

# Smart Metering Entity (SME) Licence Order Working Group

Meeting # 5

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June 6<sup>th</sup>, 2016

# Agenda

Time	Agenda Item
9:30am – 9:40am	Review of the Agenda and Meeting Objectives
9:40am – 9:50am	Review and Approval of Minutes from Meeting # 4
9:50am – 10:00am	Review of Action Items
10:00am – 11:15am	Review of the Privacy Consultant's Report
11:15am – 12:00pm	Guidelines for synchronization of the new fields
12:00pm – 1:00pm	Lunch
1:00pm – 1:30pm	Technical Specifications Update
1:30pm – 1:45pm	Communications Calendar Update
1:45pm – 2:00pm	Project Timeline Status Update
2:00pm – 2:15pm	Meeting Conclusions, Next Meeting Planning

# Review and Approval of Minutes from Meeting #4

# Review of Action Items

# Review of Action Items

- There are only 4 LDCs that have not responded to the following requests:
  - EDA Survey requesting EDA-member LDCs to specify whether they currently using Postal Code or GPS Coordinates (Latitude and Longitude) to identify the service location
  - SME email note sent on May 11<sup>th</sup>, 2016 requesting confirmation that despite the fact that they have not participated in the May 5<sup>th</sup>, 2016 webinar, they confirm awareness of the project and have reviewed the webinar material
- Individual ‘SME to LDC Communication’ tickets have been created for the 4 LDCs on May 19<sup>th</sup>, 2016
- The SME has scheduled individual conference calls with the 4 LDCs this week

# Review of the Privacy Consultant's Report

# Privacy Consultant's Report

- Privacy Analytics Inc. was contracted by the IESO to perform a conceptual re-identification risk assessment for the data set that will exist in the MDM/R once the OEB order is implemented.
- The purpose of a conceptual re-identification risk determination is to establish an expected re-identification risk level on a dataset before the data elements are collected in order to avoid collecting data which is known to be at a high risk.
- The analysis considered a data set broader than the new data fields, including the following fields: Street, City, ORG\_ID, and USDP\_ID

# Privacy Consultant's Report

- The report covers the data sharing scenario in which the Local Distribution Companies (LDCs) are the *data providers* and the IESO is the *data recipient*.
- The Consultant noted that the records in the MDM/R pertain to dwellings (and not individuals) and therefore, the risks described are for the re-identification of a dwelling.
- The Consultant completed the analysis and issued their report on June 1<sup>st</sup>, 2016.



# Risk Context and Risk Threshold

- In order to provide an estimate of the re-identification risk context in the MDM/R, the Consultant assessed:
  - The Security and Privacy Controls in place at the IESO (deemed to be HIGH)
  - The degree of Recipient Trust in place at the IESO (deemed to be HIGH)
  - The potential invasion of privacy based on the sensitivity and potential harm to those in dwellings represented in the data set.
- From these assessments, the probabilities of re-identification attacks were estimated and an appropriate risk threshold was determined.

# Consultant's Assessment and Recommendations

- The Consultant recommended that *street address* – a field considered to be a *direct identifier* currently being submitted by the LDCs to IESO – be masked (notwithstanding the fact that not all LDCs populate this field with a valid value).
- Based on the conceptual risk determination of the quasi-identifiers contained in the data schema, it was determined that the inclusion of the full (6 character) postal code and the exact occupancy change date would represent an unacceptably high risk of re-identification.

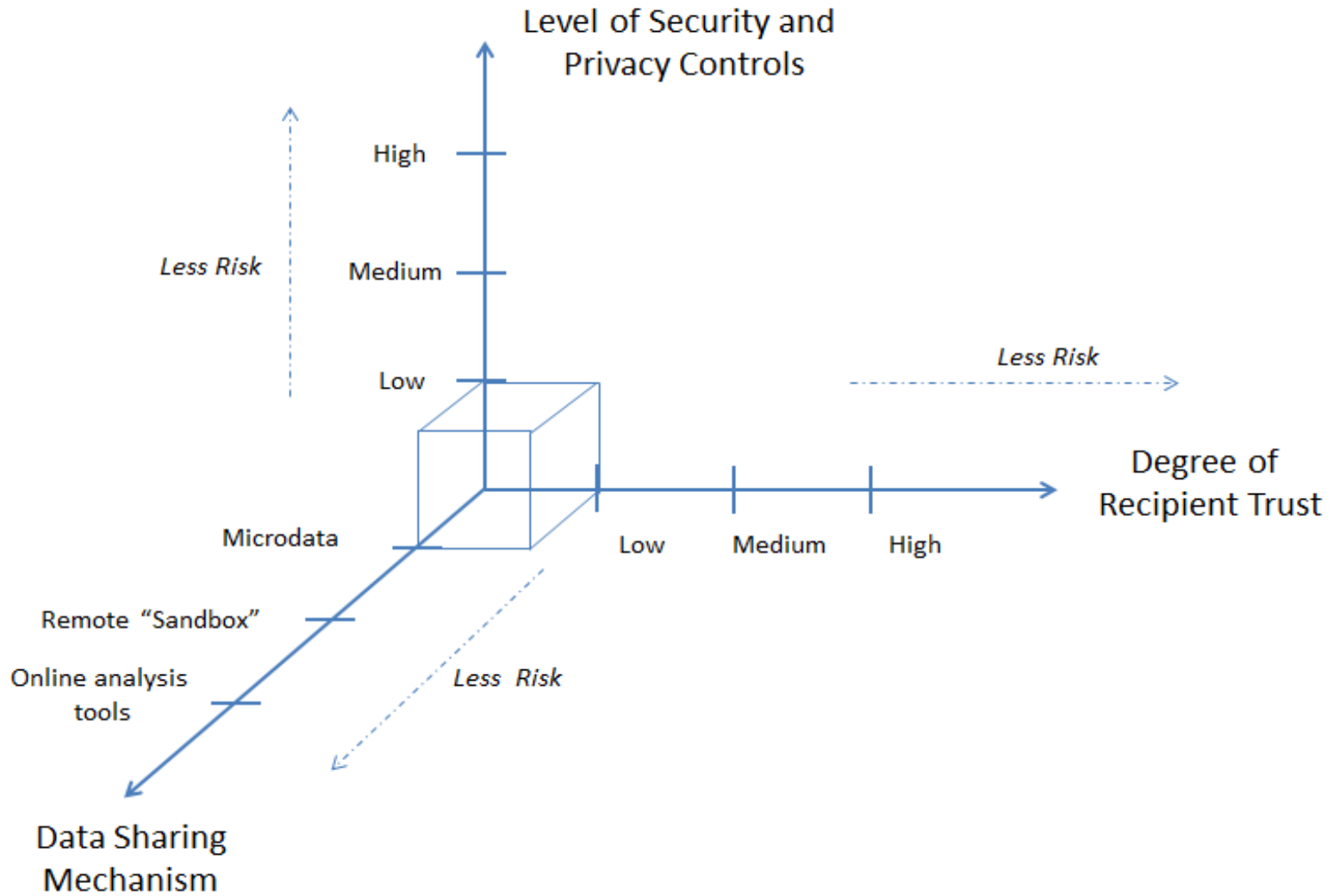
# Consultant's Assessment and Recommendations

- The Consultant identified three possible risk mitigation strategies that would lower the estimated re-identification risk to an acceptably low level:
  1. Generalize postal code to 5 characters and occupancy change date to month
  2. Generalize occupancy change date to year
  3. Remove occupancy change date entirely
- Considering that accuracy and completeness of key data fields is paramount in extracting analytical value from the data set, **the mitigation strategy of generalizing the occupancy change date to year and collecting the 6 character Postal Code is the most viable option.**

# Third Party Access Recommendations

- In the future, the IESO will be acting as a data provider for various categories of external organizations interested in access to the MDM/R data.
- Because no specific organizations in these categories have been identified, it is not possible to complete a full re-identification risk determination for these recipients at this time.
- The Consultant strongly recommends that when a complete data set is available, a data-based risk measurement should be performed within 6-12 months after data capture has been initiated in order to validate the results of this analysis.

# Third Party Access Recommendations



# Conclusions

- The Consultant determined that with the recommended risk mitigation techniques, the risk would be very small that the information contained in the MDM/R smart meter data schema could be used, alone or in combination with other reasonably available information to identify a dwelling that is a subject of the information.

# SME Actions

- The SME will pursue the second mitigation action (generalize the occupancy change date to year).
- The Technical Interface Specifications will be updated and finalized based on the new specifications recommended by the Consultant.
- The SME will share the Consultant's summary report with LDCs for their review.
- The SME will create the framework for third party access and review it with the Working Group during future meetings.

# Guidelines for synchronization of the new fields



# Synchronization File Set Submission

- Synchronization is a mechanism by which all the attributes, parameters and relationships for each location where energy consumption is being measured by a smart meter is defined in the MDM/R. Initial synchronization sends all information for a new SDP from an LDC to the MDM/R
- LDCs send updates to the MDM/R as changes occur (e.g. meter exchanges, move in/move outs)
- The MDM/R offers two types of synchronizations:
  - Incremental Synchronization (I-sync)
  - Periodic Audit Synchronizations (P-sync)
- Only LDCs with 150,000 SDPs or less can use P-sync

# OEB Order Synchronization Guidelines

- All LDCs should use I-syncs to update their SDPs with the data elements required to comply with the OEB order.
- LDCs are encouraged to submit I-syncs with only the required elements (changed or new) as this can considerably reduce the processing time to update the records in the MDM/R.
- If providing all SDP elements is the only option available to a LDC, the LDC should consider synchronizing a percentage of their total SDPs at a time. The suggested number of SDPs in each file will be shared with LDCs upon completion of further SME testing and gathering of the corresponding operational statistics.

# OEB Order Synchronization Guidelines

- When submitting synchronization file sets, please avoid the 3:00am to 7:00am peak meter read data processing time.
- Ensure your I-sync has completed processing and the IR06 and IR07 reports have been received prior to submitting another synchronization.
- P-syncs should be coordinated with the SME for LDCs with more than 25,000 SDPs
- Consider using the window from October 1<sup>st</sup>, 2016 to January 1<sup>st</sup>, 2017 to begin populating the new fields in the MDM/R.

# SME Actions

- The SME will conduct testing that includes processing I-syncs for a varying number of SDPs per synchronization file set to obtain additional statistics and develop guidelines to ensure regular operations is not adversely affected while enabling LDCs to achieve compliance with the OEB order. This testing is expected to be completed during the month of July
- Conclusions from testing will provide specific recommendations and expectations that will be shared with the Working Group and the LDC community
- A Quick Take will be published by the SME that will detail the process and guidelines for submitting I-syncs for the purpose of complying with the order

# Technical Specifications Update

# Premise Address and City Specification

- Consistent with the Privacy Consultant's recommendation, the Premise Address and City fields must be submitted with a value of 'X' in the first character space of the field.

Field	Format	Description
Premise Address	Fill first character space with value of 'X'	The physical address of the SDP
City	Fill first character space with value of 'X'	The city in which the SDP exists

# Premise Address and City Specification

- On October 1<sup>st</sup>, 2016 the MDM/R will default the Premise Address and City values with “X”
- During the period of October 1<sup>st</sup>, 2016 and January 1<sup>st</sup>, 2017, a script will be run regularly to default any received Premise Address and City values with “X”
- As of January 1<sup>st</sup>, 2017 the MDM/R will validate that these two fields are provided in your synchronization files with a value of “X”
  - Submission of a value other than “X” will result in the rejection of your synchronization file set.

# Occupant Change Specification

## SDP Parameter for 'Occupant Change':

- The Parameter Name (Param Name) will be 'Occupant Change' and related to the Service Delivery Point – Universal\_SDP\_ID
- The parameter will be date-effective
  - Start Date Time: **yyyy0101000000**
  - End Date Time: **yyyy1231000000**
  - For example, any Occupant Change that takes place in 2017 must be submitted as follows:
    - Start Date Time: **20170101000000**
    - End Date Time: **20171231000000**
- The Parameter Value (Param Value) will always be provided as 'X'.



# Summary of Deployment Schedule

Element	Expected Value	Accepted by the MDM/R	Validated if submitted	Required & Validated
Commodity Rate Class	101,102,103,104 or 105 Date format: yyyyMMddHHmmss	Oct 1 <sup>st</sup> , 2016*	Oct 1 <sup>st</sup> , 2016*	Jan 1 <sup>st</sup> , 2017
Distributor Rate Class	201,202,203 or 301 Date format: yyyyMMddHHmmss	Oct 1 <sup>st</sup> , 2016*	Oct 1 <sup>st</sup> , 2016*	Jan 1 <sup>st</sup> , 2017
Occupancy Change Flag	X Start Date: yyyy0101000000 End Date: yyyy1231000000	Oct 1 <sup>st</sup> , 2016*	Oct 1 <sup>st</sup> , 2016*	Jan 1 <sup>st</sup> , 2017
Postal Code	A1A1A1	Oct 1 <sup>st</sup> , 2016*	Jan 1 <sup>st</sup> , 2017	Jan 1 <sup>st</sup> , 2017
Premise Address	X	Currently acceptable	MDM/R will default to "X" as of Oct 1 <sup>st</sup> , 2016	Jan 1 <sup>st</sup> , 2017
City	X	Currently acceptable		Jan 1 <sup>st</sup> , 2017

\* Tentative dates that are subject to change based on the overall project schedule

# Communications Calendar Update

# Communications Calendar Update

Communications Type	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
IESO Stakeholder Engagement Website Updates	✓	✓								
IESO Stakeholder Advisory Committee		✓								
IESO Webinars		✓	NEW							
EDA Website / eBlast	✓	✓								
EDA LDC Surveys	✓									
SSC Meetings and LDC Open Calls										
MDM/R Technical Panel Meetings										
GO LIVE Communication										

# Communications Calendar Update

- A webinar session will be scheduled for the LDC community on Monday June 13<sup>th</sup> from 9:30am – 10:30am
- The goal of the webinar is to review with the LDCs the summary of the Privacy Consultant's Report and the resulting changes to the Technical Interface Specifications and to provide an update on the project timeline
- The current plan is to share the following documents with the LDCs shortly after the webinar:
  - The Privacy Consultant's Summary Report
  - The Revised Technical Interface Specifications

# Project Timeline Status Update

# Project Timeline – Status Update

Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Early meetings with various groups	Working Group Formed and Kick off Meeting	Ongoing Working Group Meetings									
Privacy vendor selection and contract negotiations		Conceptual Re-Identification Risk Determination Analysis Draft report expected by May 31, 2016	SME Assessment of 3 <sup>rd</sup> Party Access Development of draft 3 <sup>rd</sup> Party agreements			SME License Application & 3 <sup>rd</sup> Party Access Plan		Documentation & Training		Go Live	
Technical Scoping & Requirements		Development and SME internal testing of the new MDM/R code			New MDM/R code deployed to MDM/R Sandbox environment <b>LDCs' testing</b>	New MDM/R code deployed to MDM/R Production environment with Validation for new SDP Parameters excluding Postal Code					
Regulatory Activities											

# Meeting Conclusions, Next Meeting Planning

# Agreements

- The SME will pursue the following data collection process:
  - collect the 6 character Postal Code
  - generalize the occupancy change date to just the year
  - mask the Premise Address and City fields
- The SME will share the Consultant's summary report with LDCs for their review the week of June 13<sup>th</sup>.
- The SME will create the framework for third party access and review it with the Working Group during future meetings.



# Agreements

- The SME will conduct testing that includes processing I-syncs for a varying number of SDPs per synchronization file set to obtain additional statistics and develop guidelines to ensure regular operations is not adversely affected while enabling LDCs to achieve compliance with the OEB order. This testing is expected to be completed during the month of July
- A Quick Take will be published by the SME that will detail the process and guidelines for submitting I-syncs for the purpose of complying with the order

# Agreements

- The move-out date will be the trigger for the occupancy change year selection.
- The Working Group members will provide input to the SME by end of day Wednesday June 8<sup>th</sup> regarding the Premise Address and City fields.
- The final Technical Interface Specifications will be finalized this week and shared with LDCs next week.
- The EDA will send a communication to their members once the invitation for the webinar is sent out.
- Next Working Group meeting is scheduled for June 24<sup>th</sup>, 2016