CAC (MPI)

CAC (MPI) 2-1

Volume:	**CAC (MPI) 1-1**	**Page No.:**	
Topic:	**Claims Incurred**		
Sub Topic:	**General Forecasting Assumptions**		
Issue:	**Selection of development factors vs. underlying assumptions and changes to assumptions, year over year, supporting the selection of development factors**		

Preamble: In CAC (MPI) 1-1 the Corporation was asked to contrast and compare the underlying development assumptions and changes to the underlying development assumptions supporting the current year selected development factors. However, the Corporation's response only provided a reference to the selected development factors.

Question:

Please prepare a discussion paper comparing and contrasting the underlying development assumptions and changes to development assumptions, year over year, supporting the selected development factors.

Rationale for Question:

To assess changes in assumptions relating to claims incurred forecasting. Also to ensure transparency on the part of the Corporation and to ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p 28).

RESPONSE:

The references provided in the response to CAC (MPI) 1-1 provide year-over-year comparisons of the selected loss development factors (LDFs). In each reference, for the respective coverage, the current selected LDFs are shown along with the selected LDFs for the two more recent prior valuations, including the selected LDFs for the prior year.

In regards to the selection of current LDFs, the methodology used is to review all current available experience as well as the calculated averages. Prior year selections are relevant only to the extent that they show changes made to those selections, and whether such changes are justified and reasonable.

The two relevant questions in regards to the current selected LDFs are whether they are reasonable and justifiable in light of current claims procedures, and the impact of changes made. On the first question, the Appointed Actuary's selected LDFs are reasonable and justifiable, and reflect best estimates. On the second question, an impact analysis of changes made to the LDFs is provided in *Volume III Actuary Report – Oct 2015 page 6*.

CAC (MPI) 2-2

Volume:	**CAC (MPI) 1-2**	**Page No.:**	
Topic:	**Claims Incurred**		
Sub Topic:	**Forecasting Methodology**		
Issue:	**Significant Increases in Weekly Indemnity and ABO – Indexed from 2018/19 to 2019/20.**		

Preamble: The response to CAC (MPI) 1-2 a) and b) indicates that the fiscal year increase relates mainly to interest rate changes and the year over year ultimate increase is nominal.

Question:

Please confirm that the significant increases in Weekly Indemnity and ABO – Indexed, on a fiscal year over year basis, will not impact basic rates either in the 2017 GRA or the 2018 GRA. If this cannot be confirmed, please explain.

Rationale for Question:

To gain an understanding of the significant change in claims incurred on a fiscal year basis, for the coverages mentioned and the impact on prospective rate changes, and to ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p 28).

RESPONSE:

The increases from fiscal year 2018 to fiscal year 2019 will not impact Basic rates for the 2017 General Rate Application (GRA) since it does not impact the fiscal year results for 2017 or 2018, which are the two fiscal years used to determine rate indications. The impact on basic rates for the 2018 GRA is not germane to this application.

CAC (MPI) 2-3

Volume:	**CAC (MPI) 1-2**	**Page No.:**	
Topic:	**Volume II - Claims Incurred**		
Sub Topic:	**Forecasting Methodology**		
Issue:	**Increasing Claims Incurred Forecasts for Weekly Indemnity and ABO – Indexed from 2018/19 to 2019/20**		

Question:

Please provide a table for both Weekly Indemnity and ABO – Indexed showing the increase or decrease in claims incurred before financial provisions that can be attributed to the interest rate assumptions explained in CAC (MPI) 1-2 c).

Rationale for Question:

To fully understand the impact of the interest rate forecast assumptions on the claims incurred projections and to ensure that forecasts are reasonably reliable for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

For Weekly Indemnity, see the table in *Volume II CI.3.1 page 14*. For ABO – Indexed, see the table in *Volume II CI.3.2 page 18*. The interest rate impact column contains the portion of claims incurred impacted by the change in discount rates.

CAC (MPI) 2-4

Volume:	**CAC (MPI) 1-3**	**Page No.:**	
Topic:	**Volume II - Claims Incurred**		
Sub Topic:	**Assumed Claim Liability Duration**		
Issue:	**Decreasing Claim Liability Duration**		

Question:

Please provide the portion of the reduction in the claim duration that is due to the change in discount rate by year.

Rationale for Question:

To understand the impact of discount rate assumptions on duration and the claims incurred forecasts. Also, to ensure transparency and that forecasts are reasonably reliable in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

The following table shows the reduction in the claims duration as a result of the changing discount rate.

Corporate Claims Duration (in years)

	2016/17	2017/18	2018/19	2019/20	2020/21
GRA 2017	9.68	9.19	8.63	8.49	8.40
GRA 2017 with Prior Year's Discount Rate	10.08	9.60	9.11	8.55	8.41
Impact	**(0.40)**	**(0.41)**	**(0.48)**	**(0.06)**	**(0.02)**

CAC (MPI) 2-5

Volume:	CAC (MPI) 1-4	Page No.:	
Topic:	Claims Incurred		
Sub Topic:	Indexed Case Reserves		
Issue:	Indexed Claims in the Budget		

Preamble: In the response to CAC (MPI) 1-4 it states "The change was to correctly reflect the indexed claims in the budget for the following year."

Question:

For greater clarity, please elaborate and/or by way of an example explain how indexing claims affects the budget process.

Rationale for Question:

To understand the claims indexation process and how it impacts the budget process, to ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p 28).

RESPONSE:

For claims that are indexed yearly, the Corporation must incorporate the increase from indexation into the budget for the following year. For example, if the Corporation has case reserves of $100 million at the end of fiscal year 2016/17 at the 2015/16 benefit levels, then the Corporation should budget an additional 2.00% in order to correctly account for the increase from indexation. This increase would be offset by a reduction of the Incurred But Not Reported (IBNR).

CAC (MPI) 2-6

Volume:	CAC (MPI) 1-6	Page No.:	
Topic:	Claims Incurred		
Sub Topic:	Collision - Total Loss Count		
Issue:	Repair Count is Decreasing and Total Loss Count is Increasing		

Preamble: Based on the table provided by the response to CAC (MPI) 1-6, for the last 3 years, repair counts seem to be decreasing and total loss counts (with the exception of 2014/15) seem to be increasing.

Question:

Please explain and elaborate on the underlying causes of total loss counts increasing and repair counts decreasing.

Rationale for Question:

To gain an understanding of the apparent emerging distribution in repair and total loss counts changes.

RESPONSE:

As shown in *Volume II CI page 31*, the total loss collision frequency has been relatively stable at approximately 0.027 for the past six years. The Corporation had very favourable winter collision experience in 2014/15 and 2015/16, which reduced the number of minor repair claims in the winter months.

CAC (MPI) 2-7

Volume:	CAC (MPI) 1-7	Page No.:	
Topic:	Claims Incurred		
Sub Topic:	Collision Repairs		
Issue:	Parts per Repair		

Preamble: The response to CAC (MPI) 1-7 states "What MPI can measure, however, is the number of parts per repair for new model year vehicles relative to older model year vehicles."

Question:

Please file a copy of the underlying analysis supporting the parts per repair for new model year vehicles and parts per repair for "all" model vehicles for the last five years and for the forecasting period. Please provide this analysis for Collision, Comprehensive and Property Damage coverages.

Rationale for Question:

To gain an understanding of the changing trends in repairing vehicles and the impact on physical damage claims incurred forecasts.

RESPONSE:

The table below shows the average parts per physical damage repair claim for the *latest* model year and for *all* model years. "Latest model year" was defined as: model year = calendar year. e.g. a 2015 model year in the 2015 calendar year. The data is based on the 'estimate creation date' of the claim.

Calendar Year	Latest Model Year	All Model Years
2011	6.0	5.2
2012	6.0	5.4
2013	6.3	5.5
2014	6.9	5.8
2015	7.5	6.3

CAC (MPI) 2-8

Volume:	CAC (MPI) 1-13	Page No.:	
Topic:	Claims Incurred		
Sub Topic:			
Issue:	De-strengthening of Case Reserves-Weekly Indemnity		

Preamble: In the response to CAC (MPI) 1-13 a) it states "The use of the word "de-strengthening" is to recognize that the amount of case reserves for recent years is significantly lower, at earlier development periods, than the amount in earlier years."

Question:
Please advise whether MPI has investigated the causes relating to the observed de-strengthening of case reserves? If yes, please file a copy of the investigation report and if not, please explain why not.

Rationale for Question:
To gain an understanding of the causes relating to the observed de-strengthening of case reserves and the potential financial impact on claims incurred.

RESPONSE:
In compliance with the Business & Injury Improvement Initiative (BI^3) business case, reserving guidelines were adjusted to align with the use of International Classification of Diseases and Related Health Problems (ICD) 10 disability durations via Presley Reid (MD Guidelines). Key changes were:

- Initial reserving based on MD Guidelines
- Subsequent reserving changes to align with rehab planning, and expected return to work dates

- Step reserving permitted for the first 24 months of a claim based on the return to work plans

- After 24 months, files are to be reserved using the reserving calculator unless there is a set return to work date

The implementation of new reserving guidelines under BI^3 has lowered case reserves relative to pre- BI^3 levels. However, as shown in *CAC (MPI) 1-13*, the lower case reserves under BI^3 do not necessarily translate into lower overall exposure as the paid loss development experience has remained relatively consistent pre and post BI^3 implementation. From an actuarial perspective, the Corporation is closely tracking the development of claims under BI^3 and continues to adjust assumed loss development factors based on the latest information.

CAC (MPI) 2-9

Volume:	CAC (MPI) 1-16	Page No.:	
Topic:	Volume I – PUB Orders - Statistically Significant Fitted Trends		
Sub Topic:	Improvement of Trending		
Issue:	MPI Has Not Improved Their Trending Methodologies		

Question:

Would the Corporation agree that fitting probability distributions to historical losses (and severity and frequency) to determine future trends would be superior to the use of an all year trend line?

Rationale for Question:

To understand why different trending methodologies are not used in the claims forecast and to ensure that forecasts are reasonably reliable in accordance with statutory objectives and Board Order 98-14, p 28.

RESPONSE:

The Corporation has provided its rationale for the frequency and severity forecasts in *Volume II CI*. The Corporation selected these forecasts as best estimates, and therefore, does not believe that fitting historical probability distributions to historical losses would result in any material improvements to these forecasts. The Corporation has provided stochastic modeling of claims costs in *Volume II RSR.2 DCAT Appendix A Stochastic Modeling*.

The Corporation continues to be open to feedback from stakeholders on any of the forecasts made in this Rate Application. *CAC (MPI) 1-16* does not identify any specific issue with any of the Corporation's forecasts.

CAC (MPI) 2-10

Volume:	**CAC (MPI) 1-17**	**Page No.:**	
Topic:	**PUB Order 128/15**		
Sub Topic:			
Issue:	**Tail Factors**		

Preamble: On page 2 of the Corporation's response to CAC (MPI) 1-17 it states "Further, 'mortality tables' or 'tail factors' or the approach used to estimate tail factors have not been identified by the External Actuary or the External Auditor as an area of concern."

Question:
Please obtain opinions and/or comments from the External Actuary and External Auditor positively confirming the mortality tables, tail factors and the approach used by MPI to estimate tail factors in its claims reserving and policy valuation processes.

Rationale for Question:
To assess third party confirmation of MPI's use of appropriate mortality tables, tail factors and the approach used to estimate tail factors impacting claims incurred forecasts.

RESPONSE:
The External Actuary and External Auditor have not provided individual opinions on every assumption made in the Appointed Actuary's Reports. The Appointed Actuary has provided his opinion on the reasonableness of the policy liabilities in both the *Volume III AI.7 October 2015* and *February 2016* Appointed Actuary's reports.

The External Auditor has provided their opinion of the Appointed Actuary's report in AI.7.A. On *Volume III AI.7-A page 3 Accident Benefits – Weekly Indemnity*, the Auditor makes specific reference to the reasonableness of the tabular reserving assumptions used to calculate Incurred But Not Reported (IBNR) for claims 10 years or older.

CAC (MPI) 2-11

Volume:	**CAC (MPI) 1-19**	**Page No.:**	
Topic:	**Volume II – Ratemaking**		
Sub Topic:	**Calculation of Required Rate Change**		
Issue:	**De-Trend**		

Preamble: The calculation on this page shows the average rate being loaded for major class drift. It does not build in any volume trend, yet the average rate for 2016/17 of $773.73 is de-trended for volume.

Question:
Please explain how the calculation procedure described is accurate.

Rationale for Question:
To ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:
The calculation shown in *CAC (MPI) 1-19* de-trended for volume is the 'Restated Motor Vehicles Written Premium' (i.e. de-trended total premium), which includes a volume growth factor. The intent is to de-trend the 'Restated Motor Vehicles Written Premium', for both volume and drift, so that the figure is at the same point in time as the 'Rate Model Total Premium'. The calculation did not de-trend for volume the average rate of $773.73.

In *Volume II RM page 37*, the '16/17 Average Rate' of $773.73 is adjusted for vehicle drift because vehicle drift increases the average rate. Volume growth has no impact on the average rate.

CAC (MPI) 2-12

Volume:	**CAC (MPI) 1-21**	**Page No.:**	
Topic:	**Volume II – Ratemaking**		
Sub Topic:	**Trend Selection – Rounding**		
Issue:	**The Trends are Rounded Up in All Cases**		

Preamble: The response to CAC (MPI) 1-21 shows no or very little impact when rounding is removed from trend selection. The reason for this is unclear.

Question:

Please reproduce the table shown on page 20 of Section RM of the rate application if the trends chosen are as follows:

Bodily Injury	-1.64%
Property Damage	1.88%
Collision	3.68%
Comprehensive	0.64%

Rationale for Question:

To ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

The table provided in *CAC (MPI) 1-21* is based on the selected trends as requested in the question. Further, we have also removed the rounding for Accident Benefit coverages. Specifically, the following selected trends were used to derive the table provided in *CAC (MPI) 1-21*.

Bodily Injury	-1.64%
Property Damage	1.88%
Collision	3.68%
Comprehensive	0.64%
Accident Benefits – IRI	0.62%
Accident Benefits – Other (Indexed)	-0.01%
Accident Benefits – Other (Non-Indexed)	-0.93%

The main reason why the impact is insignificant is that the same selected trend is used for all major classes. Any change in the selected trend affects the pure premium for all major classes similarly. Further, the change in the selected trend as a result of rounding is minimal.

CAC (MPI) 2-13

Volume:	**CAC (MPI) 1-22**	**Page No.:**	
Topic:	**Volume II – Ratemaking – Exhibit VI**		
Sub Topic:	**Accident Year Weights**		
Issue:	**Sensitivity of Indication to Weights**		

Question:

a) Would the Corporation agree that the most recent year is most likely the most indicative of the next year's experience? The Corporation has itself argued for this in the case of movement on the DSR Scale. (See response to CAC (MPI) 1-33 a)

b) Please show the calculation of the Average Adjusted Pure Premium on Exhibit VI-6 of $74.88 and repeat this calculation using accident year weights of 0/.3333/.3333/.3333 and 0/.25/.25/.25/.25.

Rationale for Question:

To ensure that forecasts are reasonably reliable for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) In respect of expected claims costs, the Corporation disagrees "*that the most recent year is most likely the most indicative of the next year's experience*". Claims costs are affected by many different factors. There's a significant amount of variability in claims costs from one year to the next. This is especially true for Personal Injury Protection Plan (PIPP) claims costs, but in recent years is also true for other claims costs.

While the Corporation, in determining expected claims costs, may give more weight to the current year's claims costs, the use of an average claims costs trended forward to the applicable projection period reflects a more appropriate projection. Basing the expected claims costs only on the most recent year's indication will result in significant rate fluctuations from one year to the next.

While it is true that the Corporation uses the most recent year's movement on the DSR Scale to project future movement, the comparison is not appropriate. The current DSR scale is relatively new, and there are still noticeable differences in respect of movements on the scale (from one year to the next) as drivers' position on the scale stabilizes. As such, using a longer term average is currently not appropriate. However, the use of such an average would be part of the consideration as the program matures.

b) The 'Average Adjusted Pure Premium' of $74.88 is the sum of the 10-year average 'Adjusted Pure Premium – Serious Losses' of $35.89 and the 5-year 'Adjusted Pure Premium – Other Losses' of $38.99.

The table below shows the 'Average Adjusted Pure Premium' for 'Accident Benefits – IRI' based on accident year weights of 0/.3333/.3333/.3333 and 0/.25/.25/.25/.25.

Weight	Applied to Serious and Other Losses	Applied to Other Losses Only
0/.3333/.3333/.3333	$61.83	$75.58
0/.25/.25/.25/.25	$64.05	$75.01

The calculations based on the suggested weights are not appropriate for the Serious Losses portion of 'Accident Benefits – IRI'. The adjusted pure premium for Serious Losses exhibit significant year-over-year variability. As such, the use of a longer term average (i.e. a 10 year average) is more appropriate to smooth out the larger volatility in the data.

CAC (MPI) 2-14

Volume:	**CAC (MPI) 1-26**	**Page No.:**	
Topic:	**Volume III – AI.9**		
Sub Topic:	**Rate Indication – Accepted Actuarial Practice**		
Issue:	**Investment Income Accounted for in the Indication**		

Question:

Please provide the amount of investment income that is forecast to result from the holdings backing the claims liabilities and the excess investments for the 2017/18 accident year.

Rationale for Question:

To separate investment income from those backing the claims liabilities and excess in order to determine the impact on the rate indication, and to ensure that forecasts are reasonably reliable in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

The derivation of the indicated rates based on accepted actuarial practice (please see *Volume III AI.9 Actuarial Standards Compliance page 6*) takes into consideration the investment income from the assets backing the claim liabilities, i.e. the fixed income portfolio. As discussed in *Volume III AI.9 Actuarial Standards Compliance page 9*, future payments are discounted "based on the projected duration weighted interest rate of the Corporation's fixed income portfolio as at March 1, 2017".

Further, in *PUB (MPI) 1-3*, the Corporation discusses the impact on the indicated rates (based on accepted actuarial practice) if the investment income from the assets backing Basic Total Equity is considered in the derivation of the rates.

CAC (MPI) 2-15

Volume:	**CAC (MPI) 1-28**	**Page No.:**	
Topic:	**Volume III – AI.7**		
Sub Topic:	**October 2015 Actuarial Report and impact on Rate indication**		
Issue:	**The Impact of Chosen Loss Development Factors on the Rate Indication**		

Question:

Given the decrease of $12,733,000 to the selected IBNR for Accident Benefits – Weekly Indemnity with the selected loss development factors for periods 32-36, 36-44, 44-56, 56-68 and 68-80 at the Latest 9 Volume Weighted shown on Appendix E, Page 5 as in the response to CAC (MPI) 1-28 what would the resulting impact be on the indicated rate change required of that decrease in IBNR?

Rationale for Question:

To understand the impact of the selected loss development factor's impact on the rate indication, and to ensure that forecasts are reasonably reliable for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

For the five most recent accident years, the 5-year average change in accident year ultimate losses as a result of the change to the loss development factors is a decrease of $2.5 million per accident year. Such a decrease would decrease the indicated rate change by approximately 0.3%.

CAC (MPI) 2-16

Volume:	**CAC (MPI) 1-29**	**Page No.:**	
Topic:	**Volume III – AI.7**		
Sub Topic:	**October 2015 Actuarial Report and impact on Rate indication**		
Issue:	**The Impact of Chosen Loss Development Factors on the Rate Indication**		

Question:

Given the decrease of $15,730,000 to the selected IBNR for Accident Benefits – Other (Indexed) with the selected loss development factors for periods 140 – 152 and 152 - 164 at the Latest 9 Volume Weighted shown on Appendix E, Page 5 as in the response to CAC (MPI) 1-29 what would the resulting impact be on the indicated rate change required of that decrease in IBNR?

Rationale for Question:

To understand the impact of the selected loss development factor's impact on the rate indication, and to ensure that forecasts are reasonably reliable for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

For the five most recent accident years, the 5-year average change in accident year ultimate losses as a result of the change to the loss development factors is a decrease of $1.1 million per accident year. Such a decrease would decrease the indicated rate change by approximately 0.1%.

CAC (MPI) 2-17

Volume:	**CAC (MPI) 1-29**	**Page No.:**	
Topic:	**Claims Incurred**		
Sub Topic:			
Issue:	**Loss Development Factors—ABO-Other (Indexed)**		

Preamble: In the response to CAC (MPI) 1-29 it states "This is because more recent observed LDFs are significantly different, and the difference must be recognized in the selection." The financial impact as per the response is about $15.7 million.

Question:
Please summarize the causes for the significant changes and differences observed in the recent ABO-Other (Indexed) LDFs.

Rationale for Question:
To gain an understanding of the causes of the significant changes and differences observed relating to LDFs.

RESPONSE:
The differences observed in recent Accident Benefits - Other (Indexed) incurred loss development factors (LDFs) for the periods 140-152 and 152-164 is because there is an increase in the continuity of long-term claimants in regards to benefits received. These increases (in incurred LDFs) are consistent with the paid LDFs, which are also showing higher year-over-year development.

CAC (MPI) 2-18

Volume:	**CAC (MPI) 1-32**	**Page No.:**	
Topic:	**Revenues**		
Sub Topic:	**Volume Factor Decrease to 1.45% from 1.75%**		
Issue:	**Impact on Rates?**		

Question:

Reducing the volume factor to 1.45% from 1.75% would require an additional rate increase effective March 1, 2017 of about 0.5%. Please confirm. If this cannot be confirmed please provide the approximate rate change.

Rationale for Question:

To gain an understanding of the approximate impact on rates by reducing the volume factor to the three year average of 1.45% from the 10 year average of 1.75%.

RESPONSE:

Confirmed. This was based on a volume factor forecast assumption as shown below:

Forecast Year	**2016-17**	**2017-18**	**2018-19**
Volume Growth	1.75%	1.45%	1.45%

Please note, if the forecast assumed a volume factor of 1.45% in 2016-17 the additional rate requirement would be slightly higher.

CAC (MPI) 2-19

Volume:	CAC (MPI) 1-34	Page No.:	
Topic:	Volume II – Revenues		
Sub Topic:	Fleet Loss Experience		
Issue:	Equitable Rating for Fleets		

Question:

Please elaborate on the components of the fleet program that should be looked at to evaluate its equity as brought up in response to CAC (MPI) 1-34 b)

Rationale for Question:

To determine an appropriate allocation of costs between classes for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28)

RESPONSE:

The determination of the rebate/surcharge for each fleet is dependent on five components, which should be evaluated collectively in any assessment of the equity of the fleet program.

- The minimum number of vehicles to be defined as a fleet, which is currently 10
- The stop-loss for an incident, which is currently $25,000
- When the rebate/surcharge is determined, which is currently one year following the end of the period in which the fleet is defined as such
- The loss ratio used to determine if a fleet is entitled to a rebate or is required to pay a surcharge
- The actual rebate/surcharge scale

CAC (MPI) 2-20

Volume:	CAC (MPI) 1-35	Page No.:	
Topic:	Volume: II - Expenses Appendix EXP-14		
Sub Topic:	Topic: Total IT Expenses, Total Deferred Development Costs		
Issue:	Business Cases for IT investments		

Preamble: In information request CAC (MPI) 1-35 c), we asked

> c) What are the criteria, either quantitative or qualitative, used for determining which investments to include in MPI's Information Technology investment portfolio?

In its response, the Corporation referred CAC to response CAC (MPI) 1-35 a).

However 1-35 a) is not responsive to the intent of 35 c). It does not provide the type of quantitative or qualitative criteria we would expect to be employed by a mature, good practice IT provider. Set out as Attachment A to these information requests, is an example of an Overall Methodology. It includes an excerpt from the Technology Business Management Council's work on IT cost and value realization/management.

Question:
Please provide a responsive answer to CAC (MPI) 1-35 c). More particularly:

In terms of **quantitative criteria**, what are the operational and/or financial measures or metrics that are in place, or will be put in place to determine which investments to include in MPI'S Information Technology investment portfolio?

Rationale for Question:
To understand the management processes involved in selecting and evaluating IT investments, and to assess the financial and operational metrics of measuring project performance and success over time. Additionally, to ensure that actual and

projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

Proposed project investments are reviewed annually by the Manitoba Public Insurance (MPI) Executive. MPI Executive selects initiatives which address corporate needs, mitigate corporate risks, and advance corporate goals.

The selection process includes the following evaluation considerations:

1. Required Changes are first priority and must be completed by mandated timelines. (These are often legislated changes; an example would be annual process and technology updates required to enact changes from an approved Rate Application.)

2. Strategic projects are reviewed next with focus on alignment to corporate strategic goals, external events (ex. changes in repair technology impacting Manitoba trades), and societal changes (ex. autonomous vehicles). Based on these conditions, programs are enacted, revised, deferred, and completed.

3. Technical projects are reviewed next with focus on the capabilities required for current / future strategic goals and risk mitigation, ensuring that technical requirements are addressed. Emphasis is placed on ensuring platforms remain on current and supported versions. Technical projects are compared by cost, risk (current / potential impact to the business of not making the change), and capability (required as an enabler for strategic projects).

MPI has recently launched a new Value Management process which has several quantitative measures included in it (please see *CAC (MPI) 2-22*) which will be considered in the selection process going forward.

The focus is to maximize value within the portfolio, specifically; deliver within agreed to budget and timeline, resulting in the established benefits, and with an acceptable level of risk.

The proposed initiatives are then recommended to the MPI Board of Directors for approval. The MPI board receives regular updates on the progress of key initiatives, including costs and risks, from the MPI Executive and Gartner.

Appendix A

In CAC (MPI) 1-35 CAC suggested that each IT project/investment initiative should have a business case/justification that identifies the key executive sponsor, business customers (or end users), and the business needs that the IT project will support. In its Round 1 responses, MPI has described its governance processes and methods. It is recommended that a set of metrics be in place at the selection/initiation stage of each key IT initiative.

MPI needs to consider approaches that will show IT investment costs, IT resource costs and IT operating costs in business terms. Visibility and insights created by these metrics will allow a MPI Business Unit Leader to drive decisions regarding cost reduction initiatives, or alternatively, initiatives that could boost spending on a particular business application.

When undertaking the task of devising metrics and associated 'dashboards for reporting', there are several key questions that need to be addressed by persons on the CIO and/or CFO role (or equivalent MPI roles), these include:

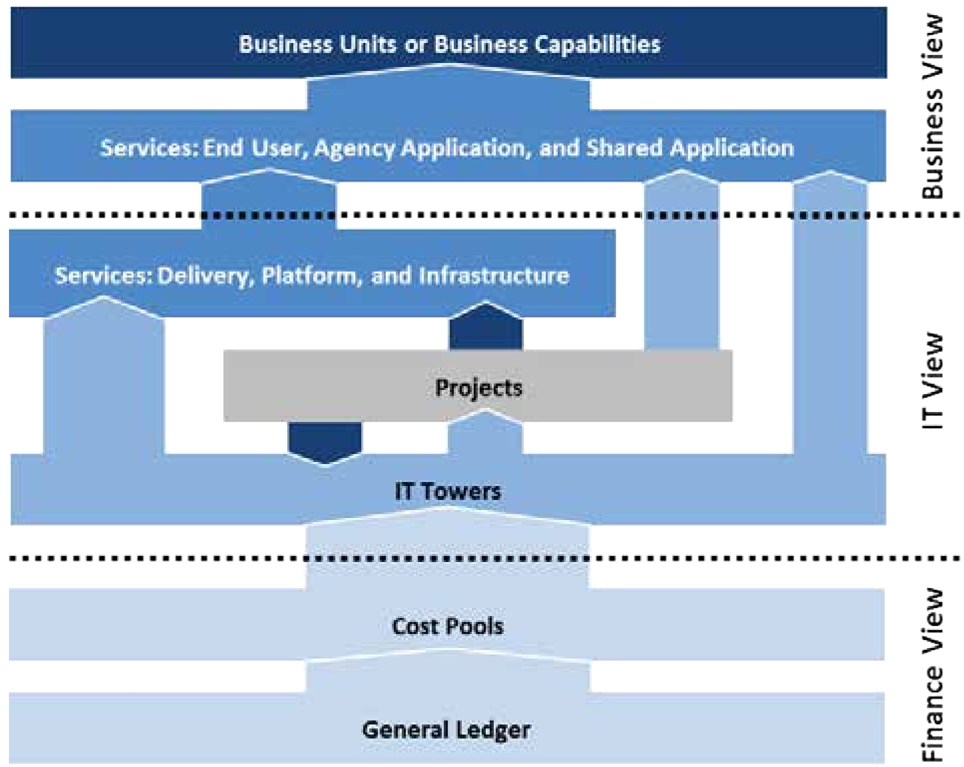
1. In the MPI service portfolio which applications and services will be consumed by whom? (which Line of Business)?
2. How much will be spent on each Application/Service?
3. How much will be needed to support each Line of Business?
4. How can this be portrayed proactively/predictively, or on an ongoing operation basis?
5. How is IT Consumption reported to Business Unit partners?
6. Does IT provide advice to Business Unit leaders on how to use IT more efficiently?
7. Does IT set and communicated IT savings goals?
8. What is the level of IT Cost Transparency?
9. Does IT enable Business Partners to see Total Costs associated with the IT Services which they consume?
10. Does IT help Business Unit partners to understand their role in balancing Cost, Quality and Consumption of IT services?

<u>Reference Methodology</u>

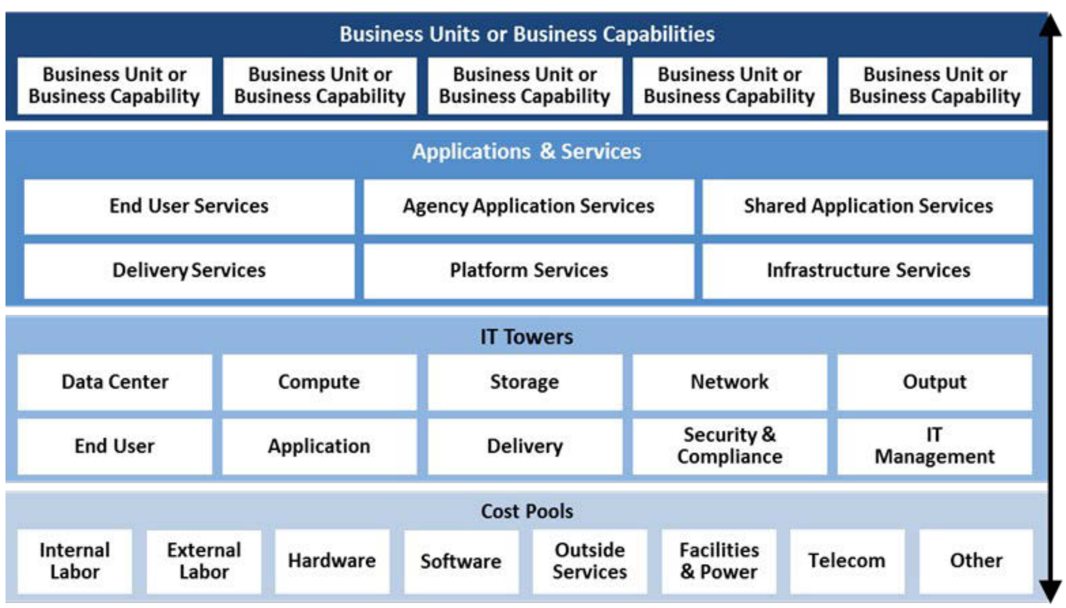
An example of an overall methodology that MPI can consider is seen in the **<u>Technology Business Management Council (TBM)</u>'s** work on optimizing IT cost and value realization/management. The **TBM** approach identifies mature industry practice, and provides examples of metrics that are useful in quantifying IT costs and business value.

The **TBM** methodology provides a taxonomy of metrics that allows IT to describe value by mapping investment categories and classifications used in the budgeting process to the various IT resources, Applications, and IT Services they comprise. The taxonomy allows IT leaders to find a common language for describing both commodity IT products and the applications or services that depend on them.

In a similar manner to the GAAP Accounting principles, TBM relies on rules for governing how IT expenditures and expenses are categorized and reported. TBM goes further to provide a taxonomy for reporting the total cost to build, buy, operate, maintain, and support IT products, applications, and services. This TBM taxonomy, born in private- and public-sector IT departments, provides the necessary categories.



Source: Technology Business Management Council 2013



Source: Technology Business Management Council 2013

TBM Terminology/Taxonomy Metrics:

KPI	Description	Justification
Cost for Performance		
Unit Cost Actuals vs. Targets for IT Towers	Unit cost targets for towers should be set annually during planning based on budgets, expected units consumed (from capacity planning), and **federal- and/or private-sector** benchmarks (where available). Actual cost per unit should be compared monthly or quarterly. These should be set for the majority of your tower spending.	With infrastructure consuming approximately 60% to 70% of overall IT spending, this KPI holds tower owners (and vendors or suppliers) responsible for cost efficiency and can dramatically improve overall value for the money spent on IT.

KPI	Description	Justification
Unit Cost Actuals vs. Targets for Business-Facing IT Services or Apps	Unit cost targets for services or apps (inclusive of towers that support them) should be set annually during planning based on budgets, expected units consumed (from capacity planning), and industry benchmarks (where available). Actual costs per unit should be compared monthly or quarterly.	Most agency leaders only understand costs in terms of the services or applications they consume, not the towers or infrastructure technologies that comprise them. Managing the unit costs of services or apps helps agency CIOs shape demand and consumption.
Business-Facing IT Services or Apps Meeting SLAs	Based on total cost of the portfolio, this percentage reveals how much of the application or service portfolio is meeting service-level agreements. It is a weighted metric based on relative TCO.	Meeting service level agreements with business partners is essential to delivering value for the money. This KPI helps agency CIOs balance cost optimization with service quality.
Customer Satisfaction Scores for Business-Facing Services	This measure reflects the outcome of surveys of the users of business-facing services. This may include Net Promoter Score or other mechanisms, but should not be limited to the service or help desk. Instead, all major services should be included in the survey.	Performance should be viewed from the perspective of the business users. While SLA attainment is an important, subjective measurements of performance can be very useful and identify areas where SLA attainment alone is insufficient.
Business-Aligned Portfolio		
Actual Spending (TCO) against Targets for Agency Outcomes (or Categories)	A portfolio-based view of TCO (OpEx and CapEx, including projects) by agency business outcomes (e.g., mission areas, business capabilities, lines of business served) should be produced monthly or quarterly for executive steering committee or governance reviews.	Since IT is often provided as a set of shared services, facilitating governance conversations with corporate executives is important to ensure agency and mission alignment. These conversations should drive top-level mandates for change, such as changes in spending for specific areas of the business.
Actual Spending (TCO) against Targets for	A portfolio-based view of TCO (CapEx, including projects, and	In concert with top-level mandates, agency and consumer-

Business-Facing Services or Apps	OpEx) by the services and/or apps that each agency consumes should be produced monthly or quarterly and presented to the agency leaders.	level discussions about spending provides additional insights about where consumption and costs can be optimized or where additional investments are needed.

KPI	Description	Justification
TCO by Vendor Category	A view of CapEx and OpEx by vendor or supplier category (e.g., strategic, preferred, transactional) should be produced and reviewed quarterly.	The right vendors and suppliers can bring tremendous value to any business or agency. Therefore it is important to ensure spending is being focused on the right third parties and according to agency or mission priorities.
TCO by TIME	A view of app and/or service TCO (CapEx and OpEx) by TIME (tolerate, invest, migrate and eliminate) or another rationalization model should be produced quarterly. This should include trends (up or down from prior period) to identify anomalies (e.g., increased development spending on apps marked for elimination).	Having a plan for rationalizing applications or services is vital to simplifying the IT estate. However, it must be governed by carefully monitoring resources (via dollars) against each category.
Investment in Innovation		
Operations & Maintenance (O&M) vs. Development, Modernization and Enhancement (DME)	O&M (may be called Run-the-Business) spending includes both capital and operating expenditures needed to operate and sustain agency operations. O&M activities are vital to each agency but there is a tendency for them to increase year-over-year as previous DME investments impact ongoing operations. O&M vs. DME spending should be reported each quarter.	If cost for performance and business alignment are managed well, those efforts should help free up investment for innovation (DME). Therefore, this KPI not only helps ensure O&M is being optimized, but it puts additional emphasis on each agency managing its demand and understanding the tradeoff of existing consumption vs. new capabilities.
Investments against Targets by Value Category	A view of investment spending (may include both O&M and DME) by category (e.g., replace, maintain, enhance, or new) against targets should be produced quarterly.	This KPI helps IT and agency business leaders understand the impact of technical debt or modernization requirements that might be crowding out new or better capabilities.
Projects On Time, On Budget, On Spec	A view of total project spending and headcount split by those that are tracking to scope, budget and deadline should be produced quarterly. It should be split by executive (agency, program or mission) sponsors and reviewed during quarterly.	This KPI demonstrates how well IT is delivering on its project-related commitments. By using dollar value of projects, as opposed to the raw number of projects, this KPI focuses the discussion on the larger projects that likely have a bigger impact on the business.

KPI	Description	Justification
Enterprise Agility		
IT Delivered by Cloud against Targets	This measures how much of IT (as a percent of Opex) is delivered as private or public cloud services to the business. Clear criteria for which services are designated cloud services are needed for this KPI to be meaningful.	Public and private cloud services are, by definition, rapidly elastic and on-demand, and their consumption is measured to provide a basis for allocating costs. Cloud enables an agency to use IT services as needed, providing agility and connecting consumption to the costs incurred.
Variable Cost Ratio by Business-Facing Service against Targets	This KPI measures how much of the business-facing IT costs (i.e., apps or services delivered to the business) are fixed (i.e., static regardless of consumption) or variable (i.e., vary in line with volumes of consumption). Targets should be set while considering implications for short- and long-term total costs.	A more variable cost structure is beneficial in situations where business volumes are falling or are expected to rise and fall. A variable cost structure helps match IT costs with business revenues. However, targets for variable costs should be set based on tradeoff considerations.
Discretionary Project Spending against Targets	Discretionary projects are those designed to enhance services or introduce new ones, as opposed to mandatory investments such as compliance, capacity upgrades, reducing technical debt and maintenance.	When mandatory spending consumes a high percentage of project spending, an agency has little ability to innovate or respond to new threats or opportunities. Greater discretionary spending as a percentage of the total indicates a greater capacity to innovate, as funds can be shifted more easily.
TBM Data Quality Index	This measures the overall state of data quality for TBM. It measures missing data sets, gaps in data, breakage between data sets, and the use of assumptive data in driving allocations. It should trend in a positive direction, although setbacks may occur after major changes in the model or data sources.	As IT leaders become data-driven in their decision making, better data quality for TBM means they can make better decisions for improving business value. Better data also improves operational maturity, making it possible to run more efficiently and reliably.

CAC (MPI) 2-21

Volume:	**CAC (MPI) 1-36 (b)**	**Page No.:**	
Topic:	**Volume: I - Cost Containment**		
Sub Topic:	**IT Investment Cost Containment**		
Issue:	**Does Cost Containment Initiative Focus on IT Costs?**		

Preamble: A Cost Containment Committee was formed in 2014 with a mandate to identify, support, track and report on cost containment and cost savings. It is recommended that a set of metrics be in place at the selection/initiation stage of each key IT initiative; these metrics can be used to identify and measure the project performance and success over time.

In CAC (MPI) 1-36 (b) the Corporation indicated that cost containment initiatives related to Information Technology (IT) include review of software expenditures, renegotiation of IT contracts, and the review and negotiation of data center operational spend. The outcomes include a reduction in licensing and software purchases, reductions in IT spend due to negotiated contract price reductions and operational efficiencies that reduce data center requirements.

Question:

a) Can MPI quantify the response to CAC (MPI) 1-36 (b)?

   i. What were the specific cost reductions attributable to the efforts of the Cost Containment committee?

   ii. Which projects did these relate to specifically?

b) In CAC (MPI) 1-36 (b) the Corporation states that operational efficiencies were realized from the efforts of the Cost Containment committee. Are these efficiencies measureable? If so, what are the measures?

Rationale for Question:

To assess the financial and operational metrics of measuring project performance and success over time, and to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a)

i. Please refer to *2016 GRA Volume 1 Cost Containment pages 6-7*, and *Attachment A and B* of same for a description of the savings so far attributable to the Innovation and Cost Containment Committee. Please see also *2017 GRA Volume 1 CC pages 6-8*, and *Attachment A* of same for projected cost savings during the test years.

ii. The cost containment savings were operational in nature and do not relate to projects.

b) Please refer to a).

CAC (MPI) 2-22

Volume:	CAC (MPI) 1-37	Page No.:	
Topic:	Volume: II - Expenses Appendix EXP-14		
Sub Topic:	Total IT Expenses, Total Deferred Development Costs		
Issue:	Monitoring the Performance IT Investments		

Preamble: In information request CAC (MPI) 1-37, it was asked:

> How does MPI monitor its IT investments/project performance against cost and schedule expectations, as well as anticipated business benefits and risks?

MPI provided a lengthy response.

The methodology and discipline associated with MPI's Business Transformation Office (BTO) Value Management process is reasonably well articulated in the Corporation's response to CAC (MPI) 1-37. If this process is executed and operationalized as described, it has significant promise.

However, it is still unclear what quantitative and qualitative metrics are employed and how they guide project performance.

For example, MPI states:

> The Enterprise Project Management Office (EPMO) provides project management oversight and governance, and coordinates project reporting on all ongoing initiatives. **It ensures that projects adhere to prescribed project management methodologies and standards and that expected benefits are realized.** (emphasis added)

But there is no articulation of methodologies, standards and metrics.

The MPI methodology and discipline associated with MPI Business Transformation Office can benefit from the operationalizing of IT Value Realization metrics and methods. **Gartner Group** stated in their work in 2015 for the National Association of Wholesale Distributors "Without a holistic approach to cost and value optimization, the story of how IT is performing (in terms of contributing value to the business) is likely to remain untold." **Gartner** recommends that multiple views of IT budgets and resource allocations are required. Cost transparency is best achieved by the following approaches:

- Develop multiple views of the IT budget and resource allocations

- Provide the foundation for better IT service supply and demand decisions

- Allow IT spending and resource costs to be quantitatively articulated and bundled and more easily connected to business processes, outcomes, and goals

<u>Gartner's description of multiple views</u>: Multiple views are necessary to provide the transparency required to effectively communicate and manage IT spend, these views include:

a) **Asset Based View** <u>(Hardware, Software, Personnel, External services)</u>
  - The 'General Ledger' view is essentially the "IT budget" for most organizations. This view is typically the foundation from which all subsequent views are built. Although business executives recognize this view, it is difficult to defend.

b) **Technical View** <u>(Servers, Storage, Networks, End-user devices, Application Support)</u>
  - Many organizations manage spend in technology stacks or domains. This allows for the effective management of IT spending in the language that most technologists and technology providers use. While the technical view provides additional financial transparency, the biggest benefit of this view comes from

the ability to analyze (and benchmark) technology spending on a unit cost basis.

c) **Business Services View** <u>(Workplace Services, Business Capability Service, Site Services, Business Enablement)</u>
- The business services view takes the same operating costs as the technical view, but organizes them in a way that more clearly communicates the cost of the services IT provides in business terms. This view requires the creation of a service portfolio that lists a set of services that can be costed and used to manage services provided to the enterprise.

d) **Investment View** <u>(Transform, Grow, Run)</u>
- The investment view divides both operating expenditure and capital expenditure into a view that distinguishes the amount of money (and potential value) spent on investing in new capabilities from the amount spent simply running the business. However, it is increasingly a source of confusion, because capital expenditures may be needed to refresh existing infra-structure and services, whereas new external services can now be purchased out of operating expenditure.

Please see Appendix B for a further elaboration of the Gartner work.

Question:

a) Please provide specific project example(s) that shows both the quantitative and qualitative financial and/or operational measures and resulting benefits that were tracked via BTO's Value Management process?

b) How does MPI ensure that it gets <u>the best price</u> from its vendors and suppliers in order to manage and minimize the unit costs of IT services?

Rationale for Question:

To understand MPI's IT Project Portfolio / IT Project Management Office approach to ongoing monitoring of IT portfolio initiatives in terms of costs, schedules, business benefits and risk management. Also any processes in place to support benefits realization to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14, p. 28.

RESPONSE:

a) To clarify, the Value Management process operates within the Finance Division and is organizationally separate from the Business Transformation Office (BTO). This independence from BTO ensures objective analysis. As noted, it is a new process and the process measures are being applied to new projects this fiscal year.

Proposed business cases include the following quantitive financial metrics:

- Project Costs
- Project Benefits
- Net Project Impact
- Internal Rate of Return (IRR)
- Payback Period (in Years)
- Return on Investment
- Discounted Payback Period (in Years)

These metrics are refined through iterations of the business case and are reviewed as part of the initiative selection process. The final business case forms the baseline measurement for the project. Additional information on the selection process is included in *CAC (MPI) 2-20*. The project is delivered as outlined in *CAC (MPI) 1-37* which includes processes for the management and reporting of costs, schedules, and risk management in alignment to the business case.

At project completion, the BTO delivery team is no longer engaged, and Value Management process resumes to report on received and projected business benefit.

Impacts to Operations, as a result of projects, are reflected in financial reporting. These expenses are benchmarked annually against a representative peer group

(Gartner for Information Technology (IT) and Ward Group for the overall corporation).

The Gartner annual scorecard (included in *Volume III AI.12 Benchmarking Appendices Appendix 5*) includes several of the metrics referenced in *CAC Round 2 Questions Appendix B*), with comparisons to a peer average:

- IT Process Maturity
- IT Spend as a % of Revenue
- IT spend per employee
- IT spend allocations (Run/Grow/Transform)
- IT spend as a % of operating expenses
- IT Budget Cost Distribution
- IT Infrastructure and Operations Cost Distribution
- IT FTE as a % of Company FTE
- IT FTE Cost Comparisons

Additional operational measures, referenced in *CAC Appendix B*, that are tracked operationally and include:

- Unit costs for IT Infrastructure
- Delivery vs. SLA (Managed Services)
- Availability (quarterly)
- Defects
- Incidents (including Security)
- Changes
- Response time (varies by technology)
- User satisfaction (annual)

b) Manitoba Public Insurance (MPI) employs vendor management techniques, such as tendering to ensure competitive pricing for comparable products and services. Where available, and for significant investments, MPI leverages research and advisory services (such as Gartner) to confirm acceptable value is being received. Gartner completes an annual review and comparison of MPI IT expenses as compared to a representative peer group (included in *Volume III AI.12 Benchmarking Appendices Appendix 5*). In the most recent scorecard Gartner identified MPI's maturity in IT Cost Containment exceeded both peer groups and has shown steady improvement since 2011/12.

Appendix B

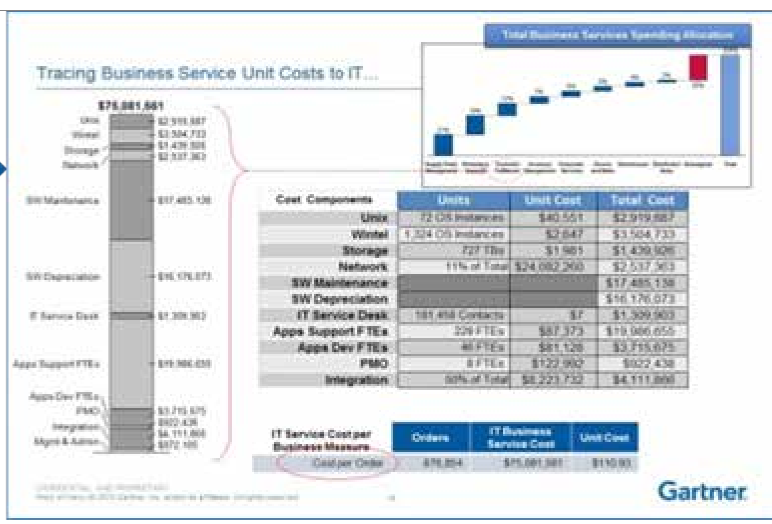
Gartner Examples: Common Metrics Categories

Common Metrics Categories

Financial and Budget		Costs
How much?	**Spent where?**	• Unit costs
Total spending (% Rev)	• Allocations by cost category	•Cost per server
Spending per employee	• Allocations by tech area	•Cost per PC
Spending per customer	• Allocations by investment category	•Cost per …
Spending per output		• Total costs
Staffing	**Projects and Key Initiatives**	**Workload and Service Levels**
Staffing levels	• Project delivery	• Quantity (SRs)
Staff allocations	• Schedule	• Quality (defect rate)
Staff efficiencies	• Budget	• Availability
	Portfolio characteristics	Response time
Process	**Security, Risk, and Compliance**	**User Satisfaction**
Maturity	• Security incidents	• User satisfaction
Quality (defect rate)	• Regulatory compliance	• Manager satisfaction
Cycle time	• Identified risks	
Cost		

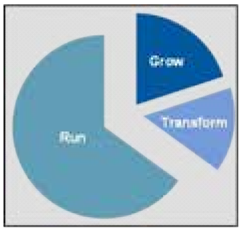
Source: Benchmarking the IT Organization, Prepared for the NAW Billion Dollar CIO Roundtable, 6 May 2015, online: https://www.naw.org/files/events/bdciomay15_BD-CIO-RT-2015_Gartner.pdf

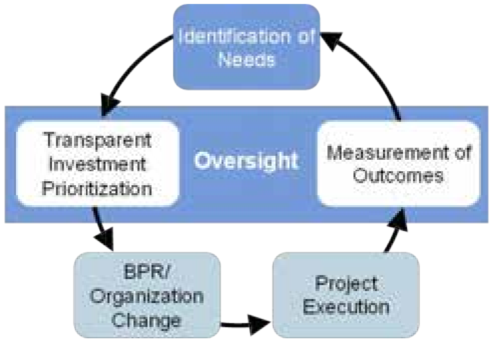
Workplace Services	Desktop Support
	Phone services
	Email
Business Capability Services	Customer Fulfillment
	Inventory Management
	Corporate (Finance, HR, Legal)
	Source and Make
	Supply Chain Management
Site Services	Warehouses
	Distribution Hubs
Business Enablement	New Product Development
	Improvement and Innovation



Source: Benchmarking the IT Organization, Prepared for the NAW Billion Dollar CIO Roundtable, 6 May 2015, online: https://www.naw.org/files/events/bdciomay15_BD-CIO-RT-2015_Gartner.pdf

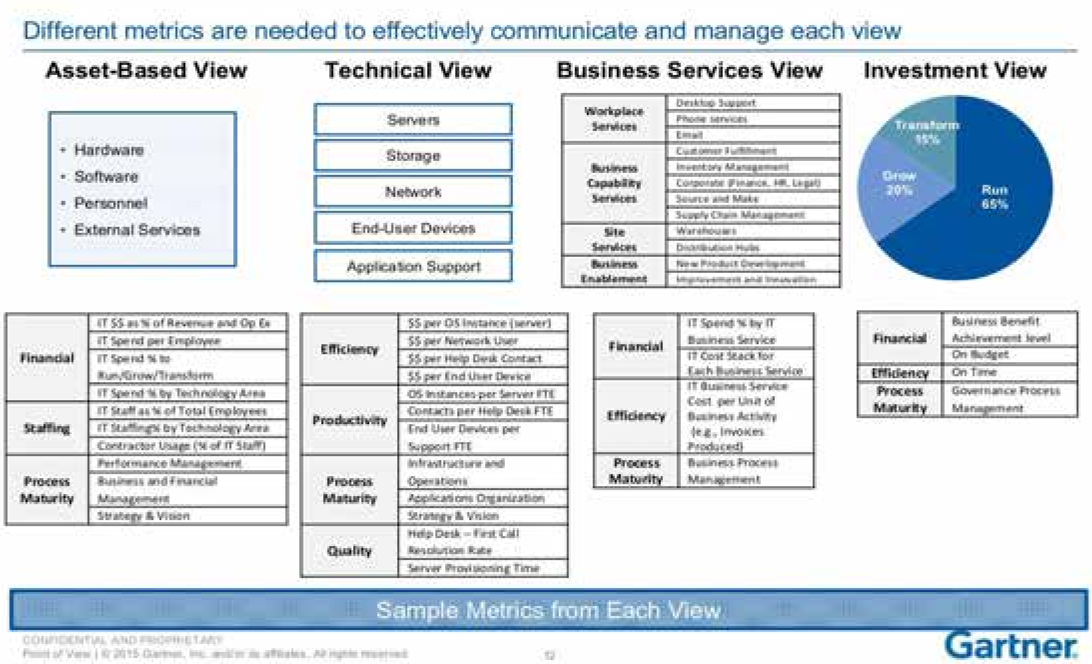
Gartner Business Services View – Communicating costs and value in a business-centric manner: *The IT business services view takes the same operating costs as the technical view, but organizes them in a way that more clearly communicates the cost of the services IT provides in business terms (often, this is described as an IT business service or an IT-enabled business service). This requires the creation of a service portfolio that lists a set of services that can be costed and used to manage services provided to the enterprise.*





Gartner Investment View - models the essential activities that communicates business value of IT: *The investment view divides both operating expenditure and capital expenditure into a view that distinguishes the amount of money (and potential value) spent on investing in new capabilities from the amount spent simply running the business. However, it is increasingly a source of confusion, because capital expenditures may be needed to refresh existing infrastructure and services, whereas new external services can now be purchased out of operating expenditure.*

Different metrics are needed to effectively communicate and manage each view - Sample Metrics from each of the views



Source: Benchmarking the IT Organization, Prepared for the NAW Billion Dollar CIO Roundtable, 6 May 2015, online: https://www.naw.org/files/events/bdciomay15_BD-CIO-RT-2015_Gartner.pdf

CAC (MPI) 2-23

Volume:	CAC (MPI) 1-37	Page No.:	
Topic:	IT Expenses		
Sub Topic:	Monitoring the Performance of IT Investments		
Issue:	Value Management Process—A New Process (CAC (MPI) 1-44)		

Question:

a) Please file a copy of the description (or the submission to the Board of Directors) of the Value Management Process tool to be used for defining expected benefits and costs of new IT investments along with the proposed measurement metrics and reporting structure.

b) Please file a copy of the Board of Directors' Minutes approving the Value Management Process tool.

c) Please advise if the Value Management Process tool to be deployed by MPI is currently used at SGI or ICBC. If not, is MPI aware of the tool SGI and ICBC use to measure/determine IT investment benefits? Please elaborate on the response.

Rationale for Question:

To gain an understanding of the new Value Management Process tool proposed by MPI to define and measure IT investment benefits and costs, in order to ensure that actual and projected costs incurred are necessary and prudent for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) and b)

The description of the Value Management Process tool was provided in *CAC (MPI) 1-37*, which included how the tool is used for defining expected benefits and costs, as well as the measurement metrics and reporting structure. Also, please see *CAC (MPI) 2-22* for metrics and reporting structure.

The Value Management Process is an operational matter, and was not approved by the Board of Directors. Accordingly, there is no separate submission, and no meeting minutes approving the Value Management Process.

c) Manitoba Public Insurance (MPI) is not aware of the tool Saskatchewan Government Insurance (SGI) and Insurance Corporation of British Columbia (ICBC) use to measure/determine Information Technology (IT) investment benefits.

CAC (MPI) 2-24

Volume:	**CAC (MPI) 1-37**	**Page No.:**	
Topic:	**IT Expenses**		
Sub Topic:			
Issue:	**Financial Oversight**		

Preamble: On page 3 of the response to CAC (MPI) 1-37 the Corporation states "Enterprise Portfolio Management Services (EPMS) provides financial oversight over BTO Operations, BTO Projects, and HP Statement of Work."

Question:

a) Please confirm that Enterprise Portfolio Management Services (EPMS) is part of the Finance Division organizationally.

b) Please describe the process EPMS follows to discharge its financial oversight duties.

c) Please describe and quantify the financial impact EPMS has had in exercising its oversight duties on the BTO Operations, BTO Projects and the HP Statement of Work.

Rationale for Question:

To gain an understanding of internal control processes put in place by MPI and the resulting financial impact to control IT operations, in order to ensure that actual and projected costs incurred are necessary and prudent for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) Enterprise Portfolio Management Services (EPMS) is part of the Information Technology and Business Transformation Division. EPMS works collaboratively with Finance, Business Services, Vendor Management and Information

Technology to ensure that budgets, spending and reporting are transparent and effective.

b) EPMS discharges its financial oversight duties as follows;

BTO Operations

EPMS is responsible for the preparation and monitoring of the Business Transformation Office (BTO) operational budget. EPMS reviews BTO operational budget financials monthly with BTO management, identifying and reporting on variances and providing forecasts to end-of-year based on operational requirements. Over-budget variances are identified, reviewed and appropriate corrective actions are taken as required. Historical performance and future requirements are taken into account for the preparation of upcoming budgets.

BTO Projects

- Budgets

  EPMS prepares the annual budgets for all BTO projects. The project budget process involves meetings with the business and project management staff to confirm work to be performed by project in order to identify the appropriate annual amounts. The budget amounts are identified by category (deferred, capital, expense) to ensure correct financial reporting. Ongoing costs are identified and provided to Finance to ensure that they are captured in appropriate future budgets. Future staff impacts are also identified in order to transition to operations at the appropriate time. EPMS works closely with Finance during the budgeting process to ensure that all costs are correctly identified.

- Monthly Reporting

  EPMS re-forecasts all BTO projects on a monthly basis to manage expenses and identify potential delivery issues. The forecasting extends to both year-end and end of project (if applicable). This process involves interviewing project managers to review current project financial information, identify work to be done and resource usage. The monthly forecasting activity results in the production of a variety of reports used to monitor and manage both individual projects and the portfolio in general. All financial reports reconciled with Finance.

c) Financial Impacts

The majority of financial benefits provided by EPMS are in cost avoidance and detailed monitoring and reporting of project financials. Many BTO projects are large in magnitude and duration, requiring very tight controls and ongoing monitoring to minimize the potential for cost overruns and to ensure that the initiatives are completed on time and within budget.

- Monitoring contracts – recovered approximately $25K from vendors for incorrect charging of Provincial Sales Tax (PST).
- Implementation of Budget/Actuals worksheet – Non-tangible benefits of increased efficiency for developing detailed financial forecasts.
- Monthly Project Forecasting – Proactive by identifying issues and correcting before they become problems
- Monthly Resource Use Forecasting – Identify resource issues , identify tasks that may be in jeopardy
- Monthly Time Card Validation – All hours charged to projects are validated resulting in accurate project costing. Errors identified are corrected.
- Consultant use of corporate vehicles – Allow consultants working on-site to use corporate vehicles, estimated savings of $15K per year.
- Negotiate Agreements with select hotels – EPMS has worked with Administrative Services to obtain MPI rates for business partners and contractors. Savings range from $11 to $95 per day.

- Review all vendor invoicing – EPMS reviews all contracts with external service providers and validates that all invoices have supporting documentation and are compliant to the contract. Unauthorized charges are rejected, and identified errors are corrected. Corrections of two occurrences avoided $25K in over-charges.

- Vendor Discount Methodology – EPMS identified that the discount methodology being used by a vendor was not correct as written in the MSA. This error would have cost MPI approximately $100K per year in lost discounts. The error was corrected and a credit note issued.

- HP Statement of Work – EPMS validates all HP resourcing invoices using a three-way validation;

  - Hours are validated correct through Timecard with the project managers

  - Rates are validated and confirmed correct

  - Resources are validated with EPMO to ensure that resources are assigned to MPI

CAC (MPI) 2-25

Volume:	CAC (MPI) 1-37	Page No.:	
Topic:	IT Expenses		
Sub Topic:			
Issue:	IT Expenses Review by Executives and Board of Directors		

Preamble: On pages 4 and 5 of the response to CAC (MPI) 1-37 the Corporation states "Finally, members of BTO and Finance management teams meet collectively with their Executives to review the project financials as stated in the Capital Master Summary." "On a quarterly basis, the Board of Directors is presented a status update on all strategic initiatives. At that time, any variance or risks to budgets or timelines are brought forward as well as the planned corrective actions."

Question:

a) Please file a copy of the most recent Capital Master Summary containing the projects financials including financial commentaries and analyses.

b) Please file a copy of the most recent status update on all strategic initiatives presented to the Board of Directors including the variance or risks to budgets or timelines analyses and planned corrective actions.

Rationale for Question:

To gain an understanding of the control processes in place to contain IT expenses and maximize value on IT investments and to ensure that actual and projected costs incurred are necessary and prudent for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The rationale for the question to obtain a copy of the most recent Capital Master Summary is to gain an understanding of the control processes in place to contain Information Technology (IT) expense and maximize value on IT investments. The Capital Master Summary includes all corporate projects across all lines of business and is not limited to just the projects impacting the Basic line of business. The document is prepared for Executive Management as a tool to monitor the overall business of the Corporation and is not specifically segregated into a Basic and non-Basic presentation format. As such, the document is not provided because it contains information beyond the jurisdiction of the Board to request. However, a description of the information contained in the Capital Master Summary is relevant.

The Capital Master Summary is an Excel Spreadsheet which lists all Corporate Initiatives that are currently active (as of the date of the report) or have either been closed within current fiscal year or will commence in the current fiscal year. The initiatives are categorized under the following headings: "Existing Initiatives – Closing", "Existing Initiatives – Carried Forward", "New Initiatives 2016/17" and "Administrative Capital". The financial reporting on each initiative is broken down to identify the life to date spend, the year to date spend, the project budget for the fiscal year, the forecasted project budgets for each of the subsequent four fiscal years, the estimated projected spend to implementation and the total project budget as at the end of the current fiscal year.

The Capital Master Summary reports the totals for all the initiatives and further sorts the information based upon line of business, cost category, administrative capital , investment capital, deferred capital and implementation expense. The Capital Master Summary provides a comprehensive overview of the financial information related to the corporative initiatives. Executive Management uses the Capital Master Summary as a control tool to monitor spending on each individual initiative as well as the total spend on all corporate initiatives. Project Managers know that deviations from approved plans and budgets are easily identified and appropriate action will be required to address concerns.

A summary of all projects that affect the Basic Line of business is provided in *Volume II Exp Table 5.2.1 page 58.* In addition *Volume II Exp Appendix 12 and 13* provide Capital Expenditures – Project Cost Comparisons and details on Deferred Development Costs and Amortization for Basic Improvement Initiatives.

b) The rationale for the question to obtain a copy of the most recent status update on all strategic initiatives presented to the Board of Directors is to gain an understanding of the control processes in place to contain IT expense and maximize value on IT investments.

The most recent quarterly update provided the Planning and Technology Committee of the Manitoba Public Insurance (MPI) Board of Directors contains information on numerous key corporate initiatives, across all lines of business, and are not limited to just the projects impacting the Basic line of business. As such, the document is not provided because it contains information beyond the jurisdiction of the Board to request. However, a description of the quarterly update is relevant. The quarterly updates include a brief project description, a summary of milestones completed, and anticipated milestones to be completed in the next quarter, and any issues or concerns that need to be addressed for successful implementation of the project. Project financials are recorded in a summary table, which includes total project budget as at the current and previous start of fiscal, and a variance for those budgets. Also, a total project budget and board approved budget adjustment during the previous year, annual project budget for the previous year, and year to date and life to date actuals.

Further, the Corporation notes that active initiatives related to the Basic line of business have been detailed in the response to *CAC (MPI) 1-50*, which lists the project objectives, executive sponsor and business owner, project timeline, current year and overall budget, as well as assessed risks and benefits.

CAC (MPI) 2-26

Volume:	CAC (MPI) 1-38	Page No.:	
Topic:	Volume: II - Expenses Appendix EXP-14		
Sub Topic:	Total IT Expenses, Total Deferred Development Costs		
Issue:	Tracking Performance of IT Investment Portfolio		

Preamble: The Corporation's response to CAC (MPI) 1-38 (iii) has not directly addressed the questions posed in quantifiable terms. MPI has described the governance process that is in place with the intent of providing Value Management oversight; however it is the execution and monitoring aspects of that governance process that must be assessed in order to demonstrate value.

CAC is assuming, based on the qualitative responses provided by MPI and its prior description of Portfolio Management, that MPI does in fact have an IT Portfolio Management discipline. Our expectation is that the MPI portfolio management system is also used as one of the 'gatekeepers' to project approvals, and is also used to ensure that project methodologies are being followed. We are also assuming that a Portfolio Management tool is in place to help to manage budget requests by program and project, so that an an overall view of such requests can be formed.

In Appendix C, we have set out a discussion and modest elaboration of portfolio management tools.

Question:

a) Please provide example(s) that would support the Corporation's response to CAC (MPI) 1-38 regarding how IT measures/monitors actual-versus-expected IT portfolio/project performance either in terms of financial or operational benefits.

b) Does MPI use a formal Portfolio Management and Project Management tools for tracking the IT Portfolio and its performance?

Rationale for Question:

To understand the MPI governance and management processes, and to ensure that forecasts are reasonably reliable and that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) and b)

In Appendix C which Consumers' Association of Canada (CAC) attached to this question it states: "IT Portfolio management requires skill sets beyond traditional technology and event project management skills. The process must be guided by an individual or group that understands enough about both the business and technology to help manage the portfolio. If the organization already has an IT-Business Alignment team that may be a good candidate to perform portfolio management".

This is a key component in how the Corporation performs IT Portfolio Management.

Please see *CAC (MPI) 1-37* for more detail in how the "IT-Business Alignment team". The highlights of this response are that the Business Transformation Office (BTO) "is responsible for overseeing the execution of the portfolio of approved projects". This includes a "management team representing BTO, Business Architecture, Technical Architecture, Enterprise Project Management Office (EPMO) and Enterprise Portfolio Management Services (EPMS)." *CAC (MPI) 1-37 page 3* identifies the roles of each department highlighting understanding and accountability, for both business and technology alignment as well as portfolio financial management and governance.

CAC (MPI) 2-20 includes an overview of the corporate initiatives portfolio review process. *CAC (MPI) 2-22* includes the financial metrics (including benefits) associated with the Value Management process and the operational measures which change based upon the implementation of projects.

Examples of delivery and project approvals can be found in *CAC (MPI) 1-37* they include;

- Identification of the seven phases of project delivery (each phase contains critical milestones and the critical objectives to be accomplished)

- Identification of the delivery controls and methodology (are checkpoints used to measure significant events and to ensure management is aware of the status of these checkpoints)

Examples of reporting and control (at the portfolio level) can also be found in *CAC (MPI) 1-37*. "The project financials are reviewed by the BTO Steering Committee which is comprised of members of BTO Management and MPI Executive Sponsors. Any identified issues surrounding project variances and any identified corrective actions are discussed and the forecasts to completion are validated. Finally, members of BTO and Finance management teams meet collectively with their Executives to review the project financials as stated in the Capital Master Summary. Additional meetings are held with project teams to review their respective project financials as required to ensure accountability and performance to budgets." These review meetings focus on delivery to financials, but also address portfolio level contention between projects.

This governance and review extends to the MPI Board of Directors, *CAC (MPI) 1-37* also states that "On a quarterly basis, the Board of Directors is presented a status update on all strategic initiatives. At that time, any variance or risk to budgets or timelines are brought forward as well as the planned corrective actions." On an annual basis, this update includes an independent review, and recommendations from Gartner.

As indicated above and in *CAC (MPI) 1-37*, MPI performs Portfolio Management practices. At present project deliverables are maintained on project SharePoint sites, and are generated in Microsoft tool compatible format (ex. Microsoft Project, Microsoft Visio, Microsoft Word / Excel / PowerPoint). Portfolio level reporting is currently a manual activity using internally developed solutions to collect and present the data from each project. Lawson is leveraged for financial information for all projects.

Appendix C

IT Portfolio Management tools are required to assist in the forecasting, scheduling, and management of human, financial, and technical resources across the IT Portfolio. These tools are also capable of providing "scenario analysis" functionality allowing management to see the effects on the entire IT Portfolio of changing the project and work stream mix, adjusting resource or budget allocations, changing the sequencing and delivery dates of projects, etc.

IT Portfolio Management Standards and Methods

IT Portfolio Management tools (such as PlanView or Primavera) are built around and can enforce standards; A key industry standard is **Val IT**, a suite of documents that provide a framework for the governance of IT investments, produced by the **IT Governance Institute**. **Val IT** is a formal statement of principles and processes that can be used for IT portfolio management, and represents an overall IT governance framework, composed of the principles of value governance, portfolio management, and investment management. Val IT is tightly integrated with another IT governance framework known as COBIT, from the Information Systems Audit and Control Association.

One challenge of including application maintenance and support in IT portfolios is that IT budgets tend not to track these efforts at a sufficient level of granularity for effective financial tracking. Here, the IT portfolio management discipline acts as a change driver, forcing a more robust cost tracking process for these activities (and helping both IT and general management to see these more in a true profit and loss context.)

Val IT extends and complements **COBIT**, which provides a comprehensive control framework for IT governance extending from line of business issues, to IT-specific issues, to process and governance. **Val IT** focuses on the investment decision (are we doing the right things?) and the realization of benefits (are we getting the benefits?), whereas COBIT focuses on the execution (are we doing them the right way, in a controlled manner, and are we getting them done well?).

IT portfolio management requires skill sets beyond traditional technology and even project management skills. The process must be guided by an individual or group that understands enough about both the business and technology to help manage the portfolio. If the organization already has an IT-Business Alignment team, that may be a good candidate to perform portfolio management.

Implementing an IT Portfolio Management system (and related disciplines) forces answers to the following key questions:

1. What are we spending our available resources on now? (This gives some indication of priority, and a fairly good indication of resource allocation.)
2. Who are we and what are we trying to accomplish? (This indicates the level of business-IT alignment.)
3. What are the investments that will provide the greatest leverage? (This is where the "rubber hits the road" in using agreed measurements and metrics of project value and balancing this with good business and technology judgment and leadership.)
4. How many investments can we successfully take on at a given time? (This indicates the level of discipline of resource planning and budgeting.)
5. How will these investments interact? (This indicates the level of maturity of the portfolio risk management process.)

CAC (MPI) 2-27

Volume:	**CAC (MPI) 1-40**	**Page No.:**	
Topic:	**Volume: II - Expenses Appendix EXP-14**		
Sub Topic:	**Total Deferred Development Costs**		
Issue:	**Tracking Total Cost of Ownership**		

Preamble: The table at pg 50 of Expenses Appendix EXP-14 that lists Total Deferred Development Costs identifies MPI's primary projects, and the actual and estimated project costs for IT. This table likely represents a significant portion of the cost of MPI's IT investment portfolio.

The aspect of CAC (MPI) 1-40 that addresses 'Total Cost of Ownership' for IT investments was not specifically addressed in the Corporation's response.

Question:
How does MPI measure the total cost of ownership for IT investments?

Rationale for Question:
To determine whether MPI has processes in place to track the total costs of ownership for its IT investments and to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:
Total cost of ownership is determined through the comparison of direct project costs, and the impact to ongoing operating expenses over a specified duration (in years).

The key metrics used as part of Value Management can be found in *CAC (MPI) 2-22*. The measure described above is included in the Net Project Impact.

Prior to the introduction of Value Management, Manitoba Public Insurance (MPI) considered cost analysis as part of major project selection decisions.

CAC (MPI) 2-28

Volume:	**CAC (MPI) 1-42**	**Page No.:**	
Topic:	**Volume: II – Information Technology**		
Sub Topic:	**Program Financials**		
Issue:	**Detailed Breakdown of Program Financials (ITO Program)**		

Preamble: The Corporation's response to CAC (MPI) 1-42 was vague and very high level, making it difficult to understand how MPI is actually performing Value Management for IT investments.

Technology Modernization funding is being sought over the next 4-year period, with 10 initiatives identified; $6.0M in 2016/17, $9.0M in 2017/18, $ 11.0M in 2018/19 and $14.0M in 2019/20. The rationale that follows each is described in the Application in qualitative terms.

Question:

Please select one key IT initiative, and provide the response, at the program level of detail, to the following questions based on that initiative as an example:

a) What further detailed description is available that quantifies the specific deliverables associated with the initiative?

b) What are the associated cost breakdowns, associated projects with schedules, and specific business benefits for the initiative?

c) How is the individual initiative linked to MPI's strategic business priorities?

d) How do the costs of the initiative compare to historical spending (last 3 to 5 years)?

Rationale for Question:

To better understand the detailed projections, planned activities, strategic business rationale, and schedules associated with each ITO program initiative, and to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14, p. 28.

RESPONSE:

Manitoba Public Insurance (MPI) has reviewed the response to *CAC (MPI) 1-42* and can provide some further clarification. The $6 million for 2016/17 to which Consumers' Association of Canada (CAC) referred to in *CAC (MPI) 1-42* was broken down already in the table at the bottom of *Volume I IT page 16* into individual projects. Each project is a separate line item. MPI then provided descriptions on the pages that follow for each of the line items (projects). Those explanations provide the drivers at a project level for each part of the program.

The rationale for the question is stated as "To better understand the detailed projections, planned activities, strategic business rationale, and schedules associated with each ITO program initiative, and to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and *Board Order 98-14 page 28*." To this end the Corporation can provide blank Project Plan templates, in Attachments A, B and C, which illustrate the process and tools used by the Corporation to establish detailed projections, planned activities, strategic business rationale, and schedules.

The Corporation provides the following additional specifics for the Application Portfolio Management project as an example:

a) The Application Portfolio Management project description includes the rationale or driver for the program. It also explains the expected outcome: "At the completion of the project the assessment framework, prioritized recommendations and improved reporting will be transitioned….".

b) The Application Portfolio Management project is a one-time investment with a 2016/17 budget of $500,000. The budget is allocated across the internal labour and external labour required to complete project deliverables. The benefit from this investment is to "create a standardized approach to application risk management, thereby ensuring risks are identified and appropriately prioritized”. This approach will be transitioned from the project team to Information Technology (IT) operations “increasing the capability of internal staff and maturity of the overall process.” This is aligned to Gartner recommendations to understand and manage applications, in order to prevent the accumulation of technical debt.

c) The Application Portfolio Management project is linked to program objectives, the program objectives and context are identified on *Volume I IT page 14* and *15*.

d) No comparable investments have been made in Application Portfolio Management (APM) within the last five years.

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
1			**Project Management and Admin**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
2			Project Management & Admin	No	1 day	Tue 7/14/15	Tue 7/14/15		
3			Stream/Team Lead & Related Admin	No	1 day	Tue 7/14/15	Tue 7/14/15		
4			Milestone: Gating Calendar Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
5			Admin - timesheets, meetings, status reports, gate reviews, travel time	No	1 day	Tue 7/14/15	Tue 7/14/15		
6			Maintain Financial Forecast & Actuals Workbook	No	1 day	Tue 7/14/15	Tue 7/14/15		
7			**Planning**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
8			Create Project Charter	No	1 day	Tue 7/14/15	Tue 7/14/15		
9			Revise Project Charter	No	1 day	Tue 7/14/15	Tue 7/14/15		
10			Milestone: Project Charter Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
11			Milestone: Project Charter Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
12			Review Project Kickoff Presentation with BTO Steering Committee and VP	No	1 day	Tue 7/14/15	Tue 7/14/15		
13			Perform Project Kickoff Presentation	No	1 day	Tue 7/14/15	Tue 7/14/15		
14			Create Project Plan	No	1 day	Tue 7/14/15	Tue 7/14/15		
15			Revise Project Plan	No	1 day	Tue 7/14/15	Tue 7/14/15		
16			Milestone: Project Plan Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
17			Milestone: Project Plan Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
18			Milestone: Delivery Approach Presentation Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
19			Resource Planning & Admin	No	1 day	Tue 7/14/15	Tue 7/14/15		
20			Project Core Resources Assigned	No	1 day	Tue 7/14/15	Tue 7/14/15		
21			Business Input to Planning	No	1 day	Tue 7/14/15	Tue 7/14/15		

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
22			Milestone:Business Continuity (BCMP)/Disaster Recovery Document Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
23			Technical Input to Planning	No	1 day	Tue 7/14/15	Tue 7/14/15		
24			Change Management Planning	No	1 day	Tue 7/14/15	Tue 7/14/15		
25			**Strategic Standard & Agreements / Legal**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
26			Milestone: Contracts / RFP , etc. Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
27			Milestone: Legislation Changes Completed	No	1 day	Tue 7/14/15	Tue 7/14/15		
28			Milestone: Regulations Changes completed	No	1 day	Tue 7/14/15	Tue 7/14/15		
29			**External Vendor / Partner**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
30			Milestone: Contract(s) Signed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
31			Milestone: Contract Work Started	No	1 day	Tue 7/14/15	Tue 7/14/15		
32			Milestone: Contracts Work Completed	No	1 day	Tue 7/14/15	Tue 7/14/15		
33			**Business**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
34			**Business Architecture**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
35			Define Vision Document	No	1 day	Tue 7/14/15	Tue 7/14/15		
36			Revise Vision Document	No	1 day	Tue 7/14/15	Tue 7/14/15		
37			Document Business Policy Decisions	No	1 day	Tue 7/14/15	Tue 7/14/15		
38			Business Policy Decisions Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
39			Business Case validation against vision completed/adjusted	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
40			Milestone: Vision Document Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
41			Milestone: Vision Document Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
42			Milestone: Vision, Architecture & Requirements Reviewed with Executive Committee	No	1 day	Tue 7/14/15	Tue 7/14/15		
43			**Detailed Business Requirements**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
44			Define Detailed Requirements #1	No	1 day	Tue 7/14/15	Tue 7/14/15		
45			Define Detailed Requirements #2	No	1 day	Tue 7/14/15	Tue 7/14/15		
46			Define Detailed Requirements #3	No	1 day	Tue 7/14/15	Tue 7/14/15		
47			Define Legal Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
48			Define Financial Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
49			Define Interfaces Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
50			Define Security Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
51			Review Q&A Detailed Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
52			Update Detailed Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
53			Milestone: Detailed Business Requirements Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
54			Milestone: Detailed Business Requirements Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
55			Define Reporting Requirements #1	No	1 day	Tue 7/14/15	Tue 7/14/15		
56			Perform Q&A on Reporting Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
57			Update Reporting Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
58			Milestone: Reporting Requirements Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
59			Milestone: Reporting Requirements Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
60			Define Forms & Letters Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
61			Milestone: Forms & Letters Requirements Complete	No	1 day	Tue 7/14/15	Tue 7/14/15		
62			Milestone: Forms & Letters Requirements Approved	No	1 day	Tue 7/14/15	Tue 7/14/15		
63			Define Policies & Procedures Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
64			Define Legislation Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
65			Define Regulations Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		
66			Define Brochures & Stationary Requirements	No	1 day	Tue 7/14/15	Tue 7/14/15		

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
67			**Business Scenarios Definition**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
68			Define Business Scenarios subject1	No	1 day	Tue 7/14/15	Tue 7/14/15		
69			Define Business Scenarios subject2	No	1 day	Tue 7/14/15	Tue 7/14/15		
70			Identify CORE Business Scenarios for QC&M	No	1 day	Tue 7/14/15	Tue 7/14/15		
71			Perform Q&A on Core Business Scenarios	No	1 day	Tue 7/14/15	Tue 7/14/15		
72			Update Core Business Scenarios	No	1 day	Tue 7/14/15	Tue 7/14/15		
73			Milestone: Core Business Scenarios Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
74			Core Business Scenarios Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
75			**Business Walk-Thru**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
76			Prepare Business Walk-Thru Presentations)	No	1 day	Tue 7/14/15	Tue 7/14/15		
77			Present Business Walk-Thru	No	1 day	Tue 7/14/15	Tue 7/14/15		
78			**BA Consultations**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
79			Consulted by Technical Team	No	1 day	Tue 7/14/15	Tue 7/14/15		
80			Consulted by Change Management	No	1 day	Tue 7/14/15	Tue 7/14/15		
81			Consulted by Quality Control & Metrics	No	1 day	Tue 7/14/15	Tue 7/14/15		
82			Consultations with Legal	No	1 day	Tue 7/14/15	Tue 7/14/15		
83			**Go Live Criteria**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
84			Identify "Go Live" Criteria	No	1 day	Tue 7/14/15	Tue 7/14/15		
85			Communicate "Go Live" Criteria to Project Team	No	1 day	Tue 7/14/15	Tue 7/14/15		
86			"Go Live" Criteria Complete	No	1 day	Tue 7/14/15	Tue 7/14/15		
87			Develop Implementation Readiness Presentation	No	1 day	Tue 7/14/15	Tue 7/14/15		
88			Milestone: Implementation Readiness Presentation to BTO Steering Committee	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
89			Milestone: Implementation Readiness Presentation to Executive Committee	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
90			**Technical**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
91			**Technical Architecture**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
92			Develop Architecture Definition	No	1 day	Tue 7/14/15	Tue 7/14/15		
93			Architecture Definition Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
94			Architecture Definition Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
95			Develop IBM Infrasture Forecast	No	1 day	Tue 7/14/15	Tue 7/14/15		
96			Milestrone: IBM Infrastructure Forecast Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
97			**Systems Analysis**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
98			Initial Impact Assessments	No	1 day	Tue 7/14/15	Tue 7/14/15		
99			Create Solution Overview	No	1 day	Tue 7/14/15	Tue 7/14/15		
100			Revise Solution Overview	No	1 day	Tue 7/14/15	Tue 7/14/15		
101			Milestone: Solution Overview Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
102			Milestone: Solution Overview Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
103			**Detailed Analysis**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
104			System Analysis Specifications Developed	No	1 day	Tue 7/14/15	Tue 7/14/15		
105			System Analysis Specifications Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
106			System Analysis Specifications Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
107			Milestone: Systems Analysis/Use Cases Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
108			Milestone: Systems Analysis/Use Cases Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
109			**Design**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
110			Develop Design Specifications	No	1 day	Tue 7/14/15	Tue 7/14/15		
111			Milestone: Design Specifications Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7

Project: Project Schedule Temp
Date: Wed 9/7/16

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors
112			Design Specifications Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
113			**Development**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
114			Milestone: Development Started	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
115			Develop Item #1	No	1 day	Tue 7/14/15	Tue 7/14/15	
116			Develop Item #2	No	1 day	Tue 7/14/15	Tue 7/14/15	
117			Milestone: Development Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
118			Milestone: Show Plans Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
119			**Testing**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
120			**Environments**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
121			Define Project Environment Requirements	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
122			Reserve Environment Components for Project	No	1 day	Tue 7/14/15	Tue 7/14/15	
123			Acquire/Purchase Environment Components for Project	No	1 day	Tue 7/14/15	Tue 7/14/15	
124			Environment Setup - DEV Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
125			Environment Setup - SIT Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
126			Environment Setup - UAT Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
127			**QC&M Test Strategy**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
128			Create QC&M Test Strategy	No	1 day	Tue 7/14/15	Tue 7/14/15	
129			Milestone: QC&M Test Strategy Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
130			Milestone: QC&M Test Strategy Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
131			**QC&M Test Plan**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
132			Create QC&M Test Plan	No	1 day	Tue 7/14/15	Tue 7/14/15	
133			Review QC&M Test Plan with Project Team	No	1 day	Tue 7/14/15	Tue 7/14/15	
134			Update QC&M Test Plan	No	1 day	Tue 7/14/15	Tue 7/14/15	

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors
135			Milestone: Acceptance Test Plan Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
136			Milestone: Acceptance Test Plan Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
137			**Perform Testing**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
138			Perform Unit Testing	No	1 day	Tue 7/14/15	Tue 7/14/15	
139			Unit Testing Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
140			Perform Integration Testing	No	1 day	Tue 7/14/15	Tue 7/14/15	
141			System integration Testing Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
142			Perform User Acceptance Testing	No	1 day	Tue 7/14/15	Tue 7/14/15	
143			Perform Performance Testing as required	No	1 day	Tue 7/14/15	Tue 7/14/15	
144			User Acceptance Testing Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
145			**People Readiness**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
146			**Change Management Business Impact Analysis**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
147			Obtain Business Direction	No	1 day	Tue 7/14/15	Tue 7/14/15	
148			Create Draft Impact Analysis	No	1 day	Tue 7/14/15	Tue 7/14/15	
149			Review Draft Impact Analysis with Change Management Team	No	1 day	Tue 7/14/15	Tue 7/14/15	
150			Update Impact Analysis	No	1 day	Tue 7/14/15	Tue 7/14/15	
151			Second review with Change Management Team	No	1 day	Tue 7/14/15	Tue 7/14/15	
152			Finalize Business Impact Document	No	1 day	Tue 7/14/15	Tue 7/14/15	
153			Present Business Impact Analysis for Sign-off	No	1 day	Tue 7/14/15	Tue 7/14/15	
154			Milestone: Business Impact Analysis Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
155			Milestone: Business Impact Analysis Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
156			**Change Management Stakeholder Analysis**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
157			Develop Stakeholder Analysis	No	1 day	Tue 7/14/15	Tue 7/14/15	

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors
158			Present Stakeholder Analysis for Approval	No	1 day	Tue 7/14/15	Tue 7/14/15	
159			Milestone: Stakeholder Analysis Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
160			Milestone: Stakeholder Analysis Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
161			**Change Management Plan**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
162			Obtain Business Impact Analysis	No	1 day	Tue 7/14/15	Tue 7/14/15	
163			Obtain Stakeholder Impact Analysis	No	1 day	Tue 7/14/15	Tue 7/14/15	
164			Obtain Communication Milestones and Milestone Dates from Communication Team	No	1 day	Tue 7/14/15	Tue 7/14/15	
165			Create Draft Change Management Plan	No	1 day	Tue 7/14/15	Tue 7/14/15	
166			Change Management Plan Draft Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
167			Change Management Plan Draft Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
168			Develop Training & Performance Support Plan	No	1 day	Tue 7/14/15	Tue 7/14/15	
169			Training & Performance Support Plan Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
170			Training & Performance Support Plan Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
171			Develop HR Strategy Implementation Plan	No	1 day	Tue 7/14/15	Tue 7/14/15	
172			HR Strategy Implementation Plan Completed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
173			HR Strategy Implementation Plan Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
174			**KMS**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**	
175			Develop Training Materials	No	1 day	Tue 7/14/15	Tue 7/14/15	
176			Training Materials Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
177			Training Materials Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
178			Develop Policies & Procedures	No	1 day	Tue 7/14/15	Tue 7/14/15	
179			Policies & Procedures Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
180			Policies & Procedures Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15	

Jul 12, '
S M T W

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
181			**Business Change Agent Network Meeting**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
182			Identify Change Agents For Impacted Stakeholder Groups	No	1 day	Tue 7/14/15	Tue 7/14/15		
183			Update Current Change Agent Network Recommended Structure, Participants, and Roles	No	1 day	Tue 7/14/15	Tue 7/14/15		
184			Confirm Date for Change Agent Network Meeting with Business	No	1 day	Tue 7/14/15	Tue 7/14/15		
185			BA's to submit presentation material to CM Lead	No	1 day	Tue 7/14/15	Tue 7/14/15		
186			Send invite to Change Agents	No	1 day	Tue 7/14/15	Tue 7/14/15		
187			Send Change Agent Network Materials for Approval	No	1 day	Tue 7/14/15	Tue 7/14/15		
188			Change Agent Network Material Approved	No	1 day	Tue 7/14/15	Tue 7/14/15		
189			Send Change Agent Network Slide Deck to Directors	No	1 day	Tue 7/14/15	Tue 7/14/15		
190			Business Change Agent Network Meeting - Complete	No	1 day	Tue 7/14/15	Tue 7/14/15		
191			**External Communications Planning**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
192			**Communication Strategy**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
193			Obtain Business Direction	No	1 day	Tue 7/14/15	Tue 7/14/15		
194			Conduct Communication Audit & Document Recommendati	No	1 day	Tue 7/14/15	Tue 7/14/15		
195			Create Communication Calendar	No	1 day	Tue 7/14/15	Tue 7/14/15		
196			Create Draft Communication Strategy Document	No	1 day	Tue 7/14/15	Tue 7/14/15		
197			Review Draft Communication Strategy Document with Shar	No	1 day	Tue 7/14/15	Tue 7/14/15		
198			Communication Strategy Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
199			Communication Strategy Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
200			**External Communications Audit**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
201			Build database listing all materials	No	1 day	Tue 7/14/15	Tue 7/14/15		
202			Collect electronic inventory of materials	No	1 day	Tue 7/14/15	Tue 7/14/15		

Project: Project Schedule Temp
Date: Wed 9/7/16

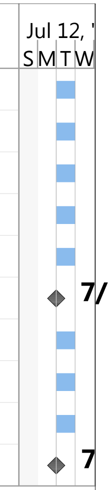
Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors	Jul 12, ' S M T W
203			Collect Physical inventory of materials	No	1 day	Tue 7/14/15	Tue 7/14/15		
204			Communications Audit Complete	No	1 day	Tue 7/14/15	Tue 7/14/15		
205			**Communications Execution**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
206			External communications Materials	No	1 day	Tue 7/14/15	Tue 7/14/15		
207			Internal Communications Materials	No	1 day	Tue 7/14/15	Tue 7/14/15		
208			**Transition**	**No**	**0 days**	**Tue 7/14/15**	**Tue 7/14/15**		
209			Business Operational Transition Training & Documentation Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7/
210			Technical Knowledge Transition Training & Documentation Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
211			Technical Operations/Support Transition Training & Documentation Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
212			**Implementation**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
213			Create Implementation Strategy	No	1 day	Tue 7/14/15	Tue 7/14/15		
214			Milestone: Implementation Strategy Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
215			Milestone: Implementation Strategy Approved	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
216			Create/Maintain Implementation Task list	No	1 day	Tue 7/14/15	Tue 7/14/15		
217			Milestone: CCB GO - NO GO Decision Received	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
218			Milestone: Implementation Complete	Yes	0 days	Tue 7/14/15	Tue 7/14/15		7
219			**Post-Implementation**	**No**	**1 day**	**Tue 7/14/15**	**Tue 7/14/15**		
220			Gather & Compile Lessons Learned - business	No	1 day	Tue 7/14/15	Tue 7/14/15		
221			Gather & Compile Lessons Learned - change mgmt	No	1 day	Tue 7/14/15	Tue 7/14/15		
222			Gather & Compile Lessons Learned - standards/legal	No	1 day	Tue 7/14/15	Tue 7/14/15		

Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		Task Mode	Task Name	Milestone	Duration	Start	Finish	Predecessors
223			Gather & Compile Lessons Learned - QCM	No	1 day	Tue 7/14/15	Tue 7/14/15	
224			Gather & Compile Lessons Learned - technical	No	1 day	Tue 7/14/15	Tue 7/14/15	
225			Milestone: Lessons Learned Document Ready	No	1 day	Tue 7/14/15	Tue 7/14/15	
226			Milestone: Lessons Learned Reviewed	No	1 day	Tue 7/14/15	Tue 7/14/15	
227			Milestone: Lessons Learned Action Items Issued	No	1 day	Tue 7/14/15	Tue 7/14/15	
228			Complete Warranty Work	Yes	0 days	Tue 7/14/15	Tue 7/14/15	
229			Update Application Documentation	No	1 day	Tue 7/14/15	Tue 7/14/15	
230			Administer Performance Reviews	No	1 day	Tue 7/14/15	Tue 7/14/15	
231			Complete Project Close Form	No	1 day	Tue 7/14/15	Tue 7/14/15	
232			Project Closed	Yes	0 days	Tue 7/14/15	Tue 7/14/15	



Project: Project Schedule Temp
Date: Wed 9/7/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID		% Work Complete	Task Name	Start	Finish	Milestone Level	Deliverables	Project Milestone	Duration	ep 28, '1 MTWT
0		0%	**Project Schedule**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
1		**0%**	**Project Management**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
2		0%	Develop and Present Project Delivery Approach	Wed 10/1/14	Wed 10/1/14				6 h?	1
3		0%	Create Project Plan & Schedule	Wed 10/1/14	Wed 10/1/14				6 h?	1
4		0%	Plan and Execute Project Kickoff	Wed 10/1/14	Wed 10/1/14				6 h?	1
5		0%	Manage Project and Report Progress	Wed 10/1/14	Wed 10/1/14				6 h?	1
6		0%	Create Production to Operations Transition Form	Wed 10/1/14	Wed 10/1/14				6 h?	1
7		0%	Complete & Conduct Performance Reviews	Wed 10/1/14	Wed 10/1/14				6 h?	1
8		0%	Compile & Report Lessons Learned	Wed 10/1/14	Wed 10/1/14				6 h?	1
9		0%	Complete Project Closeout Report	Wed 10/1/14	Wed 10/1/14				6 h?	1
10		0%	Complete Other Closeout Activities	Wed 10/1/14	Wed 10/1/14				6 h?	1
11		0%	Milestone: Project Plan Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
12		0%	Milestone: Project Plan Approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
13		0%	Milestone: Project Management Activities Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
14		0%		Wed 10/1/14	Wed 10/1/14				6 h?	1
15		0%	Perform Project Admin Tasks	Wed 10/1/14	Wed 10/1/14				6 h?	1
16		0%		Wed 10/1/14	Wed 10/1/14				6 h?	1
17		**0%**	**Business Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
18		0%	Create Project Charter	Wed 10/1/14	Wed 10/1/14				6 h?	1
19		0%	Milestone: Project Charter Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
20		0%	Milestone: Project Charter Approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
21		0%	Create Business Requirements & Use Cases for _	Wed 10/1/14	Wed 10/1/14				6 h?	1
22		0%	Create Business Requirements & Use Cases for _	Wed 10/1/14	Wed 10/1/14				6 h?	1
23		0%	Create Business Architecture Solution for _	Wed 10/1/14	Wed 10/1/14				6 h?	1
24		0%	Create Test Scenarios	Wed 10/1/14	Wed 10/1/14				6 h?	1
25		0%	Create Acceptance (Go-live) Criteria	Wed 10/1/14	Wed 10/1/14				6 h?	1
26		0%	Develop Implementation Strategy	Wed 10/1/14	Wed 10/1/14				6 h?	1
27		0%	Develop Transition Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
28		0%	Develop Support Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
29		0%	Milestone: Support Plan Approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
30		0%	Milestone: Business Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1

Project: Project Schedule
Date: Wed 9/7/16

Task	External Tasks	Manual Summary Rollup
Critical Task	Project Summary	Manual Summary
Milestone	Group By Summary	Start-only
Summary	Inactive Task	Finish-only
Rolled Up Task	Inactive Milestone	External Tasks
Rolled Up Critical Task	Inactive Milestone	External Milestone
Rolled Up Milestone	Inactive Summary	Progress
Rolled Up Progress	Manual Task	Deadline
Split	Duration-only	

ID		% Work Complete	Task Name	Start	Finish	Milestone Level	Deliverables	Project Milestone	Duration	ep 28, '1 M T W T
31		0%		Wed 10/1/14	Wed 10/1/14				6 h?	1
32		**0%**	**Legal Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
33		0%	Create RF* Deliverable	Wed 10/1/14	Wed 10/1/14				6 h?	1
34		0%	Create / Amend Legal Contract	Wed 10/1/14	Wed 10/1/14				6 h?	1
35		0%	Develop Regulatory Changes	Wed 10/1/14	Wed 10/1/14				6 h?	1
36		0%	Milestone: Legal Agreement Signed	Wed 10/1/14	Wed 10/1/14				6 h?	1
37										
38		**0%**	**Technical Architecture Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
39		0%	Create Vision Document	Wed 10/1/14	Wed 10/1/14				6 h?	1
40		0%	Develop Architecture Definition	Wed 10/1/14	Wed 10/1/14				6 h?	1
41		0%	Create/Maintain Logical Data Model	Wed 10/1/14	Wed 10/1/14				6 h?	1
42		0%	Create/Maintain Physical Data Model	Wed 10/1/14	Wed 10/1/14				6 h?	1
43		0%	Create/Maintain Database Solution	Wed 10/1/14	Wed 10/1/14				6 h?	1
44		0%	Define and Setup Project Environments	Wed 10/1/14	Wed 10/1/14				6 h?	1
45		0%	Create Disaster Recovery Specifications	Wed 10/1/14	Wed 10/1/14				6 h?	1
46		0%	Milestone: Vision Document Approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
47		0%	Milestone: Technical Architecture Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
48		0%		Wed 10/1/14	Wed 10/1/14				6 h?	1
49		**0%**	**Technical Development Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
50		**0%**	**Analysis & Design**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
51		0%	Create Systems Specifications	Wed 10/1/14	Wed 10/1/14				6 h?	1
52		0%	Create System Use Cases	Wed 10/1/14	Wed 10/1/14				6 h?	1
53		0%	Create Design Specifications	Wed 10/1/14	Wed 10/1/14				6 h?	1
54		0%	Milestone: Analysis Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
55		0%	Milestone: Design Approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
56		**0%**	**Development & Unit Test**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
57		0%	Develop System Solution	Wed 10/1/14	Wed 10/1/14				6 h?	1
58		0%	Conduct Unit Test	Wed 10/1/14	Wed 10/1/14				6 h?	1
59		0%	Milestone: Development Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
60		**0%**	**System Test**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
61		0%	Execute and Validate SIT	Wed 10/1/14	Wed 10/1/14				6 h?	1

Project: Project Schedule
Date: Wed 9/7/16

Task	External Tasks	Manual Summary Rollup
Critical Task	Project Summary	Manual Summary
Milestone	Group By Summary	Start-only
Summary	Inactive Task	Finish-only
Rolled Up Task	Inactive Milestone	External Tasks
Rolled Up Critical Task	Inactive Milestone	External Milestone
Rolled Up Milestone	Inactive Summary	Progress
Rolled Up Progress	Manual Task	Deadline
Split	Duration-only	

ID		% Work Complete	Task Name	Start	Finish	Milestone Level	Deliverables	Project Milestone	Duration	ep 28, '1 MTWT
62		0%	Milestone: Technical Development Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
63										
64		**0%**	**Change Services Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
65		0%	Develop CM Stakeholder Analysis Document	Wed 10/1/14	Wed 10/1/14				6 h?	1
66		0%	Develop Business Impact Analysis Document	Wed 10/1/14	Wed 10/1/14				6 h?	1
67		0%	Develop Change Management Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
68		0%	Execute Change Management Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
69		0%	Milestone: Change Management Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
70										
71		**0%**	**KMS Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
72		0%	Develop Training Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
73		0%	Develop Policies and Procedures	Wed 10/1/14	Wed 10/1/14				6 h?	1
74		0%	Develop Training Materials	Wed 10/1/14	Wed 10/1/14				6 h?	1
75		0%	Conduct Training	Wed 10/1/14	Wed 10/1/14				6 h?	1
76		0%	Milestone: KMS Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
77										
78		**0%**	**External Communications Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
79		0%	Develop Communciation Strategy/Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
80		0%	Conduct External Communication Audit	Wed 10/1/14	Wed 10/1/14				6 h?	1
81		0%	Execute Communication Strategy/Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
82		0%	Milestone: External Communications Deliverables Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
83										
84		**0%**	**QC&M Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
85		0%	Develop QC&M Test Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
86		0%	Develop Test Cases	Wed 10/1/14	Wed 10/1/14				6 h?	1
87		0%	Milestone: Test Plan approved	Wed 10/1/14	Wed 10/1/14				6 h?	1
88		0%	Execute Acceptance Test	Wed 10/1/14	Wed 10/1/14				6 h?	1
89		0%	Milestone: UAT Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
90										
91		**0%**	**External Vendor/Partner**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
92		0%	Milestone: Component _ Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1

Project: Project Schedule
Date: Wed 9/7/16

Task	External Tasks	Manual Summary Rollup
Critical Task	Project Summary	Manual Summary
Milestone	Group By Summary	Start-only
Summary	Inactive Task	Finish-only
Rolled Up Task	Inactive Milestone	External Tasks
Rolled Up Critical Task	Inactive Milestone	External Milestone
Rolled Up Milestone	Inactive Summary	Progress
Rolled Up Progress	Manual Task	Deadline
Split	Duration-only	

ID		% Work Complete	Task Name	Start	Finish	Milestone Level	Deliverables	Project Milestone	Duration	ep 28, '1 MTWT
93		0%	Milestone: Component _ Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
94		0%	Milestone: Component _ Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
95		0%	Milestone: External Vendor Components Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
96										
97		**0%**	**Implementation Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
98		0%	Create Implementation Strategy	Wed 10/1/14	Wed 10/1/14				6 h?	1
99		0%	Develop and Communicate Implementation Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
100		0%	Develop, Communicate & Manage Implementation Task List	Wed 10/1/14	Wed 10/1/14				6 h?	1
101		0%	Create and Communicate Implementation CR	Wed 10/1/14	Wed 10/1/14				6 h?	1
102		0%	Complete System Implementation Tasks	Wed 10/1/14	Wed 10/1/14				6 h?	1
103		0%	Milestone: GO/NO GO Decision Received	Wed 10/1/14	Wed 10/1/14				6 h?	1
104		0%	Milestone: Implementation Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
105										
106		**0%**	**Transition and Warranty Team**	**Wed 10/1/14**	**Wed 10/1/14**				**6 h?**	
107		0%	Conduct Knowledge Transfer	Wed 10/1/14	Wed 10/1/14				6 h?	1
108		0%	Provide Warranty Support	Wed 10/1/14	Wed 10/1/14				6 h?	1
109		0%	Communicate Support Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
110		0%	Communicate Transition Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
111		0%	Execute Transition Plan	Wed 10/1/14	Wed 10/1/14				6 h?	1
112		0%	Milestone: Transition and Warrany Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1
113										
114		0%	Milestone: Project Completed	Wed 10/1/14	Wed 10/1/14				6 h?	1

Project: Project Schedule
Date: Wed 9/7/16

Task	External Tasks	Manual Summary Rollup
Critical Task	Project Summary	Manual Summary
Milestone	Group By Summary	Start-only
Summary	Inactive Task	Finish-only
Rolled Up Task	Inactive Milestone	External Tasks
Rolled Up Critical Task	Inactive Milestone	External Milestone
Rolled Up Milestone	Inactive Summary	Progress
Rolled Up Progress	Manual Task	Deadline
Split	Duration-only	

Manitoba Public Insurance

Project Plan

Project Name
Project Number

Highlighted text is included only to provide guidance to the user. Before distributing, please remove all text highlighted in red.

If a section of this template does not apply to a business/project type, mark N/A (not applicable), or delete the section/sub section.

This report has been prepared as advice, opinions, proposals, recommendations, analyses or policy options developed by or for the public body or a minister, as per Section 23(1) of the Freedom of Information and Protection of Privacy Act.

Version:
Date:

Revision History

Ver #	Date	Revised By	Description of Revisions

Superseded Deliverables

This document supersedes the following deliverables:

Document Name	Ver #	Location

Referenced Deliverables

This document references the following documents:

Document Name	Ver #	Location

Stakeholder List

The following list summarizes the individuals and groups identified as stakeholders to this project.

The following list summarizes the individuals and groups identified as stakeholders to this project. These individuals are deemed to be impacted by, or having impact on the project. All will have access to the project information via the project SharePoint site.

Name	Title
	Executive Project Sponsor (VP, Strategy and Innovation & CIO)
	VP Business Owner (VP, Name of the Business Division)
	Executive Director, Corporate Initiatives Sponsor
	Executive Director, Business Transformation Office
	Executive Director, Information Technology
	Executive Director, Enterprise Systems Support
	Director, Project Delivery
	Director, Enterprise Project Management Office
	Director, Corporate Communications
	Chief Technical Architect
	Director, Knowledge Management Services
	Director, Staff Development and Change Services
	Manager, Broker Operations
	Manager, Financial Applications
	Manager, Application Services
	Manager, Custom Applications
	Manager, Production Support (BI, PD & Support Applications)
	Manager, Quality Control and Metrics
	Manager, IT Support and Applications
	Manager, IT Service Desk
	Manager, Vendor Management
	Project Manager, Project Name

Stakeholders and their contact information are available at the project's SharePoint site: See **Stakeholders** under **Lists** at: [**include link to project site**].

Table of Contents

1 INTRODUCTION

The Project Plan is created to ensure that all stakeholders in the project (the Company, team members, and the external resources) have a common understanding of, and agreement with, the scope of the project and the way in which it will be managed.

The plan is intended to:

- Define and establish a common understanding of the scope of the project;
- Define the context within which the project is being undertaken;
- Define the roles and responsibilities of project participants; and
- Establish how the success of the project will be demonstrated / measured.

The Project Plan forms the baseline for the project against which changes can be identified and managed.

2 PROJECT DESCRIPTION

3 PROJECT OBJECTIVES

Objectives

4 PROJECT SCOPE DEFINITION

4.1 Scope of Work to be Provided

The following identifies the work products and services that are planned, in order to satisfy the project objectives.

-
-

4.2 Scope of Work to be Excluded

The following are considerations of scope or objectives to be excluded from the project and/or the deliverables.

-
-

4.3 Related Projects

5 METHODOLOGY AND APPROACH

5.1 Methodology

The MPI Project Management Methodology will be followed through the delivery of the product or service identified in this Project Plan. The EPMO and EPM Toolkit sources will provide the framework for managing the project.

5.2 Approach

5.3 Project Transition

5.4 Project Phases

The following project phases are planned. The end of each phase marks a project milestone and the strategic point where mid-project reviews will be conducted. These reviews may result in adjustments to the project plan and to remaining phases.

1. Requirements Definition
2. Planning
3. Analysis
4. Design
5. Development and Unit Testing
6. System Test
7. Acceptance Test /Quality Assurance
8. Implementation and Deployment
9. Post Implementation

1) Requirements Definition

The Requirements Definition phase is the crucial step of defining and documenting business needs. These high-level components capture the business need. They are translated into detailed requirements, made traceable, and signed off.
When the requirements have been accepted by the business representative(s), this document will serve as the basis for the delivery team's work.

The deliverable from this phase is the Business Requirement document and/or Business Use Cases and supporting diagrams.

2) Planning

In the initial stages of the project, an overall project plan for the project team is created and a project structure is established. Responsibility for the planning portion of this phase lies primarily with the project manager who collaborates with the project team members (Business, Architecture, Technical, Quality & Metrics, Change Management, Knowledge Management Services and Communications).

3) Analysis

The Analysis phase involves the analysis and elaboration of business requirements. Business requirements are reviewed and high-level impacts to the system are determined.

4) Design

The Design Phase includes:

- Create Design Specifications
- Creation of detailed Screen and Report Mock-ups and detailed Program Specifications for the developer.
- Finalize Reference Table values
- Review Design Specifications

Note: Design deliverables will only be created for those components where they are required and appropriate. Work products that require a minimal amount of work (less than 10-days of effort) will not have separate design deliverables developed, however will be identified to ensure all project team members are aware of the deliverable.

A Subject Matter Expert will perform Quality Assurance assessment on each design document as identified in the Quality section. Design specifications must satisfy requirements; meet applicable corporate ctandards, Customer Service Standards and Technical Architecture Standards; and must meet the needs for all affected parties and must be sufficiently complete to advance to the Development Phase. Responsibility for this phase lies primarily with the project team.

5) Development and Unit Test

This phase is responsible for developing/creating/building the components, according to the System Design specifications, and validating each component (or unit). Responsibility lies primarily with the project team with support from required groups. During this phase, planning commences for:

- Training, and Policy & Procedure development (Knowledge Management Services)
- Internal Communication (Staff Development and Change Services)
- External Communication (Corporate Communications)

These plans are executed according to schedule, over the remaining phases of the project.

6) System Test

System testing conducts a test of the integrated system. Its primary focus is to ensure that all known requirements have been satisfied and, where required, all the individual parts work as a whole. System test may be less comprehensive than Acceptance Testing. Responsibility for system test tasks lies primarily with the project team.

7) Acceptance Test/ Quality Assurance

Acceptance testing will involve the integrated testing of all components within the application. The Acceptance Test team will perform test transactions/ functions to confirm that the business requirements have been satisfied.

Acceptance test will be conducted by the Quality Control and Metrics department The project team will be involved in a supporting role.

Acceptance Test is the final quality assurance phase. At the completion of this phase, the deliverable is operation ready, and the business client assumes ownership. No further changes to the product is allowed, without the expressed approval of the Project Acceptor.

8) Implementation and Transition

During this phase, the product is implemented into an operational environment, and is deployed (distributed) internally and if applicable, externally.

The Transition strategy is executed to transfer the product from the project to business operations, when the business takes ownership of the product and its support.

The project teams will co-ordinate, plan and execute implementation of the product or service.

9) Post Implementation Review

A post implementation review of the project will be carried out. Independent project health checks will assess the success of the project, and document important lessons learned. The findings are used to support process improvement for future projects.

Responsibility for the Post Implementation Review lies with the Project Manager with support from the entire project team; and with the Enterprise Project Management Office.

6 DELIVERABLES

The deliverables identified in this section will undergo formal acceptance by the Project Sponsor or delegate. The client representatives may participate in the creation of these deliverables.

The acceptance process will involve distribution of the deliverable, followed by review and revision within a specified time frame. A deliverable will be considered accepted if a formal Sign-off is received during this process or if the acceptance time period expires without written notification indicating otherwise. The Change Control procedure must be followed in order to change these deliverables after they have been accepted.

Deliverables will be approved as defined in the *Deliverable Approval Process* document.

Unless otherwise indicated, the revision/approval process for a deliverable is as follows:

- Delivery of first draft
- Revisions or approval within 5 business days
- Delivery of second draft
- Revisions or approval within 3 business days. Revisions apply only to the second draft.
- Final Version delivered. At this point, the deliverable is considered approved and further changes will require change control.

Formal deliverables are those which require the approval of the Executive Project Sponsor or designate.
The remainder are considered Informal deliverables which are reviewed and approved by the BTO Management Team or designate.

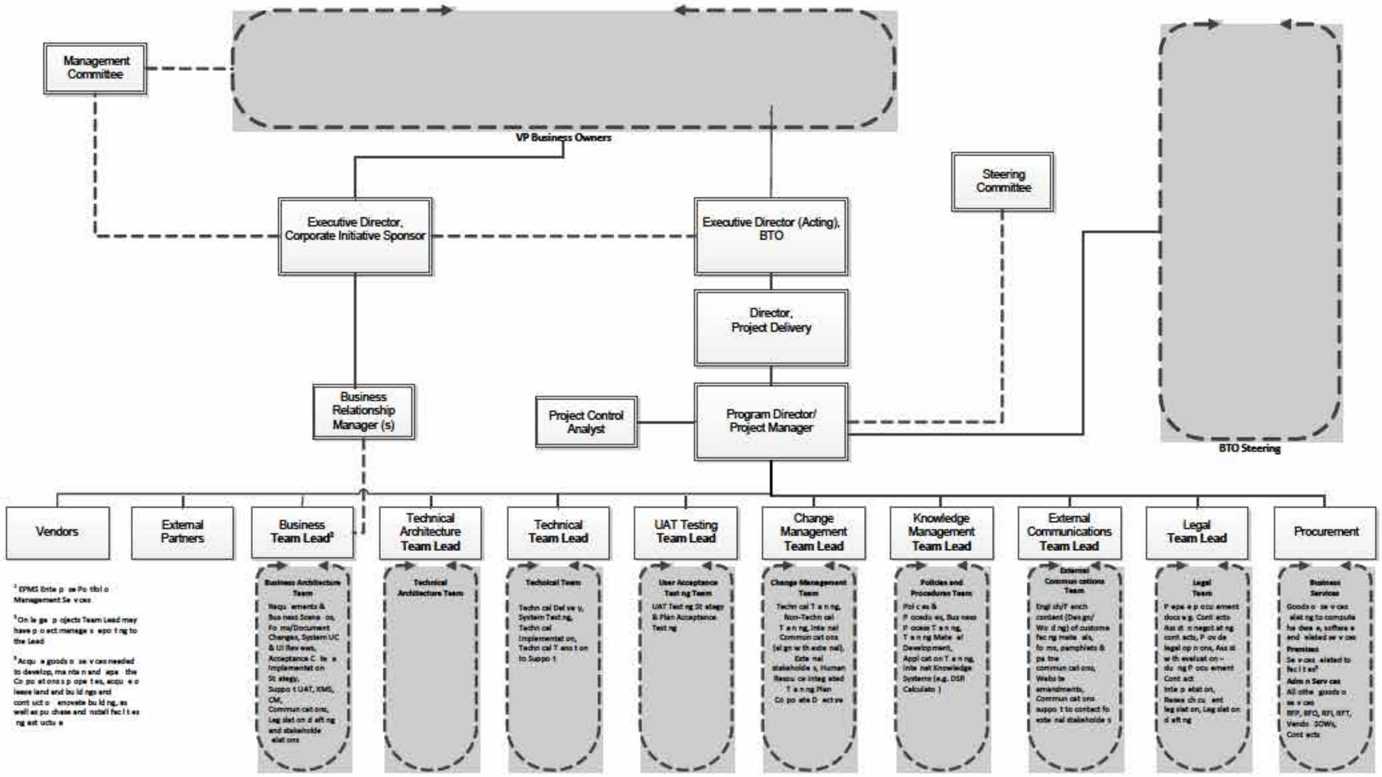
See Appendix A for the complete list of Formal and Informal Project Deliverables.

7 PROJECT ORGANIZATION

The project team structure will consist of individuals from these groups:

The project organization and assigned responsibilities follow:

BTO Program Project Hierarchy



7.1 Project Roles and Responsibilities

The following roles and responsibilities are defined to deliver the scope of work set out in this Project Plan.

Open the *Standard Roles and Responsibilities* at the link below and copy the applicable roles and responsibilities to this section of the Project Plan.

http://intranetportal/pmo/PMO%20Toolkit/2.%20Project%20Planning%20-%20Guides%20and%20Templates/Standard%20Roles%20and%20Responsibilities.docx

8 KEY ASSUMPTIONS

All Assumptions are documented and managed at the project's SharePoint site.
See **Assumption Log** under **the Quick Launch bar at:**

The assumptions made during development of this plan are listed below.

The key assumptions made during development of this plan are listed below.

Assumption #	Assumption Description	Assumption Type	Date Validation Required	Impact (If proven false)	Owner

KEY RISKS

The Risk Management Plan and Risk Register together identify and define the approach for managing risks associated with the project.

Please refer to the *Risk Management Plan* which details the Risk Management approach for the project.

All Risks are documented and managed at the project's SharePoint site.
See **Risk Log** under **the Quick Launch bar at:**

The Risks identified during development of this plan are listed below.

9 PROJECT BUDGET

The number of hours estimated to complete the project work is identified in the chart below. The estimates are based on high level analysis and, if required, are subject to revision via the Change Control process, as the project progresses.

The hours are broken down by components, as follows:

Budget by Project Phase	Effort Hours
Requirements Definition	
Project Management	
Analysis	
Design	
Development	
System Test	
Acceptance Test /Business Quality Assessment	
Training Delivery	
External Communication	
Implementation Deployment and Closeout	
TOTAL	

Budget by Components/Products	Effort Hours
1. New	
2. Appointment Scheduler	
3. Training	
4. Translated Documents	
5. Certified Letters	
6. External Communication	
TOTAL	

10 PROJECT SCHEDULE

The following table represents the major milestones of this project. The Project Manager will track and report on these milestones in a status document.

Major Milestone	Milestone Date	Group Responsible
Project Plan Signed Off		
Analysis Completed		
Design Completed		
Development Completed		
System Test Completed		
Acceptance Test Signed Off		
. . .		
Project Closed		

QUALITY MANAGEMENT

The Quality Management plan focuses on product quality, as well as the processes and practices used to achieve it. Quality Assurance, Quality Control and Quality Improvement tasks are built into the project plan and processes.

Preventative Activities: These are an investment of effort at the start of the project life cycle to help minimize cost and risk. The preventative activities in this plan include:

- Development of a detailed project plan
- Ensuring sufficient time is allocated for all phases of the development life cycle
- Conducting peer reviews with Subject Matter Experts
- Conducting design walkthroughs with the Business Team and gaining approval
- Reviewing all project deliverables for quality assurance

Adequate time is allocated for good communication with all project stakeholders, through:

- Bi-weekly status reports and meetings with project team(s), as required
- Creation of the support Committee
- Establisgment of project repository, which supports stakeholder communication
- Development and production software (versioning)
- A formal project change control/decision control process
- Development of an implementation plan

Acceptance Testing

Acceptance Test is the final quality assurance phase of the project and is conducted by the Quality control and Metrics department. The deliverable, *Go-Live Criteria* is input to the Acceptance Test process. The Criteria must be satisfied by the Acceptance Test, for the project to be accepted.

The Acceptence Test Team Lead is responsible for Acceptance Test planning, on behalf of the various Business areas impacted by the project, and for the execution of that plan.

11.1 Test Execution

Testing is performed at various stages of the project using defined test cases and test data to establish that the expected results are achieved.

The test strategy for the *Project Name* is as follows:

- Component testing for each changed/created work product
- System testing of the integrated system performed by a test team
- Acceptance testing of the integrated system is performed by the client or client representative

Each test will have documented test plans and test cases.

The project's approach to testing is as follows:

Type of Test	Conducted By	Automated or Manual	Automation Product

11.2 Change Control

The Change Control process is intended to ensure that:

a.) quality of the project deliverables are not compromised by change
b.) changes are introduced to the project in a controlled and coordinated manner
c.) changes are assessed and approved by management before being implemented
d.) changes to Business Requirements are managed via the Requirements Change Log (RCL) process

Change Requests (CRs) and Decision Requests (DRs) will be used to document requested changes and decisions throughout the project.
See *Change Request* and *Decision Request* templates in the EPMO Resource Centre.

Change requests may be initiated by any stakeholder and requires approval the Project Manager and the Director of Business Strategy.

Unless a longer turnaround time has been mutually agreed upon, CR's and/or DRs will be responded to within three (3) working days. If a CR is not responded to within the agreed upon time period, it will be deemed to have been rejected. If the CR is reopened after that time period, the impacts must be reassessed.

Decision requests will typically be raised by the Project Manager to document issues requiring a business decision. If a DR is not responded to within the agreed upon time period, the recommendation on the DR will be deemed to have been rejected.

11.3 Quality Improvement

Before the start of the project, the Project Manager will review the lessons learned on a project that is considered comparable to the current one. As part of the Post Implementation Review (PIR), lessons learned on the current project will be documented and recommendations implemented to make quality improvements. Project Lessons Learned should be posted on the MPI Project Lessons Learned site.

12 COMMUNICATION MANAGEMENT

12.1 Status Reporting

The Project Communication plan is intended to provide consistent and timely information to all project stakeholders. This plan will assist the project teams in building an effective communication strategy to enhance communication throughout the project lifecycle.

12.2 Communication Matrix

The Communication Matrix identifies communication among those involved in or impacted by the project.

Type of Information	Description / Purpose	Audience	Frequency	Responsible
Project Start and Completion Forms	Provide a record of when a project begins and ends.	Enterprise Project Management Office	Beginning of the project & Post-implementation	Project Manager
Project Status Report	Report status of the project; also includes Change and Decision Request log for all CRs/DRs related to the project.	Project Stakeholders; EPMO	Bi-Weekly	Project Manager
Steering Committee	Review project progress – completed and near term milestones; project Decisions and Change Requests; discuss Project Risks	Steering Committee members; EPMO	Bi-Weekly	Project Director
Leadership Status Meeting	Address the accomplishments and results of the project with the client (or client representative) at selected milestones in the project. These meetings address commitments, plans, risks, status of activities and issues for the project, as well as how the project fits into the current business environment. Address new requirements that are added, existing requirements that are changed, etc.	Project Acceptor or Client Representative Project Manager Director, Project Delivery (optional)	Weekly – if required Milestone Driven	Project Manager
Project Team Status Meeting	Discuss project activities, progress; also address issues and assumption management. Address new requirements that are added, existing requirements that are changed, etc.	Project team members Event Driven - As Required	Weekly	Project Manager

13 TERMS OF ACCEPTANCE

Acceptance Documents Requiring Signoff

The project acceptance criteria will be set out in the *Go-Live Criteria* document.
The Terms of Acceptance are satisfied when the *Acceptance Test Results Summary* demonstrates that the established acceptance criteria have been met.

The *Go-Live Decision* is based on the above results.

The Go-Live decision is made by the Change Control Board (CCB). Find CCB details at this link:

http://intranetportal/pmo/PMO%20Toolkit/2.%20Project%20Planning%20-%20Guides%20and%20Templates/Change%20Control%20Board%20%20Members.docx

14 APPENDICES

A – Project Deliverables
B – Project Work Breakdown Structure
C – Project Schedule Gantt Chart

Appendix A – Project Deliverables

Add project deliverables here.

Appendix B – Project Work Breakdown Structure

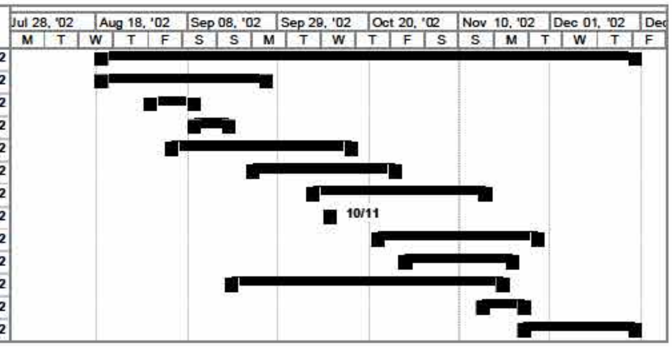
Add Project Work Breakdown Structure (WBS) here

Appendix C – Project Schedule Gantt Chart

Add Project Schedule Gantt chart here.

Eg.

ID	Task Name	Start	Finish
1	**Project A**	08/19/2002	12/20/2002
2	**Planning**	08/19/2002	09/26/2002
9	**8.3 Forms Changes**	08/30/2002	09/09/2002
12	**Debug Changes**	09/09/2002	09/17/2002
14	**8.3 Analysis & Design**	09/04/2002	10/15/2002
20	**8.3 Development**	09/23/2002	10/25/2002
27	**8.3 System Test**	10/07/2002	11/15/2002
38	**8.3 Business Acceptance Test lab completed**	10/11/2002	10/11/2002
40	**8.3 Document Build Procedures**	10/22/2002	11/27/2002
45	**8.3 Acceptance Test**	10/28/2002	11/22/2002
51	**8.3 Plan Implementation**	09/18/2002	11/20/2002
58	**8.3 Execute System Implementation**	11/15/2002	11/25/2002
62	**8.3 Project Closeout**	11/25/2002	12/20/2002



BTO AUTHORIZATION

Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Director, EPMO	**Date:**	
Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Director, EPMS	**Date:**	
Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Corporate System Architect	**Date:**	
Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Director, Project Delivery	**Date:**	

EXECUTIVE AUTHORIZATION

Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Executive Director, BTO	**Date:**	
Name:		**Signature:**	*Approved via SharePoint Workflow*
Role:	Executive Director, Corporate Initiatives Sponsor	**Date:**	
Name:		**Signature:**	
Role:		**Date:**	

Management Committee Approval (If applicable)			
Status: *(Please circle one)*	(A)pproved (R)ejected	**Status:** *(Please circle one)*	(A)pproved (R)ejected
Name:		**Name:**	
Role:	**President and Chief Executive Office**	**Role:**	**VP Business Development, Communications & Chief Product Officer**
Signature:		**Signature:**	
Date:		**Date:**	
Status: *(Please circle one)*	(A)pproved (R)ejected	**Status:** *(Please circle one)*	(A)pproved (R)ejected
Name:		**Name:**	
Role:	**VP Customer Service & Chief Operating Officer**	**Role:**	**VP Business Transformation, Information Technology & Chief Information Officer**
Signature:		**Signature:**	
Date:		**Date:**	
Status: *(Please circle one)*	(A)pproved (R)ejected	**Status:** *(Please circle one)*	(A)pproved (R)ejected
Name:		**Name:**	
Role:	**VP Finance & Chief Financial Officer**	**Role:**	
Signature:		**Signature:**	
Date:		**Date:**	

CAC (MPI) 2-29

Volume:	**CAC (MPI) 1-43**	**Page No.:**	
Topic:	**Volume: II – Information Technology**		
Sub Topic:	**Program Financials - Technology Modernization**		
Issue:	**Detailed Breakdown of Program Financials (ITO Program)**		

Preamble: The Corporation's response to CAC (MPI) 1-43 adequately described in a qualitative manner the overall objectives and benefits realized from the ITO Program.

Question:

In terms of measureable IT value, does MPI have any financial measures that support the realized benefits from the ITO Program? If so, what are these measures?

Rationale for Question:

To understand the benefits estimation and realization processes for a Technology Modernization Program and to ensure that actual and projected costs incurred are necessary and prudent for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

As outlined in the response to *CAC (MPI) 1-43*, the ITO Program was intended to address technology obsolescence. This was a risk based initiative that was undertaken for the reasons detailed in *CAC (MPI) 1-43*. As such, identifying financial measures to justify the ITO Program was not a priority for the project development in 2011.

CAC (MPI) 2-30

Volume:	**CAC (MPI) 1-56**	**Page No.:**	
Topic:	**2015 Compensation Report**		
Sub Topic:			
Issue:	**Special Advisor Positions**		

Preamble: On pages 2, 6, 15 of the 2015 Compensation Report it refers under the Position Title to employees holding the position title of "Special Advisor".

Question:
Please explain the duties Special Advisors perform for MPI, the value they bring to the corporation and how they fit into the corporate organizational structure.

Rationale for Question:
To gain an understanding of the duties special advisors perform for MPI and the value they add to the corporation on a "one time" or continuous basis, to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14.

RESPONSE:
The Special Advisor role(s) is a highly complex role requiring comprehensive business and/or technical knowledge. These roles are held by long service employees who bring extensive job knowledge in particular areas of the business.

These positions generally work alongside executive or very senior-level management to develop, implement, and administer directional, strategic, and large-scale business plans/projects. These roles are required to effectively interact on a cross-divisional basis and with executive/senior management on divisional strategic planning activities and conduct market research, strategy development, and valuation assessments post-implementation for corporate and divisional projects.

CAC (MPI) 2-31

Volume:	**CAC (MPI) 1-56 and CAC (MPI) 100**	**Page No.:**	
Topic:	**2015 Compensation Report**		
Sub Topic:			
Issue:	**Investment Department Staff Salaries**		

Preamble: On page 1 of CAC (MPI) 100 a) the Corporation states in the response "The Investment Committee of the Board has 3 members, two CFAs and one CPA with investment fund experience. The Investment Department includes four individuals who are all CFA charterholders." In the 2015 Compensation Report in CAC (MPI) 1-56 the salaries of the four individuals are reported as follows by position:

Manager, Investments	$109,661
Sr. Investment Analyst	$55,413
Sr. Investment Analyst	$80,071
Sr. Investment Forecasting Specialist	$94,426

Question:

a) Please describe each individual investment professional's duties relative to adding value to MPI's investment portfolio design and performance.

b) Please elaborate on whether MPI's investment professional's salaries are commensurate with CFA charterholders in the insurance industry.

Rationale for Question:

To gain an understanding of the work performed by MPI's investment professionals in adding value to MPI's investment portfolio, as investment income is a key component in rate stability for basic insurance. Also for ensuring that actual and projected costs incurred are necessary and prudent for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The Investment Department is responsible for conducting research to assist the Investment Committee and the Minister of Finance with making strategic and policy level decisions. The following is a list of the major responsibilities of the Investment Department:

- Providing advice and recommendations on all investment related matters within the guidelines of the Investment Policy Statement.

- Monitoring the performance and risk of the external asset managers as well as their compliance with the Investment Policy Statement, and other Investment Committee Working Group (ICWG) policies such as the Asset Liability Management Policy and reports their compliance to the ICWG and Investment Committee.

- Working with external consultants in conducting manager searches and asset-liability management studies as necessary.

- Involvement with hiring or terminating the external managers and the implementation of investing funds with external managers in approved asset classes such as infrastructure.

- Conducts extensive work to support the General Rate Application (GRA) process by assisting with forecasting Investment Income and all of its sub-components including interest rate forecasting. This work is summarized in the 2017 GRA Investment Income Document.

b) The Canadian Chartered Financial Analyst (CFA) Societies published a compensation survey of its members in August 2015. The results show that for CFA Charterholders in Winnipeg the median salary is $128,993. The Corporation conducts regular salary reviews to ensure that salaries are commensurate with other local employers. CFA charterholders are paid a wide range of salaries based on their roles and responsibilities; the Corporation feels that the salaries paid to its investment professionals are reasonable.

CAC (MPI) 2-32

Volume:	**CAC (MPI) 1-60**	**Page No.:**	
Topic:	**Disposals of Property and Equipment**		
Sub Topic:			
Issue:	**Annual Reconciliations**		

Preamble: In the response to CAC (MPI) 1-60 the Corporation states "The significant disposals of furniture and equipment in 2015/16 were the result of an operational reconciliation activity between MPI accounting records and related physical inventories."

Question:

a) Please file a copy of the capitalization policy approved by the Board of Directors.

b) Please explain whether MPI performs a physical inventory count of furniture and equipment on an annual basis or on an "ad-hoc" basis. Please elaborate on the response.

c) Please describe the control process in place to provide a clear understanding of the accounting for furniture and equipment.

Rationale for Question:

To gain an understanding of the internal controls in place to ensure that furniture and equipment are accounted for accurately, as furniture and equipment is a significant operating expense over time and impacts basic rates. Also, to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14.

RESPONSE:

a) Please see attached.

b) The Corporation performs physical inventory counts on an ad-hoc basis.

c) The impact of the disposal of the mentioned furniture and equipment was immaterial. The net impact of the disposals was less than $200,000.

AGENDA E

SUBMISSION TO THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS OF MANITOBA PUBLIC INSURANCE

SUBJECT: Policy for Capitalization of Assets

RECOMMENDATION: That the members approve the updated policy for capitalization of assets effective March 1, 2009 as follows:

- Furniture and Equipment will be recorded as a capital asset if the cost of the individual asset (including taxes) equals or exceeds $5,000.
- Computer equipment including monitors, CPU's, servers, memory, laptops, fax machines, printers, etc. will be recorded as a capital asset if the cost of the individual asset (including taxes) equals or exceeds $5,000.
- Land, Land Improvements, Buildings, Leasehold Improvements, Vehicles and Systems Furniture will be recorded as capital assets.

This change in policy will be applied on purchases made effective March 1, 2009.

BACKGROUND: The current policy for capitalizing assets has been in place since November 1, 1998. The following items fall within this policy:

- Furniture and Equipment will be recorded as a capital asset if the cost (including taxes) equals or exceeds $500.
- Data Processing Equipment (now referred to as Computer Equipment) such as monitors, CPU's and server upgrades will be recorded as capital assets. All other data processing equipment will be recorded as a capital asset if the cost (including taxes) equals or exceeds $500.
- Land, Land Improvements, Buildings, Leasehold Improvements, Vehicles and Systems Furniture will be recorded as capital assets.

The policy for capitalization of assets requires updating for the following reasons:

- In comparison with similar organizations, MPI's current materiality level is significantly lower that the majority of these organizations.
- A significant portion of furniture and equipment, computer equipment and systems furniture are what would now be considered, low value items.
- Using a defined dollar amount is:
  - Objective
  - Determinable
  - Definite
  - Not subject to opinion or interpretation.
- Using a dollar amount that is not material (i.e. $5,000) is in accordance with Canadian Generally Accepted Accounting Principles and International Financial Reporting Standards.

The following proposed updated policy for capitalization of assets is intended to eliminate relatively low value items from being administered in the asset management ledger.

- Furniture and Equipment will be recorded as a capital asset if the cost of the individual asset (including taxes) equals or exceeds $5,000.
- Computer equipment including monitors, CPU's, servers, memory, laptops, fax machines, printers, etc. will be recorded as a capital asset if the cost of the individual asset (including taxes) equals or exceeds $5,000.
- Land, Land Improvements, Buildings, Leasehold Improvements, Vehicles and Systems Furniture will be recorded as capital assets.

IMPACT:

The following items will be expensed, effective March 1, 2009, under the updated policy for capitalization of assets:

- Desktop & laptop computers
- Most printers, fax machines & scanners
- Computer storage & cables
- Bookcases, tables & chairs
- Fridges, microwaves & snowblowers.

The updated policy will have no impact on Land, Land Improvements, Buildings, Leasehold Improvements, Vehicles and Systems Furniture.

Based on items purchased between March 1, 2009 and December 31, 2009 valued at less than $5,000 that would be expensed in the 2009/10 fiscal year are:

- Computer equipment - $1,119,314
- Furniture & equipment - $227,230.

The final total for the 2009/10 adjustment will be determined at the end of the fiscal year. The average for the items purchased for the three years 2006/07 to 2008/09 that are valued at less than $5,000 are $1.7 million for computers and $340,000 for furniture and equipment.

CAC (MPI) 2-33

Volume:	**CAC (MPI) 1-63**	**Page No.:**	
Topic:	**Expenses**		
Sub Topic:	**Financial Re-engineering initiative**		
Issue:	**Filing of Charter**		

Preamble: In the response to CAC (MPI) 1-63 the Corporation indicates that the Charter for the financial re-engineering initiative will be filed.

Question:

Please provide the date when the Charter for the financial re-engineering initiative will be filed.

Rationale for Question:

To confirm the date that the Charter will be filed, presumably before the Hearing starts.

RESPONSE:

Please see the Attachment; Program Charter: Finance Re-engineering Project (FRE).

Program Charter

Finance Re-Engineering Project (FRE) Number - 2593

Version: 1.0
Date:June 14, 2016

Table of Contents

1 INTRODUCTION

This Project Charter summarizes the business and management aspects of the Finance Re-Engineering Project (aka FRE). When signed by the sponsor(s), this charter serves as an agreement between the business and the project groups, formally authorizes the existence of the project, and gives authorization for the Program/Project Manager to engage resources in the planning and execution of the project activities, based on the conditions established.

2 PROJECT PURPOSE (WHY)

The Finance Division Review highlighted the role of Finance to provide leadership in enabling analytics and strategic decision support throughout MPI. In response to the business' expectations, the Finance Division leadership team has established a Vision to transform its role:

"Be a catalyst for corporate performance by proactively partnering with the business to drive decision making through accurate information, analysis and insight."

Business Partner: Finance will become an active Business Partner by working collaboratively with departments and improving communication. It must improve its relationships by maintaining clear ownership of its interactions with the Business.

One Source of the Truth: The Finance Division should be the key provider of analytical information, explain relevancy, discover trends, and work to drive MPI to anticipate issues and mitigate risk. This requires accurate reporting and complete data, driving the agenda for analytics at MPI, and ultimately creating value in the strategic planning process.

Drive value management: Finance should be a 'performance accelerator' and drive accountability for delivering on MPI strategic objectives. Finance needs to continue improving value management and influencing the PUB agenda, as well as provide guidance to drive profitable growth by improving Enterprise Risk Management.

Foundational capabilities: Key capabilities, like overall financial literacy, need improvement. Improved processes through automation and controls will reduce the reliance on manual processes and use of spreadsheets, allowing focus to shift to providing insight and analysis. With this vision and strategy in mind, the FRE program will deliver changes over the next 3 years to Finance processes and systems using a phased approach.

There is a significant project dependency on the Infor Upgrade Project. The scope and timing of the two projects must be managed carefully.

3 PROJECT OBJECTIVES (WHAT)

The objectives of the Finance Re-Engineering Project are:

Strategic

- Provide timely access to accurate financial information
- Increase efficiency and effectiveness of financial processes and system integration
- Provide appropriate support to other Divisions within the Corporation to guide decision making

Tactical (Support the Strategic Objectives)

In order to achieve the strategic objectives, several software acquisitions are required:

- Close and Reconciliation
- Travel and Expense
- Requisition Centre
- Contract Management
- Supplier Relationship Management
- Procurement Punch-out
- Strategic Sourcing
- Dynamic Enterprise Performance Management (dEPM)

In the interests of starting the FRE project as soon as possible, FRE Upgrade work will begin to be performed concurrently with the Infor Upgrade project.

4 PROJECT SCOPE

4.1 Scope of Work (Inclusions)

The project delivery approach is to segment the project into 3 phases. The charter identifies the scope breakdown between all three phases, and provides additional detail for the first phase. It is anticipated the charter will be updated with phase 2 details towards the end of phase 1 and similarly for phase 3 details towards the end of phase 2.

Phase 1: FRE Upgrade (Concurrently Worked on with Infor Upgrade)

Phase 1, to be primarily executed in fiscal 2016/2017 may overlap into 2017/2018 depending upon resource constraints and the delivery of the Infor Upgrade. Originally proposed to be included as part of the Infor Upgrade project these tasks and improvements were de-scoped from the Infor Upgrade and will be managed and delivered separately from the Infor Upgrade project. Where it make sense Change Requests would be issued to move implementation of the below into the Infor Upgrade Project delivery.

1. **Implement Close and Reconciliation Software –** The software has been authorized to purchase and install in the Infor Upgrade system integration testing (SIT) environment but not enabled in a production sense.

   A key component of the FRE Project, the Close and Reconciliation solution:

   - Achieves a quicker and more accurate close by automating traditional manual, labor-intensive Access database and spreadsheet driven account reconciliation processes while delivering metrics for analysis and continuous process improvement.
   - May require consulting and/or training from Infor

2. **Travel and Expense Requirements Definition and RFP**

   - Prepare an RFP and select a Travel & Expense application/solution provider (to be implemented in Phase 2)
   - Target Infor, Concur (an SAP company) and place the RFP on Merx

3. **Discovery of Multi/Strategic Ledger**

   - Requires engaging an Infor consultant for advice (SOW approved and specific Infor consultant reserved)
   - Requires the S3 component of the Infor Upgrade SIT environment to be available – Scheduled to be available for this purpose May 30th, 2016
   - Analyze the requirements for Multi/Strategic ledger
   - Operationalize after the Infor Upgrade is delivered and stabilized (timing dependent upon advice from Infor)

4. Finance Reporting

- Look for opportunities to improve and leverage automation
- Rolling out a reporting solution to create and distribute reports electronically
    - Leverage Finance dashboards to include KPI's, trending and exception reporting
    - Decisions made in the Infor Upgrade with respect to IBI version and strategy, use of Ming.le and Smart Office will be analyzed

5. Scanning contracts

- The technical approach to scanning of blanket PO's and contracts will be investigated & recommended solution delivered
- Investigate the synergy with the solution used by Legal – it would be desirable to only scan a document once if it was relevant to both Legal and Finance

6. Interfaces and Automations

- Interface to update foreign exchange rate daily
- Process automation
    - Approvals within Finance
    - Auto schedule of accounts payable batches
    - Infor Process Automation (IPA) training scheduled in the Infor Upgrade project

7. Removing the reliance on some access databases

- Eliminate some multi-step jobs, where Access databases are used as an intermediate step to facilitate the upload of information to Infor/Lawson

Phase 2: Implement Travel & Expense and Procure to Pay Wave 1

1. Travel & Expense

- Implementation
    - Automate end to end process for expense claims, including travel, employee expenses, education, i.e. submission, approval, payment, reporting
    - Roll out enterprise wide

2. Procure to Pay (P2P) Wave 1

- Purchase & Implement
    - Requisition Centre & Enable self service requisitioning
    - Contract Management to replace reliance on spreadsheets
    - Supplier Relationship Manager to provide vendor reporting and metrics
    - Procurement Punch-Out to facilitate ordering of supplies from external vendors

- Implement
    - Common purchasing platform through the implementation of P2P Wave 1
    - P2P dashboard improving visibility into procurement processes and results
    - Project Accounting to eliminate reliance on spreadsheets and facilitate synergies between the Business Transformation Office and Finance
    - Scanning and storage solution to reduce paper storage and facilitate electronic retrieval

Phase 3: P2P Wave 2 and Enterprise Planning

1. **P2P Wave 2**
    - Purchase & Implement
        - Strategic Sourcing to support cost containment and vendor negotiations (on-line)

    - Implement
        - Continue the centralization of purchasing and corporate contract management
        - Single vendor profile, scorecard and relationship management

2. **Enterprise Planning**
    - Purchase & Implement
        - d/EPM - a web enabled/advanced budget and forecast tool to support the alignment of planning, budgeting and forecasting processes with corporate strategic goals and initiatives

4.2 Out of Scope (Exclusions)

The items, requirements, services, and/or goals listed below are explicitly outside the scope of this project

1. HRMS Phases 3-4
2. Learning Management System (LMS)

The below Short Term items will be 100% managed and funded by Finance, outside of the FRE Project, and anticipated to be completed no later than February 28, 2017

3. SHORT TERM - Operational improvements within the Finance department viewed as quick wins. The following are the specific items:

    Auto replenishment of inventory
    - Set re-order points on various items (supplies) to trigger automatic creation of Requisition for approval.
    - Need to set the Reorder Policy (to Fixed Order Point), Set Reorder Point Code (to Fixed or Variable) and set Reorder Quantity (to X) by item.

    Document approval hierarchies (within A/R, A/P, etc.)
    - Document existing manual approval requirements within S3 processes

    Budget controls
    - Enable commitment control fields within S3 to prevent spending over GL budget (compares RQ,PO,AP, GL to budget and prevents transaction from proceeding until corrected)
    - To enable, we need to define the budget as Commitment Budget = Y (currently N) and set the budget option for budget edit to Y at the account level.
    - Creates encumbrance and commitment records for reporting against budget.

    Allocations
    - Breaking down the allocations to products and lines of business at a detailed level
    - Change the option from Summary to Detail where necessary to support detailed analysis and reporting. Eliminate reliance on Excel allocation simulation
    - This does not change the outcome of the allocation process, it allows us to leverage the delivered functionality to post the detail
    - Restrict allocation accounts in GL to allow system code CA (Cost Allocation) system posting only.

Inventory of Reporting

- Document existing reporting used and provided by Finance – both within and external to Finance
- Document requirements to support above reporting.

4.3 Related deliverables

1. Infor Upgrade
2. Culture Change
    - Changes to corporate culture and engagement are necessary in order to support the implementation of the corporation's vision for Finance

4.4 High Level Deliverables

The deliverables identified in this section are subject to refinement. These and other project related deliverables will be identified in the project plan and will undergo formal review and signoff by the deliverable approvers as defined in the project deliverable log.

The overall Finance Re-Engineering project is being delivered in three phases over a 3+ year period. Specific deliverables for Phases 2 and 3 will be further identified before the start of subsequent phases and specified for the content of that phase.

1. Vision Document
2. Project plan
3. High Level Schedule
4. Threat Risk Assessment (TRA)
5. Business Requirements Documents
6. Architecture Definition
7. FRE SIT Environment
8. RFP for Travel and Expense
9. Purchase orders
    a. Phase 1
        - Close and Reconciliation – purchase completed as of April 29, 2016
    b. Phase 2 & 3
        - A Travel and Expense solution
        - Requisition Centre
        - Contract Management
        - Supplier Relationship Manager
        - Procurement Punch-Out
        - Strategic Sourcing
        - d/EPM
10. Creation and updates to business processes and specifications
11. UAT Test Strategy
12. Test Plan

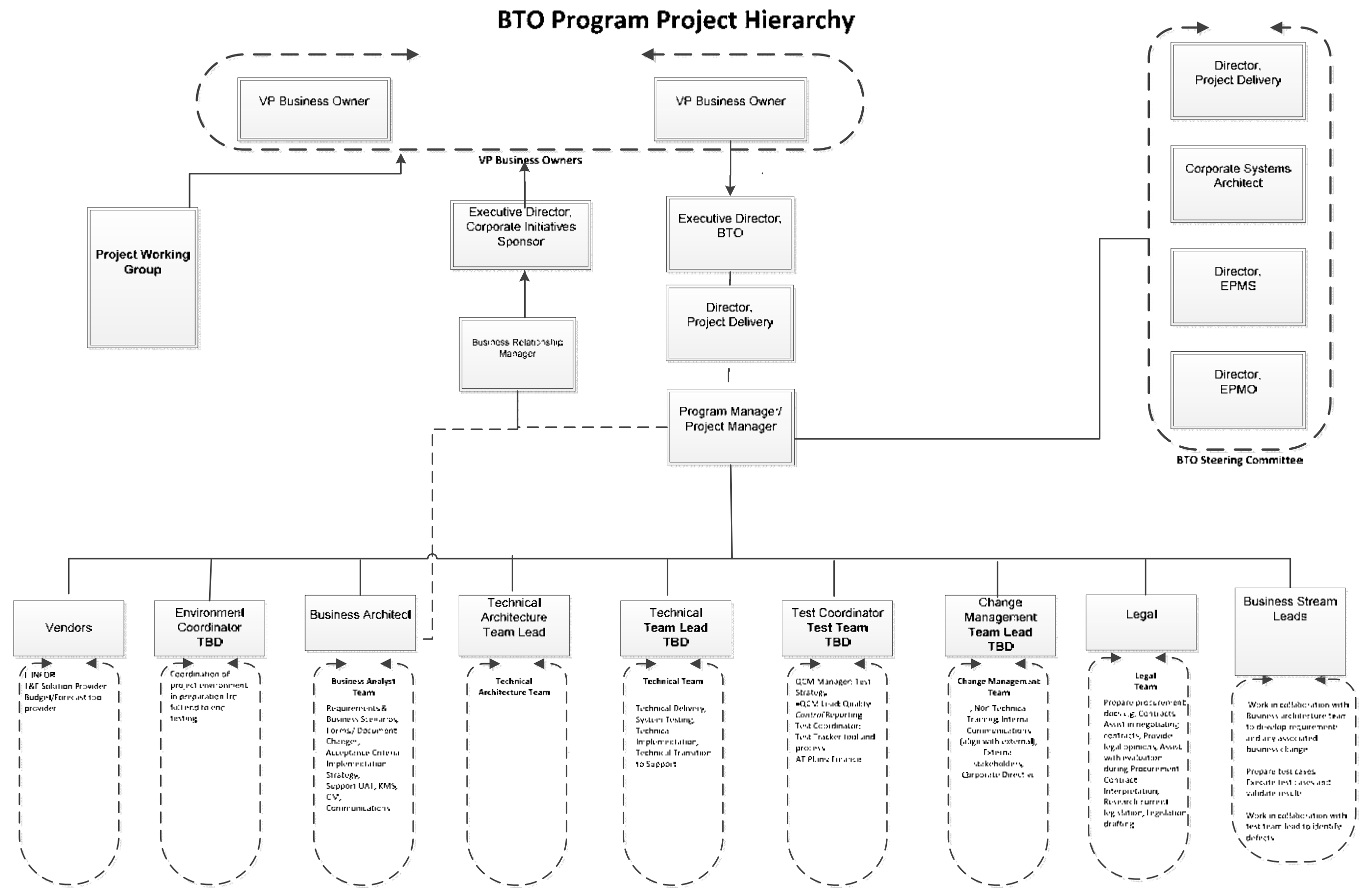
13. FRE UAT Environment
14. UAT results
15. Change Management Strategy and plan
16. Communications Strategy, plan and content
17. Support Model Strategy (if applicable)
18. Implementation Strategy with go-live criteria
19. Document new Policies, Procedures and Training
20. Update existing Operational and Support Model materials (if applicable)
21. Go Live decision
22. Production environment with updated software
23. Production Support environment with updated software
24. Updated Data Masking with net new PII fields
25. Updated Regression Test scripts for net new or modified functionality

5 PROJECT STRATEGY (HOW)

Throughout the delivery of the product(s) or service(s) described in this Charter, the Program/Project Manager will use the MPI Enterprise Project Management Methodology and EPMO Toolkit to provide the framework for managing the project.

6 PROJECT ORGANIZATION (WHO)

The project team structure is captured in the following chart.



6.1 VP Stakeholders

TITLE
VP Business Owner (VP, Finance & CFO)
VP Business Owner (VP, IT, Business Transformation & CIO)

6.2 External Organizations Involved in Project Execution

Organization	Role
Infor Consulting	Provide training and knowledge transfer on Infor applications within the context of MPI's business model and culture
Infor Suite Implementer (Vendor is TBD)	Assist/drive implementation of Infor modules not currently owned or in use
Travel and Expense solution provider	Provide training and knowledge transfer on T&E application within the context of MPI's business model and culture

7 THREE YEAR PROJECT BUDGET (HOW MUCH)

The following represents the expected project expenditure over three years. Forecasts will be updated throughout the project against both the yearly and overall budget.

	Cost
External Labour	5,009,000
Professional Services	2,860,000
Training	386,000
Travel and Expenses	1,180,000
Software	842,000
IBM Data Centre	103,000
Contingency	2,327,000
Total Deferred Development	**$12,707,000**
Internal Staffing	384,000
Internal Backfilling	869,000
Total Project Costs	**$13,960,000**

The budgeted amount represented is a rough estimate that was derived through the "Project Intake Process." A structured approach was performed during the planning stage of the project.

Total budget will be managed over the 3 years.

8 KNOWN PROJECT CONSTRAINTS

8.1 Assumptions

- Production data will be used in the FRE SIT environment and masked data used when testing integration with AOL, CARS, etc.
  - It is the project's responsibility to update any net new PII data as result of implementing
  - Corrections of the known outstanding defects in the data masking scripts identified by Finance will be resolved duringthe Infor Upgrade project
- The documentation of changes to processes within the Finance Short Term stream will be consistent with the methods currently used with the level of detail and content accepted as adequate by PWC during the external audits
- Testing effort will leverage Unified Functional Testing (UFT) - MPI's automated testing tool
- In P2P Wave 1, manual conversions of projects and historical information will be maintained within existing excel spreadsheets and databases
- "Short Term" tasks required for the Project must be completed before the end of Phase 1
- Effort by Infor Upgrade allocated resources on FRE project work will be charged to the FRE project (e.g. creation of FRE SIT)
- Software that is already part of our inventory will be extended to Finance as follows:
  - IBI (Infor Business Intelligence)– pending decision in the Infor Upgrade project on platform
  - IPA (Infor Process Automation) – training required
- Training / Advice on the use and optimization of Close & Rec will likely be required
- The RFP for Travel & Expense will be put on Merx as well as sent to both Infor and Concur
- Throughout the three years of the project there will be an ongoing effort to improve automation and integration

8.2 Constraints

Change Management

- Successful implementation of the project relies on an adjacent culture shift towards individual accountability and an understanding that "front-end" effort (training and configuration) will be offset by a greater reduction in "back-end" effort going forward. Clarity regarding project timelines, technological changes, and new expectations, will be necessary in order to mitigate the perception of "change overload."

FTE Considerations

- A substantial dependency is the adequate restructuring of roles and shifts in an effort to fulfil the requirements of the new processes. In some cases this will require the use of backfill and reliance on internal staff, and in many cases this will require upgrading current resources competencies and skills. Training and education will be instrumental. If internal resources do not have the required competencies, external recruitment can be considered.

Integrated Cross Functional Collaboration

- With the shift in roles and responsibilities comes the necessity that a serious effort be put into more functional collaboration between departments. The success of the project depends on paying special attention to where activities need to be focused on changes in departmental sharing of information and responsibilities.

Technology

- The transitions outlined are highly dependent on the implementation of improved technology and processes. Adequate technology is a key solution to many of the business requirements and is particularly necessary to implement changes in workflow, data management, and inter-departmental collaboration. Some of these enhancements require the purchase of additional software.

Project Delivery – Resources

- Some technical work required for the FRE Upgrade improvements (e.g. synchronization of SIT and UAT environments) will be performed by staff allocated to the Infor Upgrade team, where it makes sense.

8.3 Dependencies

- The Infor Upgrade project
  - Some of the Finance Re-Engineering Upgrade targeted improvements require the use of a copy of the Gold Infor Upgrade S3 SIT environment as the basis for an S3 FRE Product Line
  - There will be concurrent analysis and configuration work performed on the Infor Upgrade and FRE Upgrade Phase 1 resulting in the need for synchronization between the Infor Upgrade SIT and UAT environments and the FRE SIT and UAT enviroments

8.4 Risks

- Resource constraints - should resource constraints develop between the Infor Upgrade and the FRE Upgrade they will be resolved / mitigated accordingly minimizing the impact to the Infor Upgrade Project
- The need to continuously synchronize the test environments

- Delays in the Infor Upgrade Project schedule
- Timing of the implementations required by external factors (production code release windows, finance resource availability, software constraints where timing of the implementation is critical, etc.)
- Changes may not be readily accepted as part of the culture shift within the department and organizationally as well
- Infor relationship maintenance throughout the project

9 Communications Management

The Project Communication plan is intended to provide consistent and timely information to all project stakeholders. This plan will assist the project teams in building an effective communication strategy to enhance communication throughout the project lifecycle and will be discussed in greater detail within the Project Plan.

9.1 Communication Matrix

The Communication Matrix identifies communication among those involved in or impacted by the project.

Type of Information	Description / Purpose	Audience	Frequency	Responsible
Project Start and Completion Forms	Provide a record of when a project begins and ends.	Enterprise Project Management Office	Beginning of the project & Post-implementation	Program Manager
Project Status Report	Report status of the project; also includes Change and Decision Request log for all CRs/DRs related to the project.	Project Stakeholders; EPMO	Bi-Weekly	Program Manager
Steering Committee	Review project progress, project gates completed and near term milestones; project Decisions and Change Requests; discuss Project Risks	Steering Committee members; EPMO	Bi-Weekly	Project Director
Leadership Status Meeting	Address the accomplishments and results of the project with the client (or client representative) at selected milestones in the project. These meetings address commitments, plans, risks, status of activities and issues for the project, as well as how the project fits into the current business environment. Address new requirements that are added, existing requirements that are	BRM and Business Lead Program/Project Manager Director, Project Delivery (optional)	Weekly – if required Milestone Driven	Program/Project Manager

	changed.			
Project Team Status Meeting	Discuss project activities, progress; also address issues and assumption management. Address new requirements that are added, existing requirements that are changed, etc.	Project Team Members Event Driven - As Required	Weekly	Program Manager
BTO weekly and Monthly project portfolio reporting	Report status of the project; also includes Change and Decision Request for all CRs/DRs related to the project.	Senior Management Team	Weekly / Monthly	Director of Project Delivery
Project Forecasting	Provide monthly financial forecasts as required by EPMS	Project Stakeholders EPMS	Monthly	Program Manager

NOTE: A review with the BRM will be conducted in advance of providng project communications to BTO Executives or External Stakeholders

BTO AUTHORIZATION

		Signature:	*Approved via SharePoint Workflow*
Role:	Director, EPMO	**Date:**	
		Signature:	*Approved via SharePoint Workflow*
Role:	Director, EPMS	**Date:**	
		Signature:	*Approved via SharePoint Workflow*
Role:	Corporate System Architect	**Date:**	
		Signature:	*Approved via SharePoint Workflow*
Role:	Director, Project Delivery	**Date:**	

EXECUTIVE AUTHORIZATION

		Signature:	*Approved via SharePoint Workflow*
Role:	Executive Director, Finance & Corporate Controller	**Date:**	
		Signature:	*Approved via SharePoint Workflow*
Role:	Executive Director, BTO	**Date:**	
		Signature:	*Approved via SharePoint Workflow*
Role:	Executive Director, Corporate Initiatives Sponsor	**Date:**	

Executive Sponsor Approval

Status:	(A)pproved	**Status:**	(A)pproved
Role:	**VP Finance & Chief Financial Officer**	**Role:**	**VP Business Transformation, Information Technology & Chief Information Officer**
Signature:	**Approval provided via Email**	**Signature:**	**Approval provided via Email**
Date:	**August 27, 2016**	**Date:**	**August 27, 2016**

CAC (MPI) 2-34

Volume:	**CAC (MPI) 1-65 and 1-67**	**Page No.:**	
Topic:	**Volume III – AI.6 Annual Reports - Part 3 Corporate Strategic Plan 2016-2020**		
Sub Topic:	**Increasing Revenue Within Acceptable Investment Risk Profiles**		
Issue:	**Further Definitions**		

Preamble: "Return" and "risk" are measured in AON's Asset-Liability Study on an "accounting" basis:

- "Net income", on the return (Y) axis
- "Average annual volatility of retained earnings", on the risk (X) axis.

MPI's long-term portfolio decisions (e.g., asset mix) are influenced by these return/risk accounting-based metrics. These accounting metrics for return/risk may differ (materially) from return/risk metrics that are "market-based" (i.e., asset and liability valuations, including their recognition in "income", differ).

- "Net income" for accounting purposes excludes unrealized items arising from changes in the market value of some assets and the liabilities.

- As stated in Note 21 of MPI's financial statements:
    - "AOCI reflects the net unrealized gain or loss on financial assets classified as AFS and net actuarial gain (loss) on employee future benefits."

    - Items that will not be reclassified to income (i.e., "net income") include "remeasurement of employee future benefits".

Comprehensive income = net income + OCI.

Portfolio managers (and risk managers) in the investment industry would generally agree that market values (rather than accounting or book values) are more relevant metrics for making investment decisions, which is why portfolio/risk managers make various adjustments to net income to meet different needs.

While we understand that MPI is required to "break-even", it is unclear whether the calculation of "break-even" must be based on a prescribed definition of "income" (e.g., "net income" which excludes OCI, as distinct from "comprehensive income" which includes OCI), or whether MPI has elected "net income" as the basis for measuring "break-even".

It is also unclear whether "breaking-even" must be interpreted in an income sense, or whether it could be interpreted in a funding or cash flow sense.

MPI's response to CAC (MPI) 1-67 appears to contradict its responses to 1-68 and 1-73 in relation to the inclusion or exclusion of AOCI in retained earnings in defining risk (X axis) in the Asset-Liability Study.

- In 1-67, MPI said "'net income' in the Asset-Liability Study excludes Other Comprehensive Income (OCI). In relation to the Risk section … <u>Accumulated OCI was included in Retained Earnings in the definition of 'risk'</u> for purposes of the Asset-Liability Study."

- In 1-68, MPI said "<u>Retained earnings in the Asset-Liability Study excludes Accumulated OCI.</u>"

- In 1-73, MPI said "'return' and 'risk' metrics in the Asset-Liability Study reflect the accounting definitions for 'net income' and 'retained earnings' (i.e., they exclude Other Comprehensive Income (OCI) and Accumulated Other Comprehensive Income (AOCI) in 'return' and 'risk' respectively)".

In the response to CAC (MPI) 1-71, MPI said "it is only the remeasurement of the employee future benefits that is put to … OCI … other items relating to employee future benefits is expensed to net income".

MPI's responses to CAC (MPI) 1-72 e) appears to contradict its response to 1-72 f):

- In 1-72 e), MPI agreed that the "'actual' market risks arising from MPI's liabilities do not depend on how those liabilities are valued (by either accountants or actuaries)".

- In 1-72 f), MPI said "The Corporation agrees that inherent market risks arising from liabilities can be changed by changing the nature of cash flows underlying the liabilities. However, <u>such change can also occur by the adoption of a different 'valuation' methodology</u>. E.g. If the 'valuation' methodology required the use of a risk-free interest rate to discount the liabilities, then the inherent market risk would be reduced. However, the tradeoff is that MPI would have to hold a higher amount of liabilities. As stated in the responses above, the Corporation's current 'valuation' methodology is in adherence to IFRS and is in accordance with current accepted actuarial practice".

For purposes of this question, these definitions are used.

Inherent risk: the "true" market risk of an asset or liability

Valuation methodology: the method, excluding the assumptions used to implement the method, to value assets or liabilities for one or more purposes (e.g., discounted cash flow or present value methodology)

Assumptions: the inputs used in a valuation

Value: the quantitative assessment of an asset or liability based on the application of a valuation methodology and related assumptions (e.g., book value, accounting value, actuarial value, market value)

Risk-free rate: a term used by MPI in response to a Round 1 question; not a term to be used in responses to questions below, unless "risk-free rate" is clearly defined by MPI and distinguished from other "rates"

Market interest rate: a rate used to value an asset or liability based on an assessment of the inherent market risk of a security and/or its underlying cash flows

Question:

a) Would MPI agree that “comprehensive income” (i.e., including OCI) has more volatility than “net income” (i.e., excluding OCI), as these terms are currently defined and used by MPI?

b) Would MPI agree that “total equity” (i.e., including AOCI) has more volatility than “retained earnings” (i.e., excluding AOCI), as these terms are currently defined and used by MPI?

c) Is there a requirement (e.g., legislation/regulation or otherwise), as distinct from an MPI “election” or choice, that requires MPI to use “net income” and/or “retained earnings” (excluding AOCI), rather than “comprehensive income” (including OCI) or “total equity” (including AOCI), respectively, in:

   i. “break-even” calculations?
   ii. how return and/or risk are defined in Asset-Liability Studies?
   iii. RSR calculations?
   iv. other calculations?

d) Is the requirement to “break-even” rooted in Section 18 of the MPIC Act, which says “The corporation shall establish and maintain reserves in such amounts that, at all times, it has sufficient funds to meet all the payments as may become payable under this Act and regulations”?

   i. If so, isn’t this “break-even” requirement a constraint regarding “funding” (cash flow or liquidity risk management) rather than “income”, which is not the same as “cash flow” or “funding” as commonly understood?

   ii. If not, what is the specific legislation/regulation that requires “net income” to be used as the basis for measuring “break-even”?

e) Using the terms defined in the preamble, please clarify certain responses from Round 1 IRs:

i. Does the <u>market value</u> of MPI’s <u>liabilities</u> depend on the principles, valuation methodologies, assumptions and/or values developed by accountants under GAAP? If so, please describe how.

ii. Does the <u>market risk</u> (e.g., volatility or other appropriate market risk metric) of MPI’s <u>liabilities</u> depend on the principles, valuation methodologies, assumptions and/or values developed by actuaries? If so, please describe how.

iii. Does the <u>market value</u> of MPI’s <u>assets</u> depend on the principles, valuation methodologies, assumptions and/or values developed by accountants under GAAP? If so, please describe how.

iv. Does the <u>market risk</u> of MPI’s <u>assets</u> depend on the principles, valuation methodologies, assumptions and/or values developed by actuaries? If so, please describe how.

f) Would MPI agree that “comprehensive income” is closer to a market-based definition of “income” than is “net income”, as these terms are currently defined?

g) Would MPI agree that the “remeasurement of the employee future benefits that is put to … OCI …”, as stated in the Corporation's response to CAC (MPI) 1-71, is more volatile than the “other items relating to employee future benefits” that MPI said are “expensed to net income”?

h) Would MPI agree that “remeasurement of employee future benefits” (as defined in Note 21 of MPI’s financial statements”) will never impact “net income” nor “retained earnings” as those terms are used in the definition of “return” and “risk” in the Asset-Liability Study?

i. If so, would MPI agree that the inherent economic or market risk arising from employee future benefits (reflected in the remeasurement of employee future benefits) is not reflected in the return/risk metrics in the Asset-Liability Study?

ii. If not, under what circumstance would net income and/or retained earnings be affected by the remeasurement of employee future benefits)?

i) If a separate trust were created for the pension plan, would this "trigger" a realization (recognition in net income) of "remeasurement of employee future benefits"?

i. If so, how large (order of magnitude) would the impact on net income be for MPI (e.g., using information as of the date of the latest financial statements included in the GRA)?

j) Would MPI agree with the following statements, assuming that GAAP were to change and require MPI to use market interest rates/prices for valuing assets (i.e., 100% of unrealized gains and losses would impact net income)?

i. Net income for accounting purposes would become more volatile.

ii. Rates (i.e., premiums) would become more volatile (explain why; e.g., through the effects on both net income and the fact that the rate-setting formula is based on net income).

iii. The inherent (market) risk, as defined above, of the assets that would be subject to the revised accounting treatment would remain unchanged. If not, why not?

k) Would MPI agree with the following statements, assuming that GAAP were to change and require MPI to use market interest rates/prices for valuing liabilities?

i. Net income for accounting purposes would become more volatile.

ii. Rates (i.e., premiums) would become more volatile. If so, please explain why.

iii. The inherent (market) risk, as defined above, of the liabilities that would be subject to the revised accounting treatment would remain unchanged. If not, please explain why not?

l) If the changes to GAAP related to either the assets, liabilities or both described above had been in place when the latest Asset-Liability Study was completed, what impact would the change(s) likely have had (e.g., likely lead to more, less or about the same allocation to equities, as compared to bonds)? Please explain briefly.

m) To what extent does MPI, as distinct from other users of MPI's financial statements, use "comprehensive income" for decision-making?

n) Under what circumstance does MPI believe that comprehensive income is a better metric than net income, as these terms are currently defined?

Rationale for Question:

To clarify MPI's responses to Round 1 IRs and to understand how accounting, actuarial and other bases for measurement influence portfolio design (asset mix) and other decisions. Also, to ensure that actual and projected costs incurred are necessary and prudent; and to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR) for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

Although parts of this question have been answered, the questions are theoretical, academic in nature or requesting agreement around terminology. By the nature of the question, Manitoba Public Insurance (MPI) does not see the benefit in speaking in hypothetical and does not see the added value to the process at hand or relevance to rate setting.

a) The answer depends on the definition of volatility and nature of volatility being assumed. If there is more potential for fluctuation due to valuation changes in equities and employee future benefits, then agreed.

b) The answer depends on the definition of volatility and nature of volatility being assumed. If there is more potential for fluctuation due to valuation changes in equities and employee future benefits, then agreed.

c)

i. The current ratemaking methodology, as approved by the Public Utilities Board (PUB) and supported by the Corporation, is based on a break-even net income approach. The Corporation considers itself *required* to use the PUB ordered methodology.

ii. No.

iii. The current Rate Stabilization Reserve (RSR) targets, as approved by the PUB and supported by the Corporation, are based on Total Equity. The Corporation considers itself *required* to use the PUB ordered methodology.

iv. The Corporation cannot answer without a specific definition of 'other calculations'. However, as indicated in i) and iii), the Corporation usually uses net income and total equity for calculations noted above to ensure consistency with PUB direction.

d) The "break-even" requirement is rooted in the 1988 Report of the Autopac Review Commission (the Kopstein Report) and has been reflected in Board Orders since that time. Kopstein Report concluded that the financial crisis facing the Corporation in 1987 was caused in part by the Corporation budgeting for a loss. In Position Paper No. 7 "Need for New Financial Policies and Improved Financial Management" Judge Kopstein recommended:

> *<u>Recommendation 7.11</u>: That the government of Manitoba issue a public directive to the corporation setting an Autopac retained surplus target of*

about 15 percent of premiums. (This would amount to $40 to $50 million at prevailing premium levels.) The government directive should indicate that, if the Autopac surplus falls below ten percent or exceeds 20 percent of premiums, the corporation should and would be expected to take remedial action.

As I remarked above, the corporation budgeted for losses in 1986 in order to reduce surpluses. When losses occurred beyond those anticipated, the corporation's accumulated surpluses were suddenly eliminated in a single year. This is unacceptable. To prevent a recurrence, I suggest the following approach:

- *When Autopac surpluses exceed target levels, the corporation should budget to break even; if a loss materializes then surpluses should be run down accordingly.*

- *When the corporation is operating below surplus target levels, offsetting rate increases should be phased in over a period of up to five years (depending upon the reserve deficit) in order to minimize rate shocks.*

This approach will allow a more stable financial operation at Autopac.

<u>Recommendation 7.12:</u> That the corporation not budget deliberately for losses in any year, but budget for surpluses where reserves have been reduced below target levels, and that budgeting for surpluses should be such as to result in depleted reserves being returned to the target range over a period of not more than five years, depending on the degree of depletion

Two early examples of the concept of Board Orders adopting the break-even requirement are found in Orders 151/00 at page 44 and 173/03 at page 49 which are copied below. These examples are provided to illustrate the long history of this concept.

Board Order 151/00 – The Corporation's financial projections for the fiscal year ended February 28, 2002 indicate a net income of approximately $28 million. It is the Board's view that this level of income is not consistent with another stated object of the Corporation that it will break even over the long term on basic compulsory coverage. However, in light of the significant surplus refund already approved, the Board is reluctant to consider a reduction in base premiums at this time in addition to the surplus refund. To do so would seriously impact the accepted principles of stable, understandable, and predictable rates. The net income for the 2002 fiscal year will increase the balance in the RSR at the end of 2002, and should be considered by the Corporation in next year's application by way of a plan for the disposition of any amount in the RSR that is surplus to an acceptable target based on an updated Risk Analysis. In addition, future applications should be prepared based on operating results that are closer to a breakeven, given the significant RSR balance forecast for the near term and the Corporation's stated objective of breaking even over the long term while maintaining an adequate basic RSR.

Board Order 173/03 - In previous Orders, the Board has stated that MPI should, at a minimum, budget for a break-even position for the year of the application. The Board agreed that a break-even position would not necessarily result in a zero net income given the uncertainty in forecasting costs and/or revenues. The Board considers the projected $13.8 million net loss for fiscal 2005 to exceed the limits of a break-even position.

e)

i. MPI Liabilities are valued in accordance to both actuarial standards and accounting standards.

ii. Please see *CAC (MPI) 1-72 (f)*

iii. MPI Assets are valued in accordance to accounting standards.

iv. If the question is with respect to inherent risk as defined in the preamble, then no the market risk is not dependant on actuarial standards.

f) This question is theoretical in nature and the response requires a definition of 'market based'. Comprehensive Income and Net Income are determined based on adherence to Accounting Standards and available elections under the accounting standards. Certain interest rate movement can be elected to be in either Comprehensive Income or Net Income. Other actuarial valuations based on interest rates are required to be in comprehensive income based on accounting standards.

g) The response to this question requires a definition of 'volatility'. The split between remeasurement of employee future benefits and other items relating to employee future benefits is based on accounting standards. Both are actuarially determined and fluctuate year over year.

h) The Corporation does not strictly agree with the statement, as accounting standards related to the remeasurement of employee future benefits could change in the future. The Corporation currently follows all relevant accounting guidelines (IAS 19) when accounting for its employee future benefits, but has no control over prospective changes in those guidelines. Accordingly the Corporation cannot agree to the characterization that remeasurement of employee future benefits will <u>never</u> impact net income.

In response to i) AON offers the following:

- We agree that the inherent economic or market risk arising from employee future benefits (reflected in the re-measurement of employee future benefits) is not reflected in the return/risk metrics in the Asset-Liability Study.

- There is a tenuous link between retained earnings and re-measurement of employee future benefits. Re-measurement of employee future benefits impacts Accumulated Other Comprehensive Income (AOCI). AOCI is considered in the calculation of surplus distributions/special contributions. Surplus distributions/special contributions impact retained earnings. However, the impact is likely very small.

- Re-measurement of employee future benefits does not impact net income.
- The impact of changes in the present value of pension liabilities is modeled and flows into the AOCI.

i) This question is theoretical in nature and therefore not relevant to the rates setting process. Further, without discussion on the nature of the trust and the type of transaction to create and fund the trust, an accurate answer can not be provided.

j) This question is theoretical in nature and the request is to comment on potential currently undrafted accounting changes that may or may not occur. However, please note that MPI currently uses market interest rates and prices for valuing assets and liabilities where required under current accounting standards.

k) please see response in j) above.

l) Please see the response to j) and k) above.

m) MPI cannot comment on other users of MPI's financial statements. For decision-making, MPI uses various elements of the financial statements and financial results to ensure appropriate decisions are made in the course of operations. Some of the financial elements considered are cash flow impact, net income impact, comprehensive income impact, return on investment, discounted or non-discounted payback period, financial impact on customers, financial impact on suppliers and other elements too many to list.

n) MPI would not define one measure as better than another. The two measures show different views of the corporation's activities which does not necessitate superiority of one over the other. One may be more suited to an analysis than the other, depending on what is being analyzed.

CAC (MPI) 2-35

Volume:	**CAC (MPI) 1-66 and 1-75**	**Page No.:**	
Topic:	**Volume III, AI. 6 Annual Reports, Part 3 Corporate Strategic Plan 2016-2020, page 21**		
Sub Topic:	**Reconciling Mission, Strategy Goals, Objectives and Focus**		
Issue:	**How Have "Industry Standards" Been Determined?**		

Preamble: In response to CAC (MPI) 1-75, MPI said "a significant difference between the Corporation and other institutional fund managers is the inherently higher risks arising from the current rate-setting process, the need to break-even on an annual basis and the relatively modest size of the Corporation's approved … RSR … target".

While some industry practices may be generally accepted, it is debatable whether some generally accepted practices are prudent and appropriate in all circumstances.

A study, funded by the Rotman International Centre for Pension Management at the Rotman School of Management, University of Toronto (ICPM) compares the asset allocations, liability discount rates and performance of defined benefit funds that link the liability discount rate to their expected return on assets, rather than to the riskiness of the underlying cash flows of their liabilities. The study finds that these funds behave differently from other funds, and the authors claim that:

a) the valuation method related to the liabilities camouflages the degree of underfunding, and

b) the increased risk-taking that is observed for these funds seems to be driven by the conflict of interest between current and future stakeholders which could result in significant costs to future stakeholders.

Source: Aleksander Andonov, Rob Bauer, & Martijn Cremers "Pension Fund Asset Allocation and Liability Discount Rates: Camouflage and Reckless Risk Taking by U.S. Public Plans" (May 1, 2012). Netspar Discussion Paper No. 05/2012-061, online: http://www.icpmnetwork.com/wpcontent/uploads/2016/03/Pension_Fund_Asset_Allocation_and_Liablility_Discount_Rates.pdf

Question:

a) Does MPI believe that the valuation methods related to MPI's liabilities provide an accurate picture of the degree of funding?

b) Does MPI believe that there are any conflicts of interest (actual, potential and/or perceived) between current and future stakeholders that influence MPI's risk-taking and/or the costs to future stakeholders? Please elaborate on the response.

Rationale for Question:

Ensuring that actual and projected costs incurred are necessary and prudent and assessing the reasonable revenue needs of the applicant in the context of its overall general health (including risks such as the RSR), for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The discount rate methodology used in the pension valuation is prescribed by IFRS and requires the use of the "yield on a high quality (generally AA) Corporate bond of similar duration to the liabilities". Therefore, the valuation method is *not* necessarily an accurate picture of the degree of funding.

   The discount rate methodology used in valuation of policy liabilities is based on a dollar and duration matching of these liabilities to the Corporation's highly rated fixed income portfolio. Therefore, the valuation method *is* an accurate picture of the degree of funding.

b) The Corporation does not believe there are conflicts of interest between current and future stakeholders that influence the Corporation's asset allocation. The Corporation's asset allocation is based on the study performed by AON, while the Corporation's valuation methods for liabilities are based on accepted actuarial standards of practice.

CAC (MPI) 2-36

Volume:	**CAC (MPI) 1-73**	**Page No.:**	
Topic:	**2016 Volume II – Investment Income, Attachment C: Aon Hewitt Asset/Liability Study - Phase II, page 5**		
Sub Topic:			
Issue:	**Short Term vs Long Term Considerations in Asset Mix**		

Preamble: In its response to CAC (MPI) 1-73, the Corporation said that it was not aware of any tools to reduce "premium rates" risk, but that it "remains open to consider any related suggestions."

It is our understanding that the auto insurance sector is not unique in having to balance short-term "rate stability" on the one hand and long-term cost minimization on the other hand. However, the extent to which different sectors face these inherent challenges may differ.

In the case of defined benefit pension sector, for example, an aging population has left the burden of funding adverse scenarios on the shoulders of a smaller working population (compared to the population of retired members). In some jurisdictions (e.g., Canada), pension plans have introduced (or had for a while) mechanisms to improve the tradeoffs between these two competing/conflicting goals. Two mechanisms include:

a) revised risk-sharing among stakeholders (e.g., beneficiaries today bear more risk than prior generations by having the inflation-indexation of their pension benefits conditionally linked to the funded status – e.g., portfolio performance)

b) providing more flexibility to plan sponsors (i.e., the pension plan) so that they have an "option" to file "official" actuarial reports early (i.e., year 1 or 2, rather than the 3rd year deadline) if there is a benefit in doing so (e.g., "good funding" status that defers or prevents a (contribution) rate change, thereby providing greater rate stability).

Questions:

a) Would MPI agree that one "general" tool that is either being used by MPI now, or could be used by MPI in the future, is the choice of metrics ("basis for measurement") for valuing assets, liabilities and income recognition related to those assets and liabilities for various purposes (e.g., to meet the needs of preparing financial statements in accordance with GAAP, proposing (premium) rates, selecting a long-term asset mix)?

b) If so,
   i. Would the adoption of a more comprehensive definition of "break-even" (e.g., comprehensive income, rather than net income, as currently defined) improve the accuracy of long-term "market" returns and risks as measured in Asset-Liability Studies?
   ii. Would the adoption of a more comprehensive definition of "break-even" (e.g., comprehensive income, rather than net income, as currently defined) decrease (premium) rate stability?
   iii. Is there a trade-off between short-term rate stability on the one hand and long-term accuracy of <u>market risk</u> assessments that arises from using the same basis for measurement for both of these two purposes?

c) Would a byproduct of introducing the IRFRF be that the basis for setting rates would differ from the basis for defining return/risk in Asset-Liability Studies (or would the Studies' "process" remain unchanged)?

d) Are there solutions in the defined benefit pension sector, or other sector, that might be considered by MPI to resolve any tradeoffs between the desire for short-term rate stability on the one hand and lower long-term costs on the other (by enabling more market-risk taking in the portfolio)?

Rationale for Question:

To ensure transparency in the Corporation and that forecasts are reasonably reliable and actual and projected costs incurred are necessary and prudent. Also to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves) and for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The "choice in metrics" for "valuing assets, liabilities and income recognition" is determined by the International Financial Reporting Standards (IFRS). These items are not at Manitoba Public Insurance's (MPI) discretion.

b)

i. The Corporation focused on impact to Basic net income when selecting a portfolio along the efficient frontier in the ALM study. The accuracy of long-term market return and risk through comprehensive net income is a lesser concern because rate setting is determined by break-even Basic net income under IFRS.

ii. No, the adoption of a more comprehensive definition of "break-even" (e.g., comprehensive income rather than net income) would increase (premium) rate stability because there would be no highly volatile gains and losses associated with equities to realize in future years, which is one component of forecasted income that impacts future premiums. Although comprehensive income would be more volatile than net income, ratemaking is based on *forecasted* returns, not *actual* returns. For example, if a 7% equity return is assumed in the forecast then the *forecasted* comprehensive income from equities will always be equivalent to a 7% return. However, under the net income approach, the forecasted equity return is based on both the assumed 7% annual return and the realization of past year's unrealized gains or losses, which will by definition be more unstable than a fixed 7% forecast.

iii. As stated on the *PUB (MPI) 1-20 (a) Attachment B Phase II – Part A ALM Study page 5*, MPI's Basic compulsory program is required to break even rather than to target profits. The objective of the ALM study was that "the short-term volatility of the premium rate requirement is a primary concern”. Therefore, the benefits of long-term accuracy of market return and risk through comprehensive net income are not as important compared to reducing the short-term volatility of the premium rate requirement.

c) The basis for setting premiums including an IRFRF and the basis for defining return/risk in Asset-Liability Studies are unrelated because the ALM study used a stochastic forecast of interest rates that would be unaffected by the adoption of an IRFRF.

d) MPI is not aware of any solutions but remains open to considering any relevant suggestions.

CAC (MPI) 2-37

Volume:	**CAC (MPI) 1-74**	**Page No.:**	
Topic:	**Risk Management**		
Sub Topic:	**Attachment B**		
Issue:	**Annual Physical Damage Analysis Report**		

Preamble: In response to CAC (MPI) 1-74 c) the Corporation filed the "Risk Management Evaluation – Areas Required" report and as a risk monitoring tool for the risk labeled "Risk of repair costs higher than CPI" MPI prepared a report labeled "Annual Physical Damage Analysis Report".

Question:

a) Please file a copy of the most recent Annual Physical Damage Analysis Report.

b) Please elaborate on the use of the Annual Physical Damage Analysis Report in claims foresting, if any.

Rationale for Question:

To gain an understanding and insight of risks and physical damage claims incurred and costs control provided by the Annual Physical Damage Analysis Report, and how this may assist in claims incurred forecasting.

RESPONSE:

a) and b)

Please refer to Claims Forecasting Section of the rate application along with associated exhibits there. Everything Manitoba Public Insurance (MPI) uses to make the Physical Damage forecast is contained in this section.

Some of the Physical Damage forecasting practices have changed from previous risk assessments. The Annual Physical Damage Analysis Report is no longer prepared as it was deemed to be of limited use for forecasting purposes.

CAC (MPI) 2-38

Volume:	CAC (MPI) 1-74	Page No.:	
Topic:	Volume III – AI.6 Annual Reports, Part 2: Annual Report		
Sub Topic:	Risk Management		
Issue:	Enterprise-Wide Risk Management Policy		

Preamble: The risk description in "Risk Management Evaluation - Areas Required" in CAC (MPI) 1-74 (a)(b) Attachment B shows:

- an inherent risk rating of "high" for "investment income volatility" (corporate goal 2.0)
- an inherent risk rating of high for "annual rate changes will be more volatile" (corporate goal 5.0)
- no separate line item describing the liabilities and their inherent risks, as is the case for "investment income volatility" (there is, however, a reference to liabilities in corporate goal 5.0).

Attachment B appears to be organized around the risks of not achieving corporate goals and:

- has assessments related to corporate goals 1, 2, 4, 5 and 7 but not 3 or 6,
- does not include inherent risks arising from potential changes in legislation/regulation, accounting or actuarial practices.

In the response to CAC (MPI) 1-74, the Corporation said that "the duration matching strategy is not as effective if future inflation turns out to differ from current expectations ..., MPI 'has accepted short term inflation risk and has accounted for this risk through margins and reserve. The 'excess portfolio' was also designed to provide some long-term protection against inflation.'"

Question:

a) What is MPI's inherent risk rating for MPI's liabilities (including employee pension and other benefit obligations)?

b) Please complete the "Risk Management Evaluation - Areas Required" table's columns for "liabilities", explaining the difference (if any) between the inherent risk in the liabilities and their residual risk?

c) What tools, if any, does MPI have to manage the liabilities themselves (i.e., increase or decrease the risks arising from the liabilities relative to their inherent risks)?

   i. Would "valuation methods" and "related assumptions" be considered "tools" for managing risks arising from the liabilities?

   ii. If so, how are valuation methods and/or related assumptions being used now to manage this risk, and what effect are they having (increasing or decreasing risk)?

d) Please provide a summary, similar to Attachment B, for those risks that arise from potential changes in:

   i. unexpected inflation, in the short term (please define time horizon) and in the long term

   ii. legislation/regulation

   iii. accounting practices (GAAP)

   iv. actuarial practices

e) If MPI is unwilling or unable to answer question d, can it please provide its assessment of the likelihood and severity of the inherent risks for:

i. unexpected inflation
ii. adverse changes in legislation/regulation
iii. adverse changes in accounting practices (GAAP)
iv. adverse changes in actuarial practices

f) Provide a plausible example of a change that would adversely impact MPI directly and/or ratepayers arising from:

i. changes in legislation/regulation
ii. changes in accounting practices (GAAP)
iii. changes in actuarial practices.

Rationale for Question:

To ensure that forecasts are reasonably reliable and that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14, p. 28.

RESPONSE:

Please find attached the risk assessment matrix for the corporate risks related to the topics above, that to some extent, could impact rate setting results. Risk evaluation after controls at Manitoba Public Insurance (MPI) – Residual Risk – has been included, which is the type of scenario that the organization deals with on a regular basis rather than the theoretical scenario before controls – Inherent Risk.

a) Please refer to the attachment for liabilities related risk assessment that could affect rate setting results (includes benefits cost but not employee pension).

b) Same as in a).

c) What we refer to as tools in the documentation previously submitted are not intended to ‘manage the risk’ but to ‘assess the risk’, so they do not decrease or increase the risk per se. Their use provides us with a risk rating. Observed controls in the assessment matrix (attached) are being used to manage risk.

i. "Valuation methods" and "related assumptions" are not considered tools; however, they do set up the scenario for the subsequent risk assessment with the corresponding tools.

ii. Please see part c) i)

d) *CAC (MPI) 1-74 Attachment B* is the Likelihood tool, which is used in combination with the Severity tool to obtain the Risk Rating. Please see part e) for detailed Risk Rating.

e) Please refer to the Attachment for related risk assessment – likelihood and severity – that could affect rate setting results. Risk evaluation after controls at MPI – Residual Risk – has been included, which is the type of scenario that the organization deals with on a regular basis rather than the theoretical scenario before controls – Inherent Risk.

f) Please refer to the Risk Factors and Analysis/Impact columns in the Attachment for situations on related risk assessment that could affect rate setting results.

Manitoba Public Insurance
Risk Management Evaluation - Areas Required CAC 2-38

Corp Goal #	Related Area	Risk Element	Description	Risk Management Owner	Risk Factors/ Reason for Reporting	Risk Analysis/Impact	Inherent Risk: Likelihood Almost Certain (5) To Rare (1)	Inherent Risk: Severity Catastrophic (5) Insignificant (1)	Inherent Risk: Risk Rating	Key Processes & Controls Risk Response	How We Monitor the Risk	Residual Risk: Likelihood Almost Certain (5) To Rare (1)	Residual Risk: Severity Catastrophic (5) Insignificant (1)	Residual Risk: Risk Rating	AUDIT COMMITTEE: NEXT REVIEW DATE
1	**Actuarial/ Liabilities**	**Forecasting**	Financial results difference (+/-) than forecast impacts credibility, rate volatility	VP of Finance & CFO	Actual financial results that are different (+/-) from forecast impacts credibility and rate volatility.	Rates higher that private insurance companies could result in the risk of not being acceptable to the public.	3	3	Medium	All forecasts based on cross functional broadly based approach. On-going monitoring / analysis of actual results to budgets and/or prior years. Use of external actuary when appropriate. Use of Rate Stabilization Reserve (RSR). Use of Asset and Liability Management (ALM) program that will reduce the net income variability caused by changes in interest rates.	Monthly financial reporting, Claims Forecasting Com. meets as required to update forecasts to 5 year plan. Unpaid claims liabilities evaluated and adjusted quarterly.	2	3	Medium	October 2016
1	**Inflation/ Actuarial**	**Rate Volatility**	Rate volatility could result in rate increases that are intolerable to the public (rate shock Manitoba CPI + 3%)	VP of Finance & CFO	To ensure that Basic insurance rates are within public tolerance	Rates on average, will be lower than those charged by private insurance companies to ensure public acceptance	3	4	High	Use actuarial methods & corporate rating policies that foster stability, use 5 year plan to identify problems & control revenue & expenses.	Historical rate changes: global basis/impact on individual customers. Dynamic Capital Adequacy Test (DCAT) and Minimum Capital Test (MCT) reviews completed annually. Expense allocation study. Monthly financial reporting. Trends reviewed by Claims Forecasting Committee. Costs mitigated by use of aftermarket/ recycled parts. Negotiate labor rates with various stakeholders.	2	3	Medium	April 2017

Corp Goal #	Related Area	Risk Element	Description	Risk Management Owner	Risk Factors/ Reason for Reporting	Risk Analysis/Impact	Inherent Risk: Likelihood Almost Certain (5) To Rare (1)	Inherent Risk: Severity Catastrophic (5) Insignificant (1)	Inherent Risk: Risk Rating	Key Processes & Controls Risk Response	How We Monitor the Risk	Residual Risk: Likelihood Almost Certain (5) To Rare (1)	Residual Risk: Severity Catastrophic (5) Insignificant (1)	Residual Risk: Risk Rating	AUDIT COMMITTEE NEXT REVIEW DATE
2	**Liabilities Employees**	**Growth in Benefit Cost**	Negative financial impact	VP of Human Resources & CHRO	High growth in employee benefit costs may result in negative financial impacts	Employee benefits are growing faster than inflation while reductions to the package could cause employee dissatisfaction & potential labour disruption	3	3	Medium	Adopt strategies that limit benefit growth. The Corporation offers a number of employee health/wellness programs. Continue to identify and implement benefit cost reduction strategies.	Human capital forecasts, annual benefits report. Rates for the various benefit plans are reviewed annually, coincident with service provider contract renewals.	3	2	Medium	April 2017
5	**Liabilities**	**Reinsurance Program**	Negative financial impact of unanticipated large BI or Cat losses	VP of Finance & CFO	High value BI claims or catastrophic PD losses can negatively impact financial results and impair financial stability	The current methodology does not allow for catastrophic events or an increase in high value BI claims The rate setting methodology has no allowance for CAT losses.	3	4	High	Annual reinsurance program review. Purchase reinsurance Annually recommend changes to reinsurance in accordance with business requirements. Use DCAT & MCT in setting RSR & Retained Earnings.	Annual review of re-insurance program and MCT analysis; DCAT testing. Monthly, production and review of financial statements.	3	3	Medium	April 2017
5	**Actuarial/ Liabilities**	**Appropriate Range of RSR**	Annual rate changes will be more volatile	VP of Finance & CFO	The RSR is intended to protect motorists from excessive rate increases	Inadequate RSR could cause rate volatility	3	4	High	Board approval for appropriate RSR level. Use DCAT & MCT and ALM. Purchase of Reinsurance.	Various tests for RSR level (DCAT, MCT). Monitor investment portfolio.	3	3	Medium	October 2016
8	**Legislation/ Regulation**	**Environmental**	Sanctions, adverse publicity, DVL	VP of Finance & CFO	The Corporation is required to comply with all legislation pertaining to workplace safety & health & environmental issues	Internal Human Health Risk External Environmental Risk	3	3	Medium	Training, corporate directives/operational policies, audits. All properties are regularly inspected by Premises staff as well as local workplace safety & health committees.	Environmental audits. A Risk Management Specialist position is in place in the Premises department. A status report under the Environmental and Sustainable Development Policy is provided annually to the Audit, Finance & Risk Committee of the Board.	2	3	Medium	October 2016

Corp Goal #	Related Area	Risk Element	Description	Risk Management Owner	Risk Factors/ Reason for Reporting	Risk Analysis/Impact	Inherent Risk: Likelihood Almost Certain (5) To Rare (1)	Inherent Risk: Severity Catastrophic (5) Insignificant (1)	Inherent Risk: Risk Rating	Key Processes & Controls Risk Response	How We Monitor the Risk	Residual Risk: Likelihood Almost Certain (5) To Rare (1)	Residual Risk: Severity Catastrophic (5) Insignificant (1)	Residual Risk: Risk Rating	AUDIT COMMITTEE: NEXT REVIEW DATE
8	**Accounting Practices**	**Change in Accounting Standards**	IFRS	VP of Finance & CFO	Not conforming to the new accounting standards will result in a qualified opinion on our financial statements by our external auditors	Significant damage to our reputation as a fiscally responsible and well managed entity. Errors in application or missed deadlines impacts reputation	1	4	Medium	High level IFRS impact assessment. Regular review of IFRS accounting developments by the Finance team. Deloitte assessment; timely submission to Audit Committee for discussion and approval. Regular discussions with the audit team around changes in accounting policy note disclosure requirements	Full IFRS financial statements and note disclosures continue to be audited by the external auditors on an annual basis.	1	3	Medium	April 2017

CAC (MPI) 2-39

Volume:	CAC (MPI) 1-77	Page No.:	
Topic:	2016 Rate Application, Volume II – Investment Income Attachment C: Aon Hewitt Asset/Liability Study		
Sub Topic:			
Issue:	Min/Max Constraints for Asset Classes in Asset-Liability Study		

Preamble: In CAC (MPI) 1-77, the Corporation said questions f), g) and h) were not answered, given the complexity, estimated cost and time required to do so.

In the Preamble to CAC (MPI) 1-77, we said:

> "The min/max constraints in the Asset-Liability Study appear to be very binding. e.g., Minimum constraints for the asset classes below 'pre-determine' ≥ 80% of the asset allocation, leaving little room to optimize return/risk tradeoffs (i.e., allocating ≤ 20% of the remaining assets)."
>
> We also noted that 80% of the portfolio is constrained as follows.
> ≥ 10% Canadian Equities
> ≥ 10% Real Estate
> ≥ 5% Infrastructure
> <u>≥ 55% Liability Matching</u>
> ≥ 80% of the portfolio is 'pre-determined' by minimum constraints

We listed some potential reasons for imposing constraints, which were:

a) Legislation or regulation (e.g., maximum foreign property)
b) Market risk management (e.g., avoid concentration by setting a maximum)
c) Liquidity risk management (e.g., set a maximum for illiquid assets as a group and/or at the asset class level for real estate, infrastructure and private equity)
d) Return expectations (e.g., maximum for low-yielding assets)
e) Insufficient internal/external asset management capabilities

f) Concerns about the accuracy of modelling methodologies and/or assumptions, and the (widely-known) sensitivity of optimization results to assumptions re: returns, risks, correlations, etc."

MPI said:

> "Aon Hewitt's capital market assumptions showed real return bonds to have significant volatility and down side risk with modest returns relative to nominal bonds such as the Government of Canada 10 year bond. Also, page 17 of the Phase 1 report Aon concluded that 'RRBs are not a good inflation Hedge'."

Questions:

a) When MPI refers to "significant volatility and down side risk" for RRBs, is volatility and downside risk measured in absolute terms (i.e., asset return volatility) or in relation to liabilities?

   i. If assets only, how relevant is "asset volatility" viewed in isolation for MPI?

   ii. If in relation to liabilities, isn't "significant volatility" a good thing if the RRBs could hedge some of the interest rate risk (both real and inflation components) that are inherent in MPI's long-duration liabilities? (liabilities which, conventional wisdom suggests, are inherently "volatile" from a market value at risk perspective)?

b) Would MPI agree that the use of net income (excluding OCI), rather than comprehensive income (including OCI), in the definition of return and risk in Asset-Liability Studies lowers the actual or apparent attractiveness of RRBs as an asset class from a <u>market</u> risk management perspective (as distinct from <u>accounting</u> risk) in relation to the inherent <u>market</u> risks in MPI's liabilities? Please elaborate on the response, explaining why or why not.

c) Does MPI agree with AON's conclusion that "RRBs are not a good inflation hedge"? Please explain why or why not.

d) Can AON explain why it believes RRBs are not a good inflation hedge for MPI?

e) Can AON list one or two asset classes that offer better inflation hedges than RRBs for MPI, and offer any evidence to support that belief?

f) Can AON list one or two asset classes that offer better hedges against unexpected declines in real interest rates than RRBs for MPI?

g) For greater clarity, please describe the extent to which the minimum and/or maximum restrictions for individual asset classes resulted from the possible reasons we identified in Round 1 questions (listed again below), or other reason(s) that MPI may have considered:

   i. Legislation or regulation (e.g., maximum foreign property)

   ii. Market risk management (e.g., avoid concentration by setting a maximum)

   iii. Liquidity risk management (e.g., set a maximum for illiquid assets as a group and/or at the asset class level for real estate, infrastructure and private equity)

   iv. Return expectations (e.g., maximum for low-yielding assets)

   v. Insufficient internal/external asset management capabilities

   vi. Concerns about the accuracy of modelling methodologies and/or assumptions, and the (widely-known) sensitivity of optimization results to assumptions re: returns, risks, correlations, etc.

Rationale for Question:

To understand the rationale for the constraints imposed on the Corporation's asset/liability mix and to ensure that forecasts are reasonably reliable and actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14, p. 28.

RESPONSE:

a) When Manitoba Public Insurance (MPI) referred to "significant volatility and down side risk" for Real Return Bonds (RRB), it was referring to the risk/return relationship of the asset class. Please see *PUB (MPI) 1-20 Aon Hewitt Phase I Report page 59* – real return bonds is the lowest return asset class (lower than cash) and has relatively high risk.

   i. The volatility of the assets viewed in isolation is not relevant. The risk-reward relationship on Basic net income of the asset mixes run in Aon's optimization is relevant.

   ii. "Significant volatility" is not a good thing viewed in isolation. Return must be considered as well. To illustrate, please see *PUB (MPI) 1-20 Aon Hewitt Phase I Report page 67* – real return bonds is the lowest return asset class (lower than cash) and has relatively high risk.

   Inflation hedging was considered during the Asset Liability Management (ALM) study. There are inflation hedging asset classes other than RRBs that had a superior risk/return relationship relative to RRBs. Inflation is currently hedged by the real estate and infrastructure portfolios, which has a combined target weight of 15% of the total portfolio.

b) The Corporation disagrees with the statement.

   If RRBs were held in the portfolio today, the accounting classification would be Fair Value Through Profit and Loss (FVTPL), similar to the marketable bond portfolio. All income and gains/losses would be realized through net income. As a result, there is no difference between net income and comprehensive income for RRBs.

The Corporation's liabilities are revalued quarterly based on current interest rates. Therefore, there is no meaningful distinction between market risk and account risk as it relates to the RRBs and the Corporation's liabilities.

c) The Corporation accepts Aon's belief that there are other inflation hedging asset classes available (i.e.: real estate and infrastructure) with greater expected returns than Real Return Bonds (RRBs). At the time of the ALM study the real yields on RRBs were below 40 bps for 20 year terms and below 10 bps for 10 years and shorter terms. Real yields for the same terms are currently negative.

d) Aon Hewitt's responds: "RRBs are not a good inflation hedge for MPI for the following reasons:

- The underlying inflation according to nominal and real return bonds do not match the inflation used to value liabilities (which is based on a survey of Canadian banks).
- RRBs suffer from a limited offering.
- Supply and demand for RRBs have a large impact on the market value.
- Therefore, the economics of the inflation protection from RRBs do not match the financial impact to MPI on a year by year basis."

e) Aon Hewitt's responds: "No. There is no asset class that we know that can hedge the short term inflation risk considering how the inflation assumption is set and the Canadian RRB landscape. Over the long term, where RRB's are held to maturity, shorter term price sensitivity is less relevant and inflation experienced over the period would result in higher cash flows and an inflation hedge. It is a commonly accepted belief in the investment community that higher inflation would gradually be reflected in nominal bond yields, equity returns through higher profits, real estate through increased rents and infrastructure, especially where regulated, through increased tariffs. Some commodities are also thought to provide some long term inflation protection, although this is a topic of debate."

f) Aon Hewitt's responds: "Based on the Fisher Equation, which is Real Rates + Expected Inflation = Nominal Rates, if real interest rates decline without changes in the expected inflation, nominal interest rates will also decline and therefore nominal bonds will provide a hedge."

g) The minimum weight of 10% for Canadian equities was set to retain a meaningful exposure to our home equity markets. The maximum weight of 25% for equities was to limit market risk associated with the asset class.

The minimum weights for real estate and infrastructure were selected to avoid the significant time and expense of liquidating the existing holdings within these illiquid asset classes. The maximum weight of 30% for alternatives was set to limit the total exposure to illiquid asset classes such as commodities, timberlands, real estate and infrastructure.

The range of 55% to 75% set for the liability matching portfolio was to ensure that sufficient fixed income assets were retained to match to claims liabilities.

CAC (MPI) 2-40

Volume:	**CAC (MPI) 1-80**	**Page No.:**	
Topic:	**2016 Volume II – Investment Income, Attachment C: Aon Hewitt Asset/Liability Study, Page 6**		
Sub Topic:			
Issue:	**Asset-Only Optimization**		

Preamble: In response to CAC (MPI) 1-80 the Corporation said:

- a) "During Phase Two, the Vendor shall recommend an appropriate asset allocation …"
  - ix. "consider a broad set of asset classes … Some asset classes may not be feasible, and may be excluded at MPI's request"

- b) "The asset-only optimization was performed after Phase 1 and prior to Phase 2. The results of the asset-only optimization was an intermediate step prior to completion of the Phase 2 asset liability optimization. The Phase 2 asset-liability optimization was used as the basis for changing the asset allocation and duration matching strategy. The asset-only optimization had limited impact on the final outcome of the ALM study."

- d) "Some asset classes were ruled out after the asset-only asset allocation, based on i) the Phase 1 report, ii) discussions with Aon, and iii) the asset-only allocation. 11 asset classes were removed from … Phase 2 ... The reasons for exclusion for the asset classes varied from proposed constraints from Aon Hewitt, poor capital market expectations, limited ability or willingness by Manitoba Public Insurance to invest in certain asset classes, and prior negative experience with an asset class. The 11 asset classes excluded were:
  1. Hedge Funds
  2. Private Equity
  3. Emerging Market Equities
  4. Global Bonds
  5. High Yield bonds
  6. Bank Loans
  7. Emerging Market Debt

8. U.S. Real Estate
9. Global REITS
10. Global Listed Infrastructure
11. Farmlands"

Question:

a) Which asset classes, if any, were deemed "not feasible", and by whom (e.g., AON and/or MPI)?

b) Which asset classes, if any, were "excluded at MPI's request" and when?
   i. Before or after the asset-only optimization?
   ii. Before or after the asset-liability optimization?

c) When was it determined that the RRB allocation would be 0% for purposes of the Asset-Liability Study?
   i. Before or after the asset-only optimization?
   ii. Before or after the asset-liability optimization?

d) When was it determined that the International Equity allocation would be 0% for purposes of the Asset-Liability Study?
   i. Before or after the asset-only optimization?
   ii. Before or after the asset-liability optimization?

e) For greater clarity, please list the asset classes which were included in the full process of the asset-liability optimization, along with the min/max constraints used in the optimization(s) that most informed MPI's decision re: asset mix.

Rationale for Question:

To ensure that forecasts are reasonably reliable and actual and projected costs incurred are necessary and prudent in accordance with statutory objectives and Board Order 98-14, p. 28.

RESPONSE:

a) Please see *CAC (MPI) 1-80 (d)* for the reasons certain asset classes were excluded.

b) The following asset classes (as described in CAC (MPI) 1-80 (d) were excluded by Manitoba Public Insurance (MPI) prior to the asset-liability optimization (i.e.: Phase 2):

1. Hedge Funds
2. Private Equity
3. Emerging Market Equities
4. Global Bonds
5. High Yield bonds
6. Bank Loans
7. Emerging Market Debt
8. U.S. Real Estate
9. Global REITS
10. Global Listed Infrastructure
11. Farmlands

c) It was determined that the Real Return Bond allocation would be 0% for purposes of the Asset-Liability Study before the asset-only optimization (i.e.: Phase 1).

d) The min/max range for International Equities was 0% to 10%. The Asset-Liability optimization produced an efficient frontier comprised of several portfolios with various asset allocations. Three of those portfolios included allocations to International Equities. Only the higher risk, higher return portfolios included allocations to International Equities. Aon recommended portfolio #2, which had an allocation to International Equities of 0%. Please see *PUB (MPI) 1-20 (a) Attachment B Phase II – Part A page 43* for a table showing the asset allocation of each portfolio included in the efficient frontier.

e) The following asset classes were included in the asset-liability optimization (min/max ranges shown in brackets):

1. 91 day T-bills (55-75% for total of A, B & C)
2. Universe bonds
3. Long-term bonds
4. Mortgages (0-10%)
5. Canadian Equities (10-15%)
6. U.S. Equities (0-10%)
7. International Equities (0-10%)
8. Canadian direct real estate (10-15%)
9. Direct infrastructure (5-7%)
10. Commodities (0-5%)
11. Timberlands (0-5%)

CAC (MPI) 2-41

Volume:	**CAC (MPI) 1-81**	**Page No.:**	
Topic:	**2016 Volume II – Investment Income, Attachment C: Aon Hewitt Asset/Liability Study, page 101**		
Sub Topic:			
Issue:	**Portfolio Assumptions**		

Preamble: In response to CAC (MPI) 1-81 a) the Corporation said that Aon Hewitt's expected return for international equities was based on the following:

> "Forecast earnings are used to calculate the cash flows for the main equity markets comprising the EAFE index. The forecast cash flows are then discounted and their aggregated value is equated to the current level of the equity markets to arrive at an expected return for each of their economies. They are then combined to form the EAFE return, taking into account half of the diversification."

The Corporation's response to CAC (MPI) 1-81 a) also said "the Greystone Real Estate Fund has leverage of approximately 30%, while Aon … assumed an unlevered real estate investment (i.e.: zero) …

MPI's current infrastructure portfolio has leverage (debt to enterprise value) of approximately 39%, which is similar to the assumed 40% leverage used by Aon …."

Using recent information in MPI's financial statements, and the response above re: real estate leverage, we calculated real estate exposure on a gross and net (of debt) basis below.

	Pooled Real Estate Fund		
% EV			% AUM
100%	Gross Enterprise Value (EV)	317,000	13%
30%	Debt	95,000	4%
70%	Net	222,000	9%

Questions:

a) In modelling International Equities:

   i. Which "main equity markets comprising the EAFE index" were used?

   ii. Please list the specific countries or indexes

   iii. Please include their individual market weights (% of EAFE "coverage"), used in the 2014 Study (which may or may not differ from the actual EAFE weights at the time).

   iv. Please explain <u>both</u> why and how "taking into account half of the diversification" was implemented.

   v. Please describe how accurate "taking into account half of the diversification" was when these were "combined to form the EAFE return", given the market weights in the "main equity markets" determined above, as well as the any material difference between the average volatilities and correlations between the main equity markets included in the calculation on the one hand and those that were excluded on the other hand.

b) Is AON aware of any bias in either the return, risk (volatility) and/or correlation estimates calculated for International Equities under its approach for modelling International Equities that might arise from excluding smaller ("non-main") markets and its application of a diversification adjustment?

   i. Based on differences in average <u>volatilities</u> between the main equity markets included as a group and the group of markets that were not included?

   ii. Based on differences in average <u>correlations</u> between the main equity markets included as a group and the group of markets that were not included?

c) Would MPI agree that the difference in the real estate leverage assumption results in a ~ 4% difference between the actual exposures implemented by MPI and the assumptions for "real estate" and "fixed income" in the Asset-Liability Study, measured on a gross basis as a % of MPI's assets under management? (i.e., "Gross" real estate exposure is closer to 13% than 9% (a net figure), as a % of MPI's assets under management, and exposure to fixed income is 4% lower – i.e., the debt within the real estate portfolio.)

d) If so, is the 4% difference (~ $95 million) material, and should it:

   i. be reflected somehow for greater clarity (e.g., investment policy min/max constraints and targets)?

   ii. be reflected in duration and/or other calculations?

Rationale for Question:
To ensure that forecasts are reasonably reliable and to assess the reasonable revenue needs of the applicant in the context of its overall general health (including risk), for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) AON responds:

   i. The following equity markets were used when modeling International Equities: Eurozone, United Kingdom, Japan and Switzerland.

   ii. Please see above.

   iii. The following weights were used: Eurozone (31%), United Kingdom (21%), Japan (20%) and Switzerland (9%). The proportion of EAFE represented is 82% (different from the sum of the numbers provided (81%) due to rounding).

iv. We do not perform a full modeling of each region's returns. Instead, we combine the return assumptions using an approximation. We recognize that there is expected to be a diversification benefit within the index but, considering this approximation, we decided it is more prudent to not fully reflect the diversification benefit. Ignoring it entirely seemed too extreme so we take into account half of the diversification. This is what we do for all of our clients in Canada. We do not think it has a material impact on the results.

The return expectation without diversification benefit is calculated as the weighted average of the return expectations for each region.

In order to calculate the return expectation with diversification, we first convert each region's 10-year annualized return to average annual return, using the approximation [Geometric return] + 0.5*[Annual Standard Deviation] ^ 2. We then calculate the weighted average of the average annual returns. Finally, we convert back to a geometric return.

The half diversification assumption is the average of the with and without diversification numbers.

v. Please see the answer to question b), which we believe also addresses this question.

b) AON Responds:
We do not believe the estimates used for International Equities in our modeling would create a bias in or have a material impact on our modeling.

The breakdown into the main equity markets comprising the EAFE index is used to establish the return expectation only. Volatility and correlation assumptions for international equities are based on historical data series for the "complete" EAFE index.

The countries excluded from the breakdown into the main equity markets comprising the EAFE index are also developed markets and well integrated with the global economy. We don't have any reason to believe their equity markets' return and risk characteristics would be materially different from other developed markets so as to change our international equity return assumption.

c) Yes, there is a 4% difference between gross and net value of the pooled real estate fund. However, the Corporation reports the holding on a net basis in keeping with the Net Asset Value reported by the fund manager. Therefore, it is not necessary to split out the debt associated with the fund and report it separately.

d) The real estate pooled fund is reported net of debt as this represents the proceeds that would be realized by the Corporation upon liquidation of the investment. Real estate investments are reported at their estimated fair values as provided by the external manager in the audited financial statements for the fund.

The use of leverage in the real estate pooled fund represents a liability to that fund and is integral to the manager's strategy and cannot be separated. Because of these facts, there is no need to consolidate the debt associated with the investment in GREF with the Corporation's fixed income portfolio and therefore no impact on duration.

When the real estate pooled fund is measured on a net basis, the overall exposure to real estate (pooled real estate fund and CityPlace) as of February 2016 was 11.3%, which is within the min/max range defined for that asset class (7% - 13%). The rebalancing policy defines the monitoring of the target allocation on a fiscal quarterly basis, at a minimum, and rebalancing back to target within six months, if the weight of any asset class falls outside the allowable range. Because the real estate pooled fund is reported on a net basis there is no need for additional clarification of the investment policy min/max constraints and targets.

CAC (MPI) 2-42

Volume:	**CAC (MPI) 1-94**	**Page No.:**	
Topic:	**Volume I - Overview**		
Sub Topic:	**Interest Rate Forecasting Risk Factor (IRFRF), page 4**		
Issue:	**Interest Rate Forecasting Risk Factor (IRFRF)**		

Preamble: In the response to CAC (MPI) 1-94, MPI said "MPI should not knowingly generate or otherwise rely on forecasts that will result in a deficiency in premiums and negatively impact the RSR. The IRFRF is necessary to prevent this situation."

Question:

a) To what extent (greatly, not at all, or somewhere in between) does the timing of MPI's recommended introduction of IRFRF reflect:

   i. MPI's current funding status?
   ii. The current level of interest rates?
   iii. The best estimate forecast of interest rates by MPI?
   iv. The best estimate forecast of interest rates by relevant third parties?

b) Which of the above potential catalysts for change (in proposing an IRFRF) is the most important consideration? Least important?

c) If MPI had had a better forecast of interest rate movements in the past, given the actual changes in interest rates that has unfolded, what impact would that better forecast have had on:

   i. Proposed changes to (premium) rates in the past and under this application?

      1. Would MPI have proposed higher or lower rates, and why?
      2. Would (accounting) asset values today be different, if so, how?
      3. Would (accounting) liability values today be different, if so, how?

d) What is the main problem that MPI is trying to solve with the introduction of IRFRF?

   i. MPI's interest forecasting has large errors, or larger errors than "normal"?
   ii. Interest rates have fallen (and may not rise in the next few years)?
   iii. Both?

e) How, if at all, would the introduction of an IRFRF that effectively improves interest rate forecasts impact the design of the portfolio (e.g., asset mix or portfolio duration)?

   i. Please confirm that the IRFRF would not impact the long-term asset mix.
   ii. Please confirm that the IRFRF would not (materially) impact portfolio duration, given MPI's policy to match the duration of assets and liabilities (except to the extent of the application of a different, presumably better, interest rate forecast in any duration calculations).

f) Is the IRFRF a tool for providing "rate stability", providing another reserve/cushion for adverse deviations relative to a forecast by valuing assets and liabilities differently?

Rationale for Question:

To ensure transparency in the Corporation and that forecasts are reasonably reliable and actual and projected costs incurred are necessary and prudent. Also to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves) and for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The timing of the application for an Interest Rate Forecasting Risk Factor (IRFRF) is driven by the persistence of low predictive power of the Standard Interest Rate Forecast (SIRF), and the fact that MPI would not use the SIRF in preparing the rate indication, but for the PUB's 2015 Order directing MPI to use the SIRF. MPI considered it necessary to take some action to respond to the PUB's Order given the financial risk to Basic posed by using the SIRF without any adjustment. The continued use of the SIRF will negatively impact the overall financial status of Basic and undermine the objective of maintaining stable and predictable Basic premiums. In the past, MPI has been able to respond to the low predictive power of the SIRF by using excess equity from the competitive lines. Continuing to plan for under recovery due to reliance on forecasts that are not best estimates in anticipation of further capital transfers would be inconsistent with operating Basic on a break-even basis. It has also reached the point of being unsustainable, as excess equity in the competitive lines has now been depleted.

b) Stable and predictable Basic premiums are paramount. This cannot be accomplished without a sound financial condition for Basic, and prospective rates set using best estimate forecasts.

c) Generally speaking, actual interest rates have fallen while each year's forecast expects interest rates to increase. If previous interest rate forecasts had falling interest rates, Manitoba Public Insurance (MPI) would have requested higher premium rates in the past.

   More specifically, in this year's rate application the SIRF has posed financial risk to Basic net income. As a result, the Corporation is requesting an additional rate increase (IRFRF) above the 2% rate increase.

   A better forecast would not change the asset values or liability accounting values since market interest rates, not forecasted interest rates, impact the accounting values of the fixed income portfolio and the claims liabilities.

d) The SIRF has suffered from low predictive power for a number of years, and is not, in the Corporation's view, a best estimate. This creates a financial risk to Basic when the interest rates do not materialize as forecast. The requested IRFRF is intended to address this risk, while complying with Board order to set rates based on the SIRF. In the most simplistic terms, using the SIRF results in MPI forecasting it will earn income it knows it will not earn. Forecasting rates based upon income MPI knows it will not earn creates a premium deficiency that undermines the financial health of Basic.

e) The introduction of the IRFRF will not impact the design of the long-term portfolio.

It is confirmed that the introduction of the IRFRF will not have an impact on the long-term asset mix and will not materially impact the portfolio duration.

f) The IRFRF is proposed as a means to remedy financial risk posed by the SIRF, while complying with PUB orders. There is greater risk to rate stability absent the IRFRF, as losses resulting from the SIRF are expected, which results in planned under charging of Basic premiums and ratemaking that is inconsistent with best estimates of breakeven. Further, the Corporation's ability to transfer retained earnings to Basic is depleted.

The IRFRF is in no way related to the valuation of assets and liabilities.

CAC (MPI) 2-43

Volume:	**CAC (MPI) 1-112**	**Page No.:**	
Topic:	**Rate Stabilization Reserve**		
Sub Topic:	**DCAT**		
Issue:	**RSR Range using DCAT**		

Question:

Please calculate the RSR target, using the current DCAT, beginning of the 2017/18 fiscal year, such that all 1-in-100 year adverse scenarios maintain a positive Total Equity balance over the forecast period.

Rationale for Question:

To calculate one additional scenario to assist in building a possible RSR range that can be supported by the DCAT methodology in order to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR), and for setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

Manitoba Public Insurance would require $209 million in Total Equity as of February 28, 2017 to maintain a positive Total Equity balance for all 1-in-100 year scenarios.

CAC (MPI) 2-44

Volume:	**CAC (MPI) 1-112**	**Page No.:**	
Topic:	**Volume II - RSR**		
Sub Topic:	**DCAT**		
Issue:	**RSR Range**		

Question:

Would the Corporation agree that the range of Total Equity requirements given in response to CAC (MPI) 1-112 could be used to determine a range for the RSR?

Rationale for Question:

To continue the discussion on the use of scenarios to determine the range for the RSR. Also, to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR) for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

For the reasons outlined by the Corporation in *PUB (MPI) 1-24*, the Corporation believes that the Minimum Capital Test should be used to establish the upper bound of the Rate Stabilization Reserve.

CAC (MPI) 2-45

Volume:	**II**	**Page No.:**	
Topic:	**Rate Stabilization Reserve – RSR1.2.2**		
Sub Topic:			
Issue:	**Dynamic Capital Adequacy Test (DCAT)**		

Preamble: "The requested adverse scenarios are provided in this report for various percentile outcome levels including the 95th percentile (1-in-20) and the 97.5th percentile (1-in-40) levels. MCT ratios are only modeled for the selected adverse scenarios at the 1-in-40 level; however, the Corporation can provide the results for any other adverse scenarios through information requests or the DCAT collaborative process."

Question:

a) Please provide DCAT results for the 95th (1-in-20) percentile for each scenario (three individual and one combined).

b) Please also provide DCAT results for the 90th (1-in-10) percentile and 99th (1-in-100) percentile for each scenario (three individual and one combined).

Rationale for Question:

To assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR) and, setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

The table below shows the projected Total Equity for each of the Interest Rate Decline scenarios. The results are shown without management or regulatory action.

Table 1 Interest Rate Decline Scenario
Total Equity (in millions)

Probability	Return Period	2017/18	2018/19	2019/20	2020/21
1-in-200	1 year	$169	$145	$113	$80
1-in-100	1 year	$169	$145	$113	$80
1-in-40	1 year	$169	$145	$113	$80
1-in-20	1 year	$169	$149	$125	$94
1-in-10	1 year	$169	$160	$141	$118
1-in-200	2 year	$169	$145	$113	$80
1-in-100	2 year	$169	$145	$113	$80
1-in-40	2 year	$169	$145	$113	$80
1-in-20	2 year	$169	$145	$113	$80
1-in-10	2 year	$169	$145	$113	$80
1-in-200	3 year	$169	$145	$113	$80
1-in-100	3 year	$169	$145	$113	$80
1-in-40	3 year	$169	$145	$113	$80
1-in-20	3 year	$169	$145	$113	$80
1-in-10	3 year	$169	$145	$113	$80
1-in-200	4 year	$169	$145	$113	$80
1-in-100	4 year	$169	$145	$113	$80
1-in-40	4 year	$169	$145	$113	$80
1-in-20	4 year	$169	$145	$113	$80
1-in-10	4 year	$169	$145	$113	$80
Base		$220	$236	$251	$265

The table below shows the projected Total Equity for each of the Equity Decline scenarios. The results are shown without management or regulatory action.

Table 2 Decline in Equity Markets Scenario
Total Equity (in millions)

Probability	Return Period	2017/18	2018/19	2019/20	2020/21
1-in-200	1 year	$63	$72	$72	$67
1-in-100	1 year	$80	$89	$91	$88
1-in-40	1 year	$104	$115	$119	$120
1-in-20	1 year	$125	$136	$143	$146
1-in-10	1 year	$150	$162	$171	$176
1-in-200	2 year	$134	$75	$77	$72
1-in-100	2 year	$142	$88	$91	$90
1-in-40	2 year	$155	$109	$115	$115
1-in-20	2 year	$166	$129	$137	$138
1-in-10	2 year	$180	$153	$163	$168
1-in-200	3 year	$161	$119	$74	$72
1-in-100	3 year	$168	$131	$92	$91
1-in-40	3 year	$177	$149	$120	$120
1-in-20	3 year	$186	$165	$142	$145
1-in-10	3 year	$195	$184	$169	$175
1-in-200	4 year	$184	$162	$137	$104
1-in-100	4 year	$187	$167	$145	$114
1-in-40	4 year	$191	$176	$157	$131
1-in-20	4 year	$196	$184	$169	$148
1-in-10	4 year	$201	$195	$186	$172
Base		$220	$236	$251	$265

The table below shows the projected Total Equity for each of the High Loss Ratio scenarios. The results are shown without management or regulatory action.

**Table 3 High Loss Ratio Scenario
Total Equity (in millions)**

Probability	Return Period	2017/18	2018/19	2019/20	2020/21
1-in-200	1 year	$123	$144	$151	$151
1-in-100	1 year	$145	$165	$174	$175
1-in-40	1 year	$157	$177	$187	$190
1-in-20	1 year	$166	$185	$196	$200
1-in-10	1 year	$178	$197	$208	$212
1-in-200	2 year	$178	$94	$101	$102
1-in-100	2 year	$156	$116	$123	$124
1-in-40	2 year	$163	$136	$148	$149
1-in-20	2 year	$181	$154	$167	$169
1-in-10	2 year	$197	$170	$184	$188
1-in-200	3 year	$165	$126	$61	$61
1-in-100	3 year	$196	$135	$83	$84
1-in-40	3 year	$196	$192	$115	$121
1-in-20	3 year	$163	$165	$142	$145
1-in-10	3 year	$200	$186	$165	$170
1-in-200	4 year	$149	$82	$75	$31
1-in-100	4 year	$148	$125	$74	$55
1-in-40	4 year	$181	$165	$152	$98
1-in-20	4 year	$184	$138	$168	$124
1-in-10	4 year	$196	$194	$189	$154
Base		$220	$236	$251	$265

The table below shows the projected Total Equity for each of the Combined scenarios. The results are shown without management or regulatory action.

Table 4 Combined Scenario
Total Equity (in millions)

Probability	Return Period	2017/18	2018/19	2019/20	2020/21
1-in-200	1 year	$2	($23)	($60)	($105)
1-in-100	1 year	$24	($6)	($50)	($95)
1-in-40	1 year	$55	$28	($12)	($55)
1-in-20	1 year	$79	$72	$48	$18
1-in-10	1 year	$106	$116	$105	$91
1-in-200	2 year	$99	($51)	($80)	($111)
1-in-100	2 year	$112	($32)	($56)	($79)
1-in-40	2 year	$86	($3)	($44)	($68)
1-in-20	2 year	$117	$32	$4	($13)
1-in-10	2 year	$141	$65	$31	$19
1-in-200	3 year	$99	$17	($111)	($131)
1-in-100	3 year	$96	$14	($82)	($106)
1-in-40	3 year	$128	$31	($49)	($69)
1-in-20	3 year	$156	$94	($10)	($17)
1-in-10	3 year	$154	$118	$31	$30
1-in-200	4 year	$149	$79	($24)	($196)
1-in-100	4 year	$133	$61	($36)	($162)
1-in-40	4 year	$195	$93	($2)	($110)
1-in-20	4 year	$136	$67	($10)	($69)
1-in-10	4 year	$163	$99	$56	($17)
Base		$220	$236	$251	$265

CAC (MPI) 2-46

Volume:	**II**	**Page No.:**	
Topic:	**Rate Stabilization Reserve – RSR 2**		
Sub Topic:			
Issue:	**Combined Scenario (DCAT)**		

Preamble: "Our simulation assumes that undiscounted claims costs are independent of interest rates and equity returns. . . Based on the historical data, we have assumed that equity returns and interest rate movements have zero correlation in our modeling."

Question:

a) Please confirm that the three individual event scenarios (interest rate decline, equity decline and high loss ratio) are assumed to be independent in the combined scenario.

b) For a 1-in-40 (0.025) probability event in the combined scenario, please confirm that a suitable combination of the three individual events would be an interest rate decline scenario at 1-in-3.4 (0.2925) probability event, an equity decline scenario at 1-in-3.4 (0.2925) probability event and a high loss ratio scenario at 1-in-3.4 (0.2925) probability event, since the combined probability of these three independent events would be 0.025 (0.2925x0.2925x0.2925).

c) Please indicate the probability levels for the three individual scenarios associated with the illustrative combined scenario, i.e. 1.19% interest rate, 0.84% equity return and claims costs $13 million over budget (RSR 1, p.11)

d) Please provide scenarios corresponding to 1-in-3.4 (0.2925) probability events for each of the interest rate decline, equity decline and high loss ratio events.

Rationale for Question:

To assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR) and, setting just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) The three individual event scenarios are independently simulated in the model. However, when combined the events may produce larger impacts than the individual event scenarios. For example, an interest rate decline combined with a high loss ratio will result in a larger impact as compared to if these two events were simulated separately.

b) This is incorrect. Since the model is combining the effects of three events, it is not appropriate to take three percentiles that multiply to the 2.5th percentile as representation of the 2.5th percentile. For example, taking the 50th percentile for each event would not equal the 12.5th percentile (0.5x0.5x0.5) of the overall combined result.

c) The probabilities of the individual scenarios outlined in _Volume II RSR 1.2.2 page 11_ are as follows in bold:

- Projected yields on Government of Canada 10 year bonds decline from 1.76% in 2016/17 (i.e. the base forecast) to 1.19% by 2020/21. **19.8th percentile**

- Total equity returns are 0.84% per year compared to the base forecast of 7.3% per year from 2017/18 through 2020/21. **7.98th percentile**

- Ultimate claims costs (excluding the impact of interest rates) are on average $13 million over budget per year from 2017/18 through 2020/21. **78.8th percentile of overall simulated claims.**

d) The Corporation is unable to simulate a combined model by selecting a specific percentile for each individual event (interest rate decline, equity decline and high loss ratio). The Corporation simulates claims costs on the claim level, therefore it would not be appropriate to select the 29.25th percentile of claim severity and claim count for all distributions. These results would not be useful as outlined in part a) and b).

CAC (MPI) 2-47

Volume:	PUB(MPI) 1-13	Page No.:	
Topic:	Volume I OV.2		
Sub Topic:			
Issue:	DCAT Base Forecast does not Follow Canadian Institute of Actuaries's Standards of Practice		

Preamble: As per the Canadian Institute of Actuaries' Standards of Practice "The base scenario would be a realistic set of assumptions used to forecast the insurer's financial position over the forecast period." The response to PUB(MPI) 1-13 states that "the interest rate forecast methodology that MPI is required to use can reasonably be expected to yield incorrect results in the current market environment."

Question:

a) Please explain why the base forecast does not follow the CIA's Standards of Practice and why the Corporation feels that they are "required" to use a base interest rate forecast that they believe is unreasonable.

b) If the base forecast of the DCAT was reasonable and not "expected to yield incorrect results" would the RSR and the IRFRF not serve the same purpose? Please elaborate on the response.

Rationale for Question:

To understand the rationale for the DCAT base forecast being outside the range of reasonableness and to fully understand the purpose of the IRFRF. Also to ensure that forecasts are reasonably reliable and to assess the reasonable revenue needs of the applicant in the context of its overall general health (including reserves such as the RSR) for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

a) In preparing the base forecast, the Corporation has to follow both regulatory requirements and Canadian Institute of Actuaries (CIA) Standards of Practice. It is both reasonable and "realistic" for the Actuary to assume that the Corporation's base forecast will follow regulatory requirements. The use of the Standard Interest Rate Forecast in the Corporation's base forecast is in response to a direct order by the Public Utilities Board (Order 128/15, Order 10.14). The difficulty that exists is that the Corporation (and its Actuary) believes the Standard Interest Rate Forecast is not a best estimate. In order to meet the requirements of the Board Order and CIA Standards of Practice, the Corporation has prepared its base scenario pursuant to the Order and identified the risk of implementing the Order (the risk is identified through the introduction of the Interest Rate Forecasting Risk Factor).

b) The issue surrounding the Interest Rate Forecasting Risk Factor (IRFRF) is that the Corporation believes that Basic rates are not being set on a best estimate, break-even basis in the 2017 General Rate Application (GRA). The Corporation has filed 2017 rates in compliance with Board Order 128/15, but has also requested an IRFRF to address the interest rate forecasting issue. The determination of best-estimate, break-even rates (IRFRF) is a different issue than the calculation of the potential variability around the best estimate (RSR).

CAC (MPI) 2-48

Volume:	PUB (MPI) 1-21	Page No.:	
Topic:	AON ALM Study from 2016 GRA		
Sub Topic:			
Issue:	Risk and Reward Measures		

Preamble: In the response to PUB (MPI) 1-21 d) the Corporation states "Average annual basic net income reflects that, all things being equal, having a higher basic net income is desirable. It is a more direct measure of success than average invested asset return which only incorporates one element of net income."

Question:

a) MPI's goal, for basic insurance, is to break even over the long term. Please explain how this goal would impact the risk-reward relationship in the optimization process, if at all.

b) In AON's view, which would be the standard risk-reward parameters used in the optimization process?

Rationale for Question:

To gain a better understanding of the AON ALM study and to ensure that forecasts are reasonably reliable.

RESPONSE:

a) The volatility of net income determines the risk/reward relationship, not the goal to break even.

b) Aon Hewitt (AON) provided the following response:

There is not one standard risk and reward measure used in optimizations. We work with each client to determine a risk and reward measure that is meaningful to them, given their individual fund situation, goals and objectives.

CAC (MPI) 2-49

Volume:	PUB (MPI) 1-22	Page No.:	
Topic:	Investment Income		
Sub Topic:	Impaired investments		
Issue:	External Auditor Adjustments		

Preamble: In the External Auditor's adjustment letter (PUB (MPI) 1-22 c) Attachment C on page 2, as at February 29, 2016 it states "We have assessed management's impairment analysis and concurred with their assessment. We noted that $9.2 million should have been recognized in prior year retained earnings based on our prior year impairment assessment."

Question:

a) Please elaborate as to whether the net income for 2014/16 was understated by $9.2 million based on last year's impairment analysis.

b) Please provide an analysis of all unrecorded recommended external auditor audit adjustments as at February 29, 2016. Please explain the disposition of these adjustments.

c) Please file a copy of the external auditor's management letter, including management's responses, issued for the year ended February 29, 2016.

Rationale for Question:

To gain a better understanding of the financial impact of recommended external auditor's audit adjustments on current operations and on forecasts.

RESPONSE:

a) The Corporation sought clarity from Consumers' Association of Canada (CAC) and was advised that the question should reference the net income for 2014/15. The 2014/15 net income was not understated by $9.2 million based on last year's impairment analysis.

b) The $9.2 million recommended by the external auditors as adjustments was made up of two items:

1. $7.9 million relating to an adjustment to opening retained earnings and investment income. As this amount was taken into account in the 2015/16 fiscal year, no adjustment was required.

2. Net $1.3 million relating to the recording of the Canadian Oil Sands conversion. As the amount is included in the Total Equity, no adjustment was made.

c) Please see attached.

Attachment A
Agenda C.2
May 26, 2016

Personal and Confidential
May 17, 2016

Ms. Heather Reichert, FCA
Vice President Finance and Chief Financial Officer
Manitoba Public Insurance Corporation
234 Donald Street
PO Box 6300
Winnipeg MB R3C 4A4

Dear Ms Reichert:

During the course of our audit of Manitoba Public Insurance Corporation for the year ended February 29, 2016 we identified matters which may be of interest to management. The objective of an audit is to obtain reasonable assurance whether the financial statements are free of material misstatement and it is not designed to identify matters that may be of interest to management in discharging its responsibilities. Accordingly an audit would not usually identify all such matters.

The matters identified have been included on the subsequent pages.

This communication is prepared solely for the information of management and is not intended for any other purpose. We accept no responsibility to a third party who uses this communication.

Yours very truly,

PricewaterhouseCoopers LLP

Patrick Green, CPA, CA
Assurance

cc: Mr. Dan Guimond, President and Chief Executive Officer
Ms. Cynthia Campbell, Executive Director, Finance & Corporate Controller
Mr. Joe Riel, Manager Internal Audit

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"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

Memorandum of recommendations arising from our review of internal controls related to financial reporting

1. Valuation of swapped bonds

Observation

The Corporation invests in the Province of Quebec bonds in US dollar and a US/ CAD foreign exchange swap in order to hedge the bond's cash flow. Management calculates the fair value of this by assessing the net present value of net cash flows from the swap and the bond. In doing so a variance from the Corporation's calculation and what is confirmed and/or recalculated by third parties exists.

As they are two separate investments from two different parties, they should be valued separately, which would be the value of the bond and the value of the swap.

Impact

Valuation differences between the calculation by the Corporation and third parties can be materially different.

Recommendation

A review of the valuation process and calculation should be performed to determine a method which calculates the bond and the swap separately.

Management Comments

Management will review the process and calculation to mitigate the risk of a material difference between our methodology and the third party confirmation.

CAC (MPI) 2-50 Confidential

Volume:	**PUB (MPI) 1-58**	**Page No.:**	
Topic:	**PDR**		
Sub Topic:			
Issue:	**PDR Change Request**		

Preamble: In the attachment to PUB (MPI) 1-58 a) on PDF page 2 it states "A costing evaluation for the replacement of CARS was completed in early 2013. This evaluation identified a higher than expected cost to replace CARS and became the catalyst for the development of the new strategy and implementation approach to the PDR program."

"The new strategy also pursued alternative hybrid solution options which resulted in a higher probability of project budget and project savings being realized with lower associated implementation cost and timeline risks. At the conclusion of the strategy development, PDR program executive sponsors made a decision to associate the CARS replacement within the context and scope of the IT Strategy/Technology Refresh Roadmap in order to mitigate any associated budget and timeline risk."

On page PDF page 14 it states "In order to streamline the First Notice of Loss process through better claim triaging, significant changes would be required to the existing CARS legacy system."

"As FINEOS is currently used by the Corporation for Bodily Injury Claims, a fit assessment was conducted with FINEOS to determine fit for both First Notice of Loss and CARS legacy system replacement functionality."

Question:

Please provide an analysis of the difference in costs and functionality between moving forward with FINEOS compared to moving forward with the replacement of CARS strategy (a more recent strategy) for the development of PDR IT systems. Please file documentation supporting the executive sponsors' decision in this regard.

Please provide a discussion on how the CARS system will be replaced or re-engineered to meet the requirements of the PDR program.

Since, it appears, MPI is not using FINEOS for the PDR program, has MPI considered other systems; such as Guidewire? If not, why not? Please elaborate on the response.

Rationale for Question:

To gain an understanding of the magnitude of the PDR change request on costs, functionality and alternatives considered when issuing the change request, and to determine whether, by using older technology, such as CARS, IT costs are being deferred to maintain the current PDR program budget. Also to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

During the course of the Physical Damage Re-engineering (PDR) program, the detailed planning for the Claims Administration & Report System (CARS) replacement (with FINEOS) forecasted a significant cost increase to the PDR program budget. To stay within the PDR budget, an alternative approach was required. A solution based on utilizing the existing CARS system was developed with the following goals and approach:

- deliver PDR benefits without replacing the CARS system;
- stay within the overall PDR budget;
- Minimize change to the CARS system.

The CARS system will have some modifications developed to support the PDR program:

- the primary modifications are required to support the various Mitchell integrations;

- most of the CARS user interface will not be impacted by the PDR changes;

- a few new CARS screens will be created to support the new processes.

Since the delivery of PDR functionality does not require a new platform, alternative solutions will not be considered at this time.

CAC (MPI) 2-51 Confidential

Volume:	**PUB (MPI) 1-62**	**Page No.:**	
Topic:	**PDR**		
Sub Topic:			
Issue:	**PDR Expenses**		

Preamble: PUB (MPI) 1-62 d) compares the Original Program Budget to the Current Program Budget for PDR.

There are significant differences between the budgets for 5 projects as follows:

Project	Current Program Budget $	Original Program Budget $	Increase (Decrease) $
Optimized Adjusting	21,6502,345	31,810,658	(10,160,313)
Program Management	8,724,106	4,488,341	4,235,766
Optimized Repair & Support	7,648,378	0	7,648,378
Parts	1,361,084	0	1,361,084
Loss Prevention	0	2,815,062	(2,815,062)

Question:

Please provide a detailed explanation and reasons for the increases and decreases from Original to Current Budget for the above 5 projects.

Rationale for Question:

To gain an understanding of the changes in costs and possibly in functionality taking place in the PDR project from what was initially envisioned to what is currently presented, and to ensure that actual and projected costs incurred are necessary and prudent for the setting of just and reasonable rates in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

As provided in the original response (*PUB (MPI) 1-62*), the table below was used to describe high-level changes from the original Physical Damage Re-engineering (PDR) Program Budget and the current PDR Program Budget.

	Current Program Budget	Original Program Budget	Variance
PDR Phase 1	$ 1,446,146	$ 1,446,146	$ (0)
PDR Phase 2	$ 1,661,788	$ 927,263	$ 734,525
Optimized Repair	$ 18,604,097	$ 18,779,694	$ (175,598)
PDR Phase 3			
Optimized Adjusting	$ 21,650,345	$ 31,810,658	$ (10,160,313)
Program Management	$ 8,724,106	$ 4,488,341	$ 4,235,766
Optimized Repair & Support	$ 7,648,378	$ -	$ 7,648,378
Parts	$ 1,361,084	$ -	$ 1,361,084
Website Re-design Phase 2	$ 4,389,829	$ 5,218,612	$ (828,782)
Loss Prevention	$ -	$ 2,815,062	$ (2,815,062)
Total	$ 65,485,773	$ 65,485,776	$ (3)

The Original Program Budget, as shown in this table, was established in 2012 and was used as input to the capital planning process for the 2013/14 fiscal year. At that point in time, the PDR program was in the early stages of planning, and the formulation of the original budget was based upon information known. The original Program Charter was created to reflect the overall program purpose and program objectives, with the program scope articulating the high level projects expected to meet and deliver the business benefits.

The Current Program Budget was established, and revised in 2015 with a re-assessment of the entire PDR program. This reassessment was precipitated by the ongoing rapid changes occurring in the vehicle industry and incremental learnings during the initial phases and implementations associated with the PDR program. As part of this reassessment exercise, all planned projects were reviewed. Some projects were deferred or removed, and other new projects were identified; all with the ultimate goal of delivering the realized benefits, and while staying within the original capital program spend. The differences identified reflect these changes and are described below:

i. Optimized Adjusting ($10.1M decrease) – with the Claims Administration & Reporting System (CARS) replacement removed from the program scope, much of the originally anticipated functionality from the first notice of loss (FNOL) and the adjusting process was removed from scope. This resulted in less money being spent.

ii. Parts ($1.3 increase) – this represents the introduction of a new project to increase the percentage of alternate parts used in the repair process.

iii. Optimized Repair Support ($7.6M increase) – this represents a series of projects to support the optimized repair components of the PDR Program, specifically Collaborative Estimating (CE) and Distributed Estimating (DE). Project initiatives such as Remote Estimating, Shop Training, Enhanced Accident Profiling, etc. are designed to support the delivery of the business case and the realized benefits for the PDR program.

iv. Program Management ($4.2M increase) – during the reassessment, a number of new projects were identified. Each of these projects will require project oversight, and as such, will increase the allocation of funds for project and program management. In addition, the program was extended for an additional year.

v. Loss Prevention ($2.8M decrease) – funding for the Loss Prevention project was removed from the PDR Project as the corporation was able to leverage an existing analytical tool.

CAC (MPI) 2-52 Confidential

Volume:	**CAC (MPI) 1-130**	**Page No.:**	
Topic:	**I – Attachment A: PDR Gartner Report - Executive Summary**		
Sub Topic:			
Issue:	**PDR Gartner Report**		

Preamble: CAC (MPI) 1-130 indicated that on page PDF 4 of the PDR Gartner Report it states "The overall program budget has been consistently $65M (in 2012 dollars) throughout all changes in direction and approach. Approximately $32M has been spent on the Program to date with $32.6M remaining to complete the project. As is to be expected in a program of the duration and complexity of PDR, and given the rapid changes in automotive and repair technologies, the Program continues to undergo scoping, planning and mapping of outcomes to projects." It further states "However, it also introduces the potential for additional costs, extended timeline and deferred benefits realization."

The response sought in CAC (MPI) 1-130 was Gartner's opinion, but the Corporation's response was not clear as to whose opinion was provided.

Question:

Please provide Gartner's response to the questions posed in CAC (MPI) 1-130:

From Gartner's perspective, the corporation is spending/investing 2012 dollars in the PDR Program with benefit realization starting in year 7 and topping out in 2020/21 (year 11) with an expected IRR of 8% and a NPV of $18M (3% cost of capital):

a) In Gartner's opinion, can you provide an estimate of the useful life of a project of this nature?

b) In Gartner's opinion should the corporation expect to make additional investments into the PDR Program between now and 2020/21 to keep it current? If yes, can you estimate the amounts of additional investments?

c) In Gartner's opinion would you expect the PDR Program to be replaced in its entirety or significantly be modified to stay current? If the program is expected to be replaced, what would be the expected additional costs?

d) In Gartner's opinion, are there software providers to Property and Casualty Insurers in North America that are "best in class" that should be considered by MPI going forward? If yes, please elaborate.

Rationale for Question:

To obtain an understanding of the order of magnitude of costs and benefits realization going forward and impact on basic insurance rates from Gartner's perspective and to ensure that actual and projected costs incurred are necessary and prudent in accordance with statutory objectives (Order 98-14, p. 28).

RESPONSE:

In response to the pre-amble, the Corporation provided its opinion in response to *CAC (MPI) 1-130*, as indicated at the beginning of that response: "It is unclear whose opinion is sought. *The Corporation provides its opinion below*".

a) to d)

For Gartner's response please see the Attachment.

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Mike Poitras

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Manitoba Public Insurance Corporation
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Re: Response for Public Utility Board (PUB) Inquiry

Dear Mr. Poitras

We are pleased to provide this response to your request to address a second round of information requests from the PUB regarding the PDR Evaluation.

1) From Gartner's perspective, the corporation is spending/investing 2012 dollars in the PDR Program with benefit realization starting in year 7 and topping out in 2020/21 (year 11) with an expected IRR of 8% and a NPV of $18M (3% cost of capital):

a. In Gartner's opinion, can you provide an estimate of the useful life of a project of this nature?

The PDR program will deliver a number of software applications and also changes to business model and work processes. Software applications such as these, when appropriately maintained can be useful for many years. Many corporations have legacy applications that can be decades old. System usefulness is a function of business needs/requirements. Ideally, if business needs change, systems will change. This could occur next month, next year or next 10 years. The applications and business changes that PDR will introduce are one of MPI's first forays into the area of digital business. In this context, it is likely that both the software and the business processes will continue to evolve and adapt over time.

b. In Gartner's opinion should the corporation expect to make additional investments into the PDR Program between now and 2020/21 to keep it current? If yes, can you estimate the amounts of additional investments?

As with any investment in business transformation, Gartner would expect that there will be ongoing investment to maintain and enhance the applications, processes, and

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business model which is enabled by the PDR program. Ideally, if business needs change, systems will change. Gartner would expect that MPI will budget for ongoing maintenance, will continuously review the opportunities to enhance the software and processes, and will develop rigorous business cases which present the costs of these potential initiatives and compare them to the overall cost of implementing, operating, and supporting them. Application maintenance fees often are 18% - 20% of the initial software cost. The cost for enhancement and optimization will be dependent on the scope and scale of each opportunity.

c. In Gartner's opinion would you expect the PDR Program to be replaced in its entirety or significantly be modified to stay current? If the program is expected to be replaced, what would be the expected additional costs?

The PDR Program will deliver software applications and changes to business processes. Gartner does not expect that these will be replaced in their entirety. It is likely that the business processes will change over time. It is also likely that some of the software will be modified over time, and that some portions of the software will be replaced by more up to date solutions which provide more functionality and more business value.

d. In Gartner's opinion, are there software providers to Property and Casualty Insurers in North America that are “best in class” that should be considered by MPI going forward? If yes, please elaborate.

An abundance of new technologies are available to help P&C insurers support emerging business, including digital insurance, customer centricity and product innovation. Gartner publishes a Hype Cycle for P&C Insurance designed to help insurance CIOs evaluate emerging trends and technologies and their impact on this industry segment. CIOs and business leaders should use it to determine the adoption level, maturity, business

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impacts, benefits, and risks of specific emerging and developing technologies. In addition, the research lists some of the vendors who provide solutions in each of the areas addressed in the hype cycle. Gartner's advice to clients is to determine which of the technology areas are most relevant to their business strategy and to focus on the vendors and solutions in that space.

In addition, Gartner publishes Magic Quadrant analyses. The Magic Quadrant for claims management modules is a review of established vendors that support full end-to-end claims management and issuance functionality for P&C insurers. The Magic Quadrant for policy management modules is a review of established and emerging vendors that support full, end-to-end policy management and issuance functionality — including quoting, rating, underwriting, policy generation and statistical reporting. Gartner believes that there is a high degree of consistency among core claims management functionality, from first notice of loss to settlement, including enhanced configuration and workflow. Claims management modules are exhibiting a growing emphasis on advanced capabilities such as supply chain management or advanced fraud analytics for differentiation in the market.

The Hype Cycle was provided as part of the original PDR Project Evaluation Report. The two Magic Quadrants are provided below:

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Magic Quadrant for Property and Casualty Insurance Claims Management Modules

Magic Quadrant for Property and Casualty Insurance Policy Management Modules

Background on the Hype Cycle and Magic Quadrant.

The Hype Cycle is a graphical depiction of a common pattern that arises with each new technology or other innovation. Each year Gartner creates more than 90 Hype Cycles in various technology and application, information and IT services and industry domains as a way for clients to track technology maturity and future potential. Gartner's Hype Cycle, introduced in 1995, characterizes the typical progression of innovation, from overenthusiasm through a period of disillusionment to an eventual understanding of the innovation's relevance and role in a market or domain.

Magic Quadrants offer visual snapshots, in-depth analyses and actionable advice that provide insight into a market's direction, maturity and participants. Gartner Magic Quadrants are based on rigorous, fact-based analysis backed up by a highly structured methodology. Gartner recommends that a company's needs and circumstances should determine how it uses the Magic Quadrant, not the other way around. We do not recommend evaluating vendors in the Leaders quadrant only, and ignoring those in other quadrants. There are many reasons for this, including that a vendor in the Niche Players quadrant could offer functions that are ideally suited to the company's needs. Similarly, a Leader may not offer functions that meet its requirements — for example, its offerings may cost more than those of its competitors', or it may not support the region or industry.

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I trust that this provides the information the Public Utilities Board requires.

Yours sincerely,

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