes and incorporated into the overall decision-making process.

3. Financial, Operational & Social Attributes

The sections below present an overview of the types of information that should be evaluated as it relates to each core attribute.

Attribute #1: Financial

The financial elements review should take into account all items that can be clearly and objectively monetized and those that are program related but are not directly attributable to a single material or activity within a capital or operational budget, e.g. an existing Environmental Compliance Approval (ECA) for operating a site. For expenses and revenues that can be quantified, these should be clearly articulated and documented.

For aspects that have a non-monetary value, such as the benefits of local employment, every effort should be made to quantify these to complete the financial picture.

A clear understanding of the current and foreseeable financial outlook must be developed which includes the itemization of all current year and forecasted year budget line items related to waste diversion programs (e.g. Blue Box program). In the absence of taking into account the other core attributes (operational and social), several financial questions should be answered including:

- What is the value of program assets (physical and non-physical)?
- What is the future (1, 5, 10 year) value of these assets?

Physical assets would include items such as: land, building, equipment, vehicles. Non-physical assets include union/employee contracts, inter-municipal service provision contracts, ECA, CVOR, WSIB, zoning approvals.

The table below outlines a number of the financial elements that should be clearly defined during the financial assessment. The list should be considered as a guide only since different municipalities may have more, or less, items to include.

Table 1: Financial Elements

Expenses	Revenues
Equipment (collection, processing, transfer)	Sale of recovered materials
Staffing (Manager, supervisor, front-line, admin)	Sale of recycling boxes/carts/tags
Supplies (office, facility, staff, fuel, other)	Tipping fees (public drop off)
P&E	Tipping fees (ICI)
Residue disposal	Tipping fees (inter-municipal service)
Maintenance (scale, building, equipment)	
Utilities (water, hydro, security)	
Municipal taxes and insurance	
Capital repayments	

With respect to staffing, appropriate allocations of time spent on the particular waste diversion program (expressed in hours, annually) by position type, multiplied by the positions' fully-burdened rate (wage plus benefits) should be applied and summed to determine the activity-based staffing cost. In regards to capital repayments, the annual financing costs for historical capital upgrades needs to be applied based on the annual repayment value. As well, any internal payments to solid waste management reserves should be taken into account.

In assessing items related to municipal land, buildings and equipment (fixed and mobile) to determine their current market value, it is recommended that RFPs or RFQs are prepared and issued for each based on the following:

- [Regarding land](#): valuation is typically determined based on existing local properties (assuming retention) and if divesting, land value if converted to other best non-waste management use
- [Regarding building](#): determine age, condition, historical capital investments, anticipated capital investments, replacement value (i.e. insurance), depreciation
- [Regarding equipment](#): determine inventory, age, condition, replacement value (of existing and spare-parts inventory), determine market value if sold as a liquidation (orderly closure of business) and if sold as part of an ongoing business

In assessing the future financial value of non-physical assets, some elements can be quantified in a relatively straight-forward manner (such as pay rate increases in the case of union contracts and fees for multi-year inter-municipal service agreements).

However, assessing the value of local control and influence (including administration and enforcement) over the local program is a more difficult task but one that should be performed and included using the suggested quantification methods:

- By-law enforcement staff time, effort and cost,
- Development, distribution and updating of P&E activities, and
- Municipal call centre staff time, effort and cost.

Once completed, the financial assessment should clearly articulate the value of the municipality's interests within the Blue Box service delivery business.

Attribute #2: Operational

This should take into account only items and elements related to the operation of Blue Box service delivery and exclude all others (financial and social). The objective should be to clearly understand the possibilities, and limitations on market value, of the local program and can include complementary information from the other core value assessments. For example, under the financial assessment, it may be determined that a piece of equipment in the MRF has x years worth of useful life before it requires replacement and the cost of the replacement is \$x. In the operational assessment, the determination would not consider these financial aspects but rather would seek to determine how reliable the equipment is (e.g. up/down time, throughput, capture and purity rates) in relation to the processing capacity and efficiency of the facility.

In the absence of taking into account the financial or social attribute values, clearly knowing your operational position will serve as a critical element if/when engaging in negotiations on a potential service level contract. In this regard, high-level questions need to be answered, including:

- How many tonnes is our municipality (upper and lower tier) receiving, processing, shipping now and what is forecasted?
- What is the design capacity of our facility (e.g. annual tonnes/tonnes per hour/on-site queuing space, shipping & receiving capacity)?
- What is the operating throughput (same examples as above)?
- And what is the difference between capacity and throughput (i.e. calculated potentially available capacity)?

To determine the tonnage forecast, actual municipal specific values should be used and ideally the values should go back as many years as possible. Using the identified changes, a trend can be established and from this, a tonnage forecast can be made. While it is known that packaging is becoming lighter and fibres (e.g. newspapers) are

declining in volume, the degree of accuracy in the forecast should, if possible, take these factors into account.

In determining the facility's operating capacity, it must be known what the facility is theoretically capable of managing (expressed in tonnages and/or volume as appropriate). This can come from either the facility design and/or equipment manufacture specifications and/or as identified by the existing ECA. For example, design capacity may be rated by equipment size (i.e. throughput tonnes/hr) or inbound/outbound/storage capacity. In quantifying these, the limiting factor is the lowest limiting capacity – 'lowest rung on the ladder'. As an example, if there are only two receiving doors, the limiting factor would be the number of trucks that can be emptied (per hour) and not necessarily the full tip floor storage design capacity or facility equipment throughput capacity. Similarly, if receiving/storage is sufficient, the limiting factor could be the lowest throughput capabilities of the individual pieces of equipment.

In calculating the maximum design capacity, either the building/site designer or equipment manufacturer(s) should be able to provide this (expressed in either tonnes or volume per hour). While theoretically a facility can operate 24 hours per day, 7 days per week and 365 days per year at full speed, there are limitations to this because equipment needs to be maintained and, possibly, the site ECA and physical operating variables (winter/summer) and labour availability may impose restrictions. As such, to calculate the operating capacity, the site/equipment design capacity needs to be known and subsequently reduced by required maintenance downtime, regulatory limitations, equipment/utilities reliability factor, and labour training downtime.

Once the design capacity is known, using the historical/current processing records, a current operating capacity can be calculated. This value will be lower than the design capacity and the difference would yield the available capacity which could, in theory, be offered to other municipalities or generators. In light of the possibility of producers assuming control of the blue box program, clearly understanding the current actual operating and available capacity is vital insofar as to determine if the possibility exists for processing additional tonnage/volume intra-municipal/non-residential sources so as to increase economies of scale and overall business sale value.

The table below outlines a number of the operational elements that should be clearly defined as part of the operational assessment. The list should be considered as a guide only since different municipalities may have more, or less, items to include.

Table 2: Operational Elements

Item	Comment
Tonnage	Current, historical and forecast by source
Design Capacity	Per design (site/equipment) specifications
Operating Capacity	Current throughput (by tonne or volume)
Calculated available capacity	Design less current operating
Assessment of local/regional/provincial opportunity	Can the available capacity be filled

Once completed, the operational assessment should clearly articulate what can potentially be done with respect to maximizing the capacity of the existing infrastructure.

It is envisioned that the assessment would determine what is potentially possible. If in the process of the assessment a determination is made that additional tonnages can be accommodated (e.g. because the MRF is operating under its design capacity), an amendment to the existing ECA may be required/sought and other municipalities and/or businesses may need to be approached to determine if more local tonnage can be processed. If an ECA change is required, the application for amendment should be made as soon as practically possible.

Certainly, specific site uniqueness would need to be considered if the MRF is part of a larger multi-service location. Meaning, if the property contains a MRF, compost pad, landfill, any operational impacts (positive and negative) and synergies between these operations would need to be considered. For example, as the assessment is to be focused on the Blue Box infrastructure only, if the evaluation results in a decision to discontinue service delivery or close/decommission the MRF in favour of transferring to

another facility for processing, the costs for converting the MRF into a transfer station would need to be taken into account.

Attribute #3: Social

The social attribute is likely subjective to some degree and specific to local circumstances and may be an optional item as part of this work. While it has elements of the financial and operational attributes, it should be viewed, and assessed, independently seeking to understand local dynamics/preferences/opinions and whether or not oversight and administration from elsewhere in the Province is acceptable.

Should producers assume full responsibility for Blue Box service delivery, the implementation, operation and overall service delivery could potentially be delivered via non-local sources or at least be administered non-locally. As such, to ensure not only a smooth transition to producer responsibility but also ongoing participation to increase waste diversion, every effort should be made locally to promote a continuation of effective local service delivery.

In this regard, and in the absence of knowing the results of the financial or the operational assessments, community and (and as appropriate) political engagement should be undertaken. This could take the form of an accounting study or a survey to determine attitudes and perceptions of the public/stakeholders to assess not only how programs (under producer control) would/could be rolled out but also how promotion & education and enforcement could be applied. The impetus here is to ensure that local employment and economic development and community waste diversion efforts continue to succeed and improve rather than stagnate at a status quo.

If it is assessed that the best option is to continue to provide Blue Box service delivery, the likelihood of major program changes would likely be minimal, however, municipal costs may be adversely affected. Conversely, if the assessment concludes that it is better to divest, the local municipal program may change significantly thus requiring re-education of the public on items such as: what's-in, set out requirements, collection frequency. If this were to happen, this responsibility should fall to the producers as a program requirement, but municipalities would likely still be required to field

calls/answer questions from the public. In this regard, and as a matter of convenience; municipalities should be prepared for this and prepare to value this service as a charge back to the producers. Likewise, if the decision is to retain existing municipal P&E, communication and/or administration, staff and protocols could remain as-is (or similar) but may need to be expanded to encompass the service needs of additional communities for which the provision of services may be required under a producer catchment area regime.

The following list of questions could be asked/answered and the responses considered as part of the determination of deciding whether to retain or divest the waste diversion business.

- What is/could be the impact (positive or negative) of converting the local program to suit the needs of a producer determined program (i.e. converting to/from carts, adding new materials, subtracting materials, collection frequency)?
- If we retain some programs but not others, what is/could be the impact of multiple owners/operators of waste diversion programs on existing municipal facilities?
- What is the impact on our municipality if a waste diversion service/program exists for a non-obligated material type?
- Can we calculate the intrinsic value (monetary or non-monetary) of local ownership/operation/control/communication of our waste diversion programs?
- If we divest, will we have any control/influence over program participation, local employment, measurement, monitoring and overall diversion rate performance?

The list below outlines a number of the social items that could be defined as part of the assessment. These would likely take the form of a survey and be accompanied by supplementary questions.

- Community survey: if we changed our collection process (e.g. set out requirements, acceptable materials), would you be receptive?
- Political survey: would we feel comfortable offering services to neighbouring communities or would/can we allow our residents to travel to other communities to access their provided services.

4. Communication

Engaging key stakeholders throughout the decision-making process is essential to the successful operationalization of transitional planning. As noted above, it is recommended that key stakeholders, such as municipal financial and public works staff, senior administration and possibly municipal committees/council and other potential stakeholders are consulted in the regards to the following:

- Selection of options to consider for evaluation;
- Identification and definition of factors/accounts to consider as part of the MAE framework; and
- Determination of the basis to establish relative scoring for each account.

Municipal staff can complete the transitional planning on their own, but engaging a third party to do so could be important to some municipalities. This provides an independent third-party review, which often helps formalize and expedite the decision-making process.

It is also recommended that reporting the results of the analysis be carried out in a clear and concise report that documents the methodology, data and assumptions. This facilitates transparency and allows users of the report to assess the voracity of the analysis.