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# ArcGIS Business Analyst - 2021 Canada Data Update

Last revised December, 2021

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# 2021 Canada Data Update

## Overview

This release contains the annual update to the Environics Analytics datasets. The 2021 data release reflects the impacts of the pandemic which resulted in more change than typically expected year over year:

The most notable change within DemoStats (current year estimates) is a decline in population growth, due to a slowdown in immigration. Additionally, more than usual year over year change is evident with Labour Force employment/unemployment rates. The impact on employment rates can also be observed in other topics such as Occupation, Place of Work, and Method of Travel to Work.

With the transition to working from home due to COVID-19, there is an observable change in the population working from home instead of their usual place of work.

This year's update to PRIZM includes an update to the variable names in the PRIZM system.

## 2021 Boundaries

All 2021 Canadian geographic boundaries are provided by TomTom, clipped to shorelines and generalized based on the display level.

For this update, streets are provided by HERE (formerly NAVTEQ) and are based on the StreetMap™ Premium for ArcGIS® HERE 2021 Update.

## 2021 Demographic Data

The demographic data for this update is provided by Environics Analytics, comprising the CensusPlus, DemoStats, HouseholdSpend, Daytime Population and PRIZM Segmentation data sets. Detailed documentation for these datasets are appended to this document. Additional documentation can be found on Environics Analytics web site: [www.environicsanalytics.ca](http://www.environicsanalytics.ca)

All demographic data is aggregated to the 2021 geographic and FSA boundaries.

### ***CensusPlus 2016***

The CensusPlus database is an enhanced version of Statistics Canada's **2016 National Household Survey (NHS) and Canadian Census**. Environics Analytics enhances the Statistics Canada data to add missing values and eliminate random rounding (by Statistics Canada) that existed in both NHS and Census data, resulting in a significantly more comprehensive set of demographic data.

The CensusPlus database contains 846 variables. There are no changes to the CensusPlus variable and category types for this update.

The CensusPlus data aggregation to the other administrative boundaries is unchanged from last year.

Refer to the CensusPlus documentation for a detailed listing of all CensusPlus 2016 variables.

### ***2021 DemoStats for Current Year, -5 Year, +3, +5 & +10 Years***

The DemoStats database consists of current year estimates for 763 variables grouped into 43 demographic and socioeconomic categories. A smaller subset of 497 variables representing the core dimensions of the Canadian population is available for each of the historical and projection years, covering 23 of the 43 DemoStats categories. The demographic variables that are not projected are because Environics Analytics determined that there are not enough data available to reliably project or

estimate these variables beyond the current year. The below table lists the major data categories and years they are available for this update:

DemoStats Category	Years Variables Estimated/Projected				
	2016	2021	2024	2026	2031
Basics	x	x	x	x	x
Total Population by Age	x	x	x	x	x
Male Population by Age	x	x	x	x	x
Female Population by Age	x	x	x	x	x
Total Household Population by Age	x	x	x	x	x
Male Household Population by Age	x	x	x	x	x
Female Household Population by Age	x	x	x	x	x
Households by Maintainer Age	x	x	x	x	x
Households by Size of Household	x	x	x	x	x
Households by Household Type	x	x	x	x	x
Population 15 Years or Over by Marital Status	x	x	x	x	x
Census Families by Family Structure	x	x	x	x	x
Census Family Households by Family Structure	x	x	x	x	x
Total Children at Home by Age	x	x	x	x	x
Household Population by 5-Year Mobility		x			
Occupied Private Dwellings by Tenure	x	x	x	x	x
Occupied Private Dwellings by Period of Construction	x	x	x	x	x
Occupied Private Dwellings by Structure Type		x			
Occupied Private Dwellings by Condo Status, Tenure & Structure		x			
Occupied Private Dwellings by Band Status, Tenure & Structure		x			
Households by Income (Constant Year 2015)	x	x	x	x	x
Households by Income (Current Year)	x	x	x	x	x
Household Population 15 Years or Over by Income		x			
Household Population 15 Years or Over by Educational Attainment	x	x	x	x	x
Household Population 25 to 64 Years by Educational Attainment		x			
Household Population 15 Years or Over by Labour Force Activity	x	x	x	x	x
Household Population 15 Years or Over by Class of Worker	x	x	x	x	x
Household Population 15 Years or Over by Occupation		x			
Household Population 15 Years or Over by Industry		x			
Household Population 15 Years or Over by Place of Work		x			
Household Population 15 Years or Over by Method of Travel to Work		x			
Household Population by Religion		x			
Household Population by Visible Minority Status	x	x	x	x	x
Household Population by Aboriginal Identity		x			
Household Population by Knowledge of Official Language		x			
Household Population by Mother Tongue	x	x	x	x	x
Household Population by Language Spoken Most Often at Home		x			
Household Population by Total Immigrants & Place of Birth	x	x	x	x	x
Household Population by Recent Immigrants & Place of Birth		x			
Household Population by Period of Immigration		x			
Household Population by Age at Immigration		x			
Household Population by Generation Status		x			
Household Population by Citizen Age		x			
Household Population by Non-Citizen Age		x			

New, changed or removed variables for this update:

Variable Name	Description	Status
MARHP15	Household Population 15 Years or Over by Marital Status	New ID – all years (added)
MARP15	Population 15 Years or Over by Marital Status	Old ID – all years (removed)

Refer to the DemoStats documentation for a detailed listing of all 2021 DemoStats variables

### **2021 HouseholdSpend**

The HouseholdSpend database by Environics Analytics provides current estimates of annual expenditures for 479 variables spanning 20 categories of goods and services used by Canadian households. These categories are:

HouseholdSpend Categories
HouseholdSpend Basics
Household Expenditures (Category Summary)
Shelter
Food
Household Operation
Health Care
Household Furnishings & Equipment
Transportation
Recreation
Personal Care
Clothing
Education
Reading Materials & Other Printed Matter
Tobacco & Alcohol
Games of Chance
Miscellaneous Expenditures
Personal Insurance & Pension
Gifts of Money & Contributions
Real Estate
Goods & Services by Purchase Method

For 2021, when it comes to the expenditure data in HouseholdSpend, most of the year over year change can be explained by the impact of the COVID-19 pandemic. Categories and variables such as Pre-recorded media, downloads and audio/video media, Household appliances, and Household equipment saw an increase in expenditures. Areas such as Movie theatres, Transportation by airplane, Public transportation, Casinos, bingos and gaming machines, Alcoholic beverages served on licensed premises, and Childcare saw a decrease in expenditures.

There are no variable changes for this update.

HouseholdSpend variables are estimated for the current year only.

Refer to the HouseholdSpend documentation for a detailed listing of all 2021 HouseholdSpend variables

## 2021 DaytimePop

The DaytimePop database is Environics Analytics' estimate for the population that's reachable in any geographic area during daytime hours, grouped by 10 variable types. The 2021 DaytimePop database variables are:

DaytimePop Database	
Variable	Variable Description
ECYTOTPOPD	Total Household Population for Daytime
ECYDAYPOP	Total Daytime Population
ECYHOMEPOP	Total Daytime Population at Home
ECYHOM014	Total Daytime Population at Home Aged 0-14
ECYHOM1564	Total Daytime Population at Home Aged 15-64
ECYHOM65P	Total Daytime Population at Home Aged 65 and Over
ECYWORKPOP	Total Daytime Population at Work
ECYWKPU SP	Total Daytime Population at Work at Usual Place
ECYWKPMOB	Total Daytime Population at Work Mobile
ECYWKPHOM	Total Daytime Population at Work at Home

DaytimePop variables are estimated for the current year only.

There are no variable changes for this update.

## 2021 DemoStats Trends

The DemoStats Trends database consists of estimated and projected average household income, total population, household population and households counts encompassing over 500 variables. The database provides estimated counts all variables from 2006 to 2021 and projects values from 2021 to 2040. DemoStats Trends variables are available at the dissemination area (DA) level and all higher levels of geography. When using demographic trends, consider the differences between DemoStats Trends and DemoStats based on your business objectives:

	DemoStats Trends	DemoStats
Number of Variables	525	769
Historical Years	2006-2021	2016, 2021
Projected Years	2021-2041	2024, 2026, 2031
Base Geography	DA	DA

The areas in which business service change over time. A population trend analysis using DemoStats Trends can show how population and household counts are expected to evolve in their trade areas over the next 20 years, enabling long term planning. DemoStats provides in depth demographic and socioeconomic category estimates and projections, supporting current and shorter-term detailed planning.

New, changed or removed variables for this update:

Variable Name	Description	Status
Y41BASHHD	2041 Total Households	New Variable Added
C4041HHD	2040 To 2041 Percentage Change Total Households	New Variable Added
Y41BASHPOP	2041 Total Household Population	New Variable Added
C4041HPOP	2040 To 2041 Percentage Change Total Household Population	New Variable Added
Y41BASPOP	2041 Total Population	New Variable Added
C4041POP	2040 To 2041 Percentage Change Total Population	New Variable Added
Y41RINCAGG	2041 Constant Dollar Household Income	New Variable Added
C4041RINC	2040 To 2041 Percentage Change Constant Dollar Household Income	New Variable Added
Y41NINCAGG	2041 Current Dollar Household Income	New Variable Added
C4041NINC	2040 To 2041 Percentage Change Current Dollar Household Income	New Variable Added
Y41RINCAVG	2041 Constant Dollar Household Average Income	New Variable Added
C4041RAVG	2040 To 2041 Percentage Change Constant Dollar Household Average Income	New Variable Added
Y41NINCAVG	2041 Current Dollar Household Average Income	New Variable Added
C4041NAVG	2040 To 2041 Percentage Change Current Dollar Household Average Income	New Variable Added

Refer to the DemoStats Trends documentation for a detailed listing of all 2021 DemoStats Trends variables

### **2021 PRIZM – New LDU Distributions at the DA level**

The 2021 PRIZM segmentation system database from Environics Analytics, classifies Canada's neighbourhoods into 7 unique lifestyle segments, grouped by population and household. PRIZM consists of 67 segments that capture current demographics, lifestyles, consumer behaviour and settlement patterns in Canada. Note: The PRIZM segmentation system is separate from the Esri, USA specific Tapestry segmentation system.

This year's update to PRIZM is fairly minor compared to last year's release of the new PRIZM system. While there has been no change to the number of segments, you will still see a change year on year in postal code segment assignments and for individual PRIZM segments the percent change can exceed 15%. The biggest change to the 2021 PRIZM data is that it has been provided based on LDU (LDU Distributions at the DA level).

New, changed or removed variables for this update:

Variable Name	Description	Status
PZML01-PZML68	Prizm Segment Variables (LDU based)	New ID – (added)
PZMD01-PZMD68	Prizm Segment Variables (DA based)	Old ID – (removed)
PZML70	Prizm Segment Totals (LDU based)	New ID – (added)
PZMD70	Prizm Segment Totals (DA based)	Old ID – (removed)
PZMD69	Prizm Segment 69 Geography Total (DA based)	Removed

Refer to the PRIZM documentation for a detailed listing of all 2021 PRIZM variables

PRIZM variables can also link to optionally purchased Canadian marketing surveys and databases, including Environics Research's Social Values, PMB, Numeris RTS Canada, NADbank, Canadian Financial Monitor, AskingCanadians™, and WealthScapes™. (Please contact Esri Canada for more information on these optional add-ons.)

PRIZM variables are estimated for the current year only.

Refer to the PRIZM documentation for a detailed listing of all 2021 PRIZM variables

## 2021 Data Collections

Data Collections are thematically grouped sets of demographic and spending variables. Most Data Collections usually encompass variables of similar types that are used together in specific reports or infographics. 81 Data Collections, grouped into the following categories are included in this Data Update:

Category	Data Collections	Description
Age	3	Population counts by age and 5 year age groups and sex
Education	1	Totals by educational attainment
Households	8	Total household counts for various breakdowns
Housing	4	Totals for various physical housing statistical breakdowns
Income	4	After tax, current and constant year income breakdowns
Jobs	6	Population counts for populations in the workforce
Key Facts	3	Two collections of basic statistical demographic facts
Language & Immigration	10	Breakdowns by identity, immigration, birth and language
Marital Status	3	Households and families by marital status
Population	4	Population totals for basic facts, age breakdowns, during the day and religion
Segmentation	2	Social categorizations by housing and populations
Spending	19	Total spending expenditures breakdowns
Trends	14	Trend estimates for population and income covering 2006 to 2040

Refer to the Data Collections documentation for a detailed listing of all 2021 Data Collections and Variables.

## 2021 Business Listings

The 2021 Business Listings database is derived from a comprehensive list of business listings, licensed from the DataAxle®. The business listings database contains data on more than 1.2 million Canadian businesses—including the business name, location, franchise code, industry classification code, number of employees, and sales volume—that is current as of October 2021.

Business Listings are valid for the current year only.

## 2021 Shopping Centre Listings

The Shopping Centres database comprises most shopping malls in Canada, listing over 3,100 shopping centre records, along with data on the number of stores, floor area, anchor tenants, food courts and parking spaces based. This database is provided by Environics Analytics' and based on Rogers Publishing data.

Shopping Centre Listings are valid for the current year only.



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# Data Structures

## Geodatabases

The Business Analyst Desktop 2021 Canada Data update is delivered in File Geodatabase format (FGDB). The data is stored in five (5) databases. Due to limitations of the File Geodatabase format, the Demographic variables are stored in two Geodatabases. Business and Shopping Centre listings are stored in one FGDB each and the Street Map Premium basemap in another.

- CAN\_BUS\_2021.GDB
  - 2021 Business variables
- CAN\_SHC\_2021.GDB
  - 2021 Shopping Centre variables
- CAN\_ESRI\_2021.GDB
  - 2016 DemoStats variables
  - 2021 DemoStats variables
  - 2026 DemoStats variables
  - 2021 DaytimePop variables
  - 2021 HouseholdSpend variables
  - 2021 PRIZM variables
- CAN\_CPY\_2021.GDB
  - 2016 CensusPlus variables
  - 2024 DemoStats variables
  - 2031 DemoStats variables
- NorthAmerica.GDB

Access to the business and demographic databases is locked until a valid data license (e.g.: CAN\_2021\_Standard\_National.sdlic) is received from Esri or Esri Canada and applied using the ArcGIS Administrator application.

## MXD Layer Groups

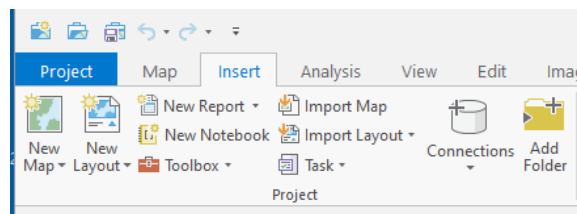
The 2021 Business Analyst Canada.mxd, Web.mxd and FastMap.mxd are pre-structured to display the 2021 data, based on predefined Layer Groups:

- Business Analyst Network Barriers *(an empty group required for BA analysis)*
- Business and Shopping Centres
  - Businesses
  - Shopping Centres
- Demographic Layers - 2016, 2021, 2026, Daytime, Spending, PRIZM (Base)
  - Block Points
  - Dissemination Areas
  - Aggregated Dissemination Areas
  - Forward Sortation Areas
  - Census Tracts
  - Census Metropolitan Areas
  - Census Subdivisions
  - Census Divisions
  - Federal Electoral Districts
  - Provinces & Territories

- Demographic Layers - 2016 Census, 2024, 2031 (CPY)
  - Dissemination Areas (CPY)
  - Aggregated Dissemination Areas (CPY)
  - Forward Sortation Areas (CPY)
  - Census Tracts (CPY)
  - Census Metropolitan Areas (CPY)
  - Census Subdivisions (CPY)
  - Census Divisions (CPY)
  - Federal Electoral Districts (CPY)
  - Provinces & Territories (CPY)
- Street Map Premium (*desktop mxd*) -or- World Street Map (*Web mxd*)

The Business, Demographic and Street Map Premium “layer groups” provide access to the data stored in their respective BA FGDBs (refer to the **Geodatabase Structure** section for details), summarized at each of the geographic boundary levels.

The predefined mxds can be opened directly in Business Analyst for ArcGIS Desktop. For Business Analyst for ArcGIS Pro it is necessary to first create a project and then import the desired mxd using the Import Map wizard.



For more details on using Business Analyst for ArcGIS Pro, refer to the online documentation at: <https://pro.arcgis.com/en/pro-app/help/analysis/business-analyst/what-is-business-analyst-pro.htm>

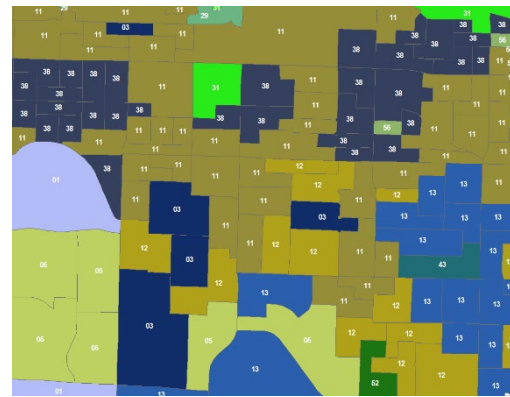
For more details on using Business Analyst for ArcGIS Desktop, refer to the online documentation at: <https://desktop.arcgis.com/en/arcmap/latest/extensions/business-analyst/whats-business-analyst.htm>

# Leveraging PRIZM Data (BA Standard License required)

## Within the Target Marketing tool

When leveraging the PRIZM segments within the Target Marketing tool in Business Analyst for Desktop (Canadian Edition) Standard, the Profiles of the Customer and Geographies are based on the Dominant segment which has been assigned to the Dissemination Area. The Dissemination Area is represented by a single assigned PRIZM segment with all population and/or households count being associated to the single PRIZM segment.

The Dominant segment for the Dissemination Area is utilized for the Target Marketing tool, for the creation of various market and consumer profiling models, including the Four Quadrant (Game Plan) Chart which analysis Core, Niche, Development, and Non-Target markets of opportunity.

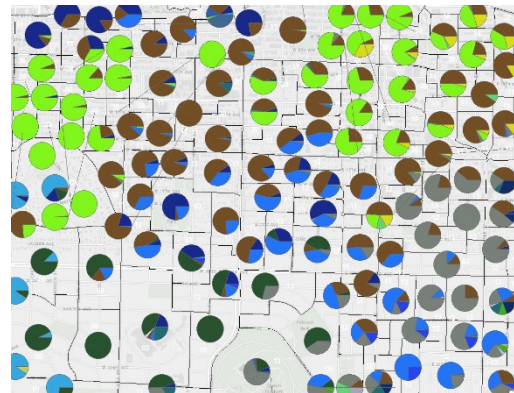


**Figure 7:** The above illustrates the Dominant PRIZM segment associated to the Dissemination Area. In this instance, there is only one PRIZM segment associated to the Dissemination Area.

## By Dissemination Area within your Table Data

The PRIZM segments within the BDS (Business Data Source) for household and population now show all PRIZM segments within a Dissemination Area. The PRIZM segments have been generated at the full 6-digit Postal Code level and pushed up to the associated Dissemination Area in which they area captured.

Now users will see the breakdown of the population or household by all PRIZM segments that reside within the Dissemination Area and not a single dominant segment cluster. This will give users more granularity into their analysis.



**Figure 8:** The above illustrates the new granularity in the PRIZM5 segment data release at the Dissemination Area. Instead of a single dominant segment representation, the Dissemination Area will show all PRIZM5 segments represented in the Dissemination Area.

**NOTES:** In some instances, the Dominant PRIZM segment may not be represented at the Dissemination Area when comparing the grouping of PRIZM segments of the same Dissemination Area from the Postal Codes which fall within the Dissemination Area. This is in part, due to the methodology utilized in the creation of the PRIZM segment assigned to the Dissemination Area, to that of the PRIZM segments assigned to the Postal Code.