

# **DIGITAL BEHAVIORS of INCOME QUALIFIED CUSTOMERS: CURRENT STATUS AND FUTURE PROSPECTS**



# SOUTHERN CALIFORNIA EDISON



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# Goals

- 1. To profile IQP customers relative to the general population of SCE residential customers with respect to selected digital or digital-related behaviors.**
- 2. To identify clusters or segments among IQP customers defined by their varying propensities towards being digital.**
- 3. To ascertain significant predictors of IQP customers being non-digital in order to formulate more responsive policies, programs, and strategies that will more effectively reach these individuals**

# Agenda

1. Overview of SCE's IQP programs
2. Importance of Outreach and Communication to IQP customers
3. Statistical results
  - a) *Digital profile of IQP customers vs non-IQP customers*
  - b) *Cluster analysis of IQP customers on digital propensities*
  - c) *Significant predictors of being non-digital among IQP customers*
4. Profile of non-digital IQP customers
5. Future Prospects

# Overview of SCE's IQP Programs

**California Alternate Rates for Energy (CARE)  
&  
Family Electric Rate Assistance (FERA)  
Programs**

# Introduction to Southern California Edison

- One of the nation's largest electric utilities:
  - Nearly 14 million residents in service territory
  - Approximately 5 million customer accounts
  - 50,000 square-mile service area
- High Low Income Population
  - Approximately 1/3 of households are estimated to be Income Qualified



■ SCE Service Territory

# The CARE Program



**California Alternate Rates for Energy (CARE) is a state legislated program which offers income-qualified customers a discount of approximately 30% on their monthly electric bills.**



**SCE has 1.2 Million CARE Households in it's service territory and administers nearly \$350 Million in CARE bill discounts annually (avg. CARE discount per household is \$23 per month).**



**CARE is available to single family households, sub metered residential facilities, non profit group living facilities, agricultural employee housing facilities, and migrant farm worker housing centers.**

# Two Ways to Qualify for CARE

1. Residential Households can qualify for CARE is someone in the home participates in at least one of the eligible public assistance programs (e.g. LIHEAP or WIC)

OR

2. Meet income guideline qualifications (approximately 200% of federal poverty income guidelines)

<b>Maximum Household Income Effective June 1, 2017</b>	
<b>Number of Persons in Household</b>	<b>Total Combined Annual Income</b>
<b>1 - 2</b>	<b>Up to \$32,480</b>
<b>3</b>	<b>Up to \$40,840</b>
<b>4</b>	<b>Up to \$49,200</b>
<b>Each additional person</b>	<b>\$8,360</b>



# The FERA Program

The Family Electric Rate Assistance (FERA) Program provides a 12% flat monthly discount on a household's monthly electric bills. The program is designed for income-qualified households of three or more persons with income guidelines set at 201%-250% of Federal Poverty Limit.

<b>Maximum Household Income Effective June 1, 2017</b>	
<b>Number of Persons in Household</b>	<b>Total Combined Annual Income</b>
<b>1 - 2</b>	<b>Not Eligible</b>
<b>3</b>	<b>\$40,841 - \$51,050</b>
<b>4</b>	<b>\$49,201 – 61,500</b>
<b>Each additional person</b>	<b>\$8,360 – 10,450</b>

# Importance of Outreach & Communication to IQP Customers

**Enrollment and Retention**

# Various Ways to Enroll

1. SCE.COM – self service web enrollment form
2. Direct Mail
  1. Annual Solicitation (mandated mailing to all non-CARE customers)
  2. Direct Mail Marketing (coupled with outbound call campaign)
3. Customer Contact Center
  1. Over the phone with an Energy Advisor (ENA)
  2. Via the Interactive Voice Response (IVR) system
  3. Physical application mailed to customer
4. Data Sharing – with internal programs (eg., ESAP) and external partners (eg., So Cal Gas)
5. Capitation Agencies (non-profit partners)

# Four Program Transactions



## Enrollment

Program enrollment based on Customer Application (self declared)



## Recertification

Continued participation based on updated Customer information (self declared every 2 years)



## Traditional Verification

Continued participation based on review of Customer's supporting *eligibility* documentation (Sampling Model)



## High Usage Verification

Continued participation based on review of Customer's supporting *income* documentation (High Usage Breach)



The program involves four separate transactions. These transactions determine the customers' eligibility and participation in the CARE program.

# Conceptual Foundation:

## *The Driving Force*



**“Data-driven decision management (DDDM) is an approach to business governance that values decisions that can be backed up with verifiable data. The success of the data-driven approach is reliant upon the quality of the data gathered and the effectiveness of its analysis and interpretation.”**

**Source:**

**<http://whatis.techtarget.com/definition/data-driven-decision-management-DDDM>**



# Data-Driven Decision-Making



**DATA &  
ANALYTICS**

**PROGRAMS**

**POLICIES**

**STRATEGIES**



# Statistical Results

**Operational Terms**



# Digital Behaviors

- *Each behavior = 1 pt., Total = 8 pts.*



DIGITAL BEHAVIOR	OPERATIONAL DEFINITION
ONLINE BILLING CHECKFREE ACTIVE	Currently receives bill online from bank
ONLINE BILLING CHECKFREE EVER	Received online bill from bank at least once in the past
ONLINE PAYMENT ACTIVE	Currently pays bill online through the bank, or using credit/debit card, or MyAcct or other similar means
ONLINE PAYMENT EVER	Paid bill online through the bank, or using credit/debit card, or MyAcct or other similar means at least once in the past
ONLINE BILLING ACTIVE	Currently receives online bill from SCE.com through MyAcct
ONLINE BILLING EVER	Received online bill from SCE.com through MyAcct at least once in the past
WITH MYACCT	With SCE MyAcct
WITH EMAIL	With email address

# STATISTICAL TECHNIQUES

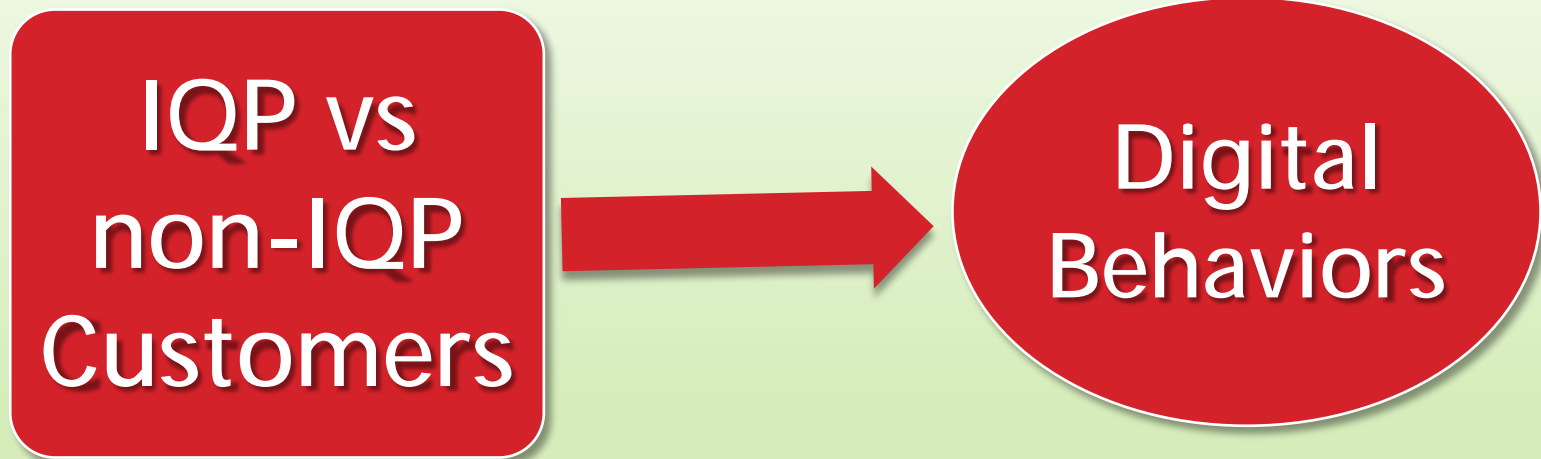


<b>STATISTICAL TECHNIQUE</b>	<b>METHODOLOGICAL PURPOSE</b>
<b>1) Bivariate Crosstabulation</b>	<b>To compare IQP and non-IQP customers on select digital behaviors</b>
<b>2) Cluster Analysis</b>	<b>To group IQP customers based on shared incidence or propensities for digital behaviors</b>
<b>3) Binary Logistic Regression</b>	<b>To identify significant predictors of non-digital behavior among IQP customers</b>

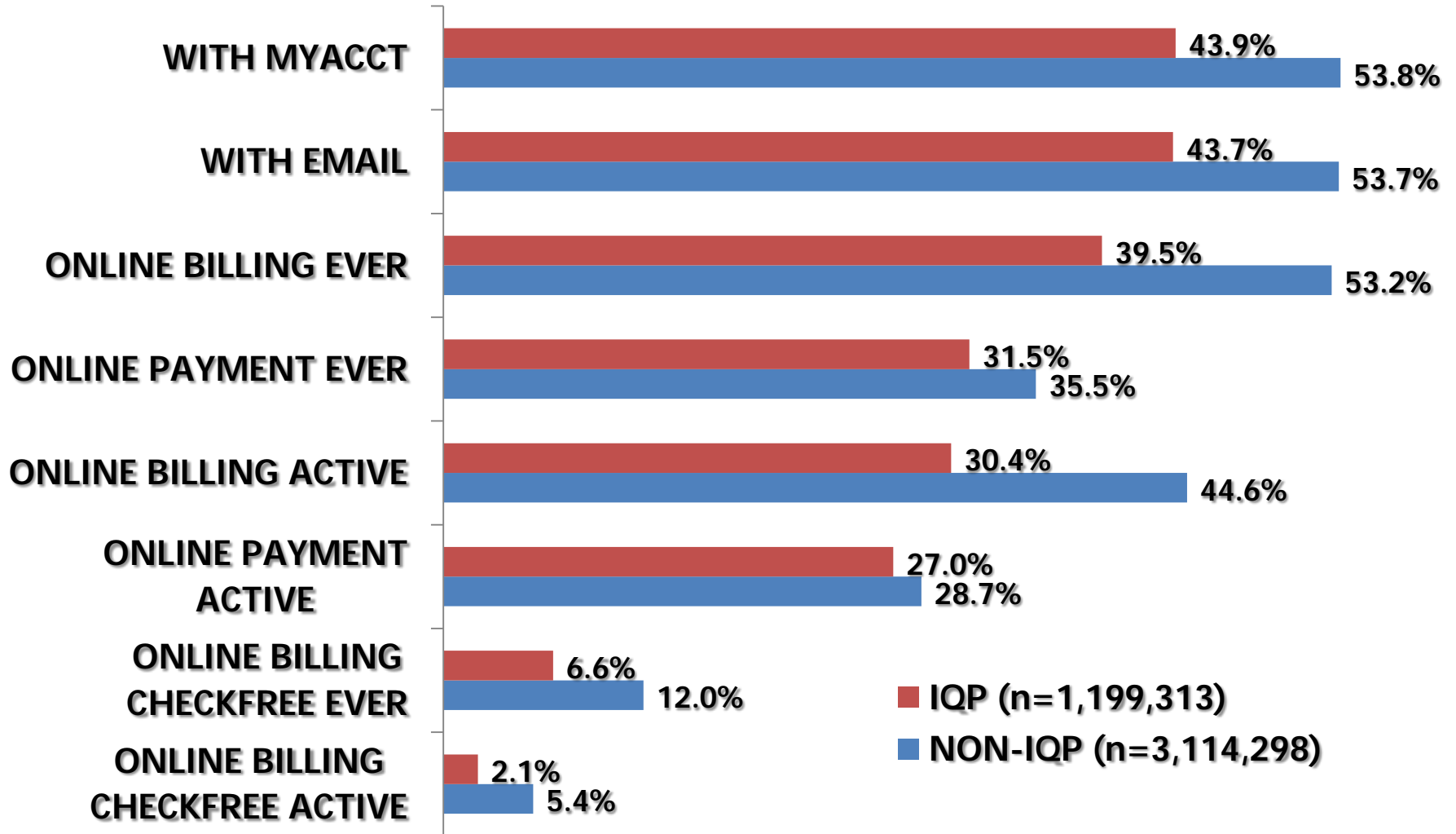
# Statistical Results

**Digital Profile of IQP Customers  
vs Non-IQP Customers**

# Bivariate Analysis: Chi-Square Tests



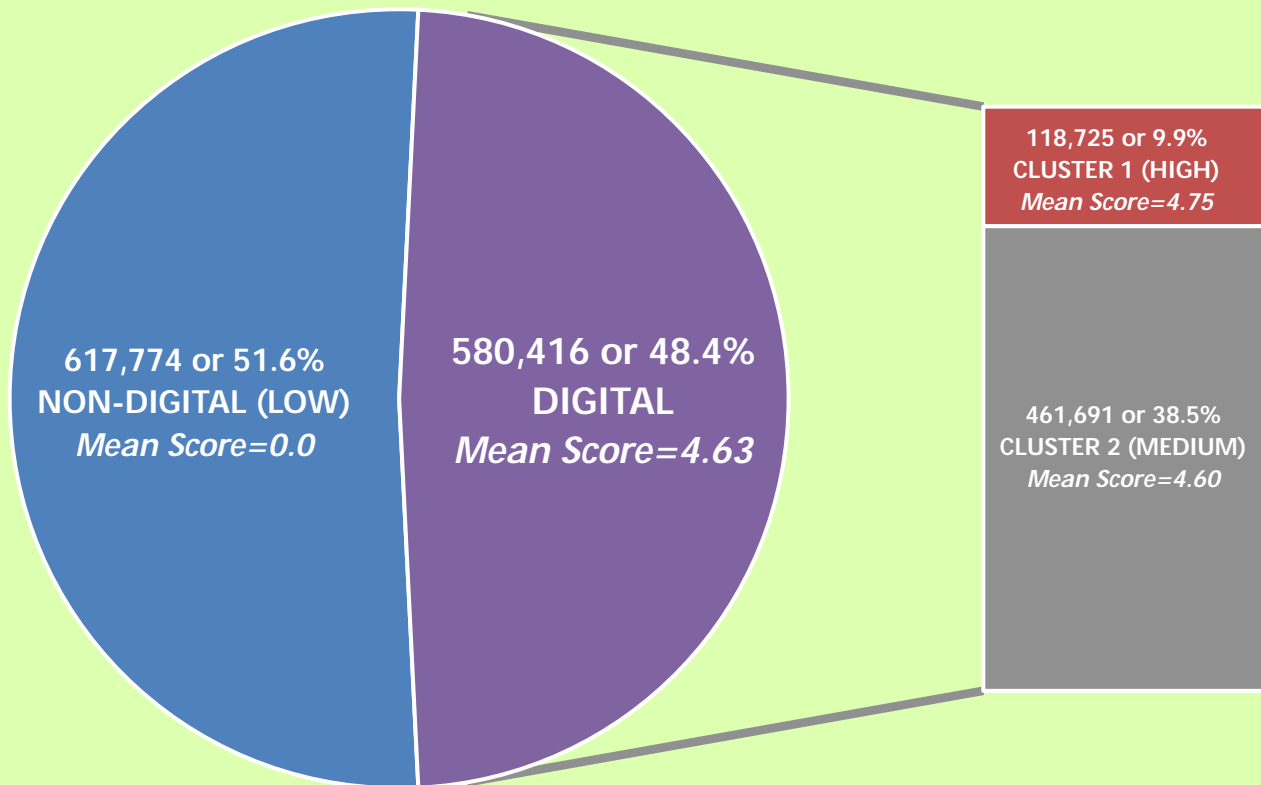
# COMPARISON OF IQP VS NON-IQP ON DIGITAL BEHAVIORS



# Statistical Results

**Cluster Analysis of IQP Customers  
on Digital Propensities**

# DIGITAL BEHAVIOR AMONG IQP CUSTOMERS



# CLUSTER ANALYSIS

**NON-  
DIGITAL  
or LOW  
DIGITAL  
CLUSTER**



**HIGH LEVEL  
DIGITAL  
CLUSTER**

**MEDIUM  
LEVEL  
DIGITAL  
CLUSTER**





# DIGITAL BEHAVIORS CLUSTER ANALYSIS: IQP CUSTOMERS

DIGITAL BEHAVIORS	NON-DIGITAL CLUSTER "LOW" (n=617,774)	"MEDIUM" DIGITAL (n=461,691)	"HIGH" DIGITAL (n=118,725)
WITH EMAIL	0.0%	90.3%	89.8%
ONLINE BILLING EVER	0.0%	80.5%	84.9%
ONLINE BILLING ACTIVE	0.0%	61.7%	66.9%
ONLINE BILLING CHECKFREE EVER	0.0%	12.8%	16.5%
ONLINE BILLING CHECKFREE ACTIVE	0.0%	4.0%	5.4%
WITH MYACCT	0.0%	90.6%	90.1%
ONLINE PAYMENT EVER	0.0%	64.8%	65.9%
ONLINE PAYMENT ACTIVE	0.0%	55.7%	55.2%
MEAN DIGITAL SCORE	0.00	4.60	4.75
TOTAL	617,774	461,691	118,725

# Statistical Results

**Significant Predictors of Being Non-Digital  
among IQP Customers**

# Multivariate Analysis: Binary Logistic Regression



probability of a "1"  
at observation  $i$

$$p_i = \frac{1}{1 + e^{-\sum_{j=0}^M \beta_j x_{ij}}}$$

natural log

regression coefficients

the  $j$ 'th variable at observation  $i$

$i = 1 \dots N$  (number of observations)  
 $j = 1 \dots M$  (number of ind. variables)

Allows Estimation of Probability of Being  
Non-Digital By Characteristic of IQP Customer

# PREDICTORS of NON-DIGITAL BEHAVIOR AMONG IQP CUSTOMERS

PREDICTOR of NON-DIGITAL BEHAVIOR	OPERATIONAL DEFINITION or CATEGORIES
AGE	AGE in YEARS
HOUSEHOLD SIZE	NUMBER of PERSONS in HH
INCOME	ANNUAL INCOME (\$)
LANGUAGE PREFERENCE	ENGLISH
	BILINGUAL
	NON-ENGLISH
EDUCATION	HIGH SCHOOL or VOCATIONAL/TECHNICAL SCHOOL
	AT LEAST COLLEGE GRADUATE
DWELLING TYPE and HOME TENURE	SINGLE FAMILY, HOME OWNER
	MULTIFAMILY, RENTER
	SINGLE FAMILY, RENTER
	MULTIFAMILY, OWNER

# THEORETICAL FRAMEWORK of ANALYSIS



**AGE**

**HOUSEHOLD SIZE**

**INCOME**

**LANGUAGE PREFERENCE**

**EDUCATION**

**DWELLING TYPE  
& HOME TENURE**

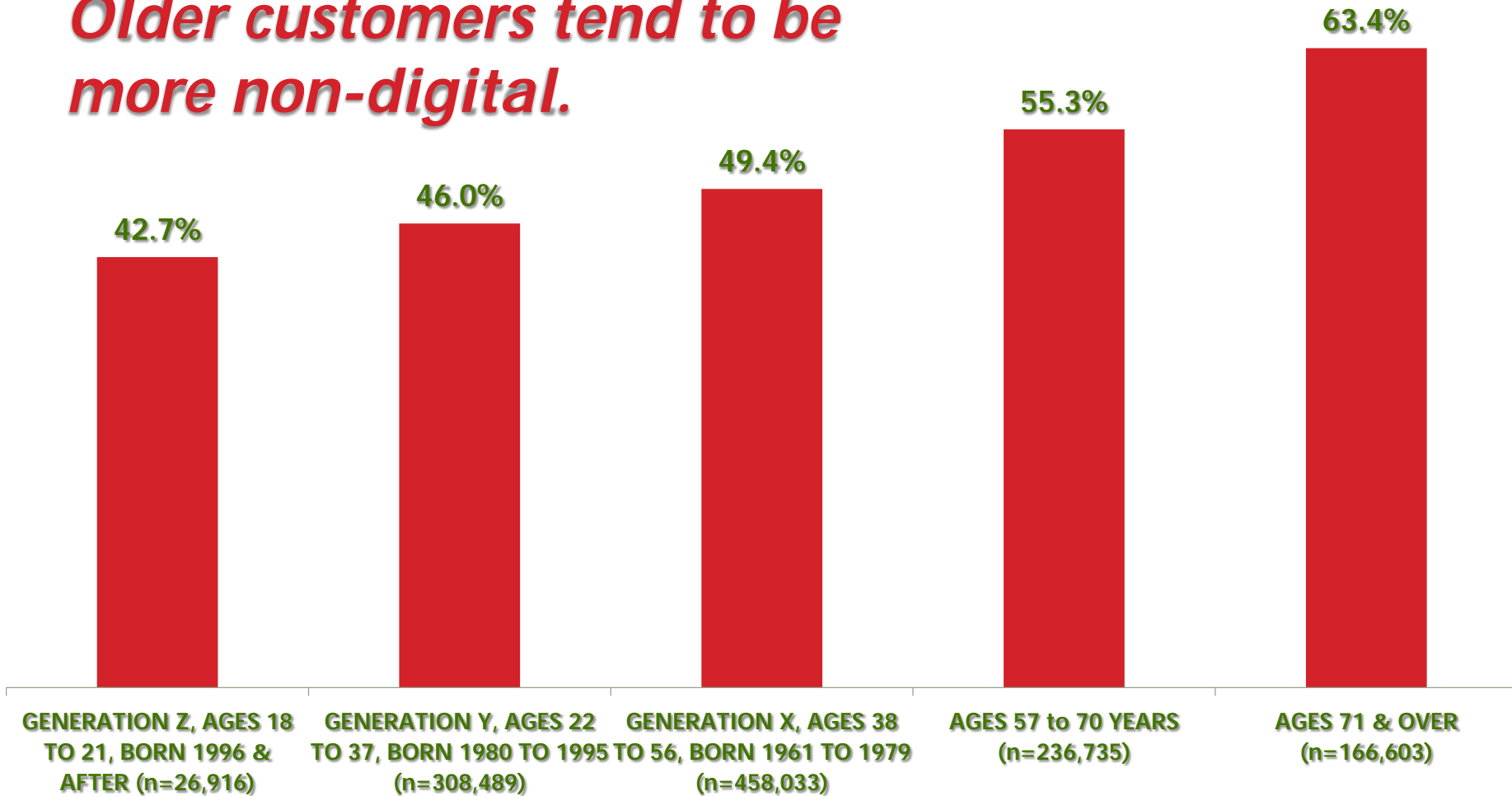


**PROBABILITY  
OF BEING  
NON-DIGITAL**

# MEAN PROBABILITY of BEING NON-DIGITAL

BY GENERATION/AGE GROUPS

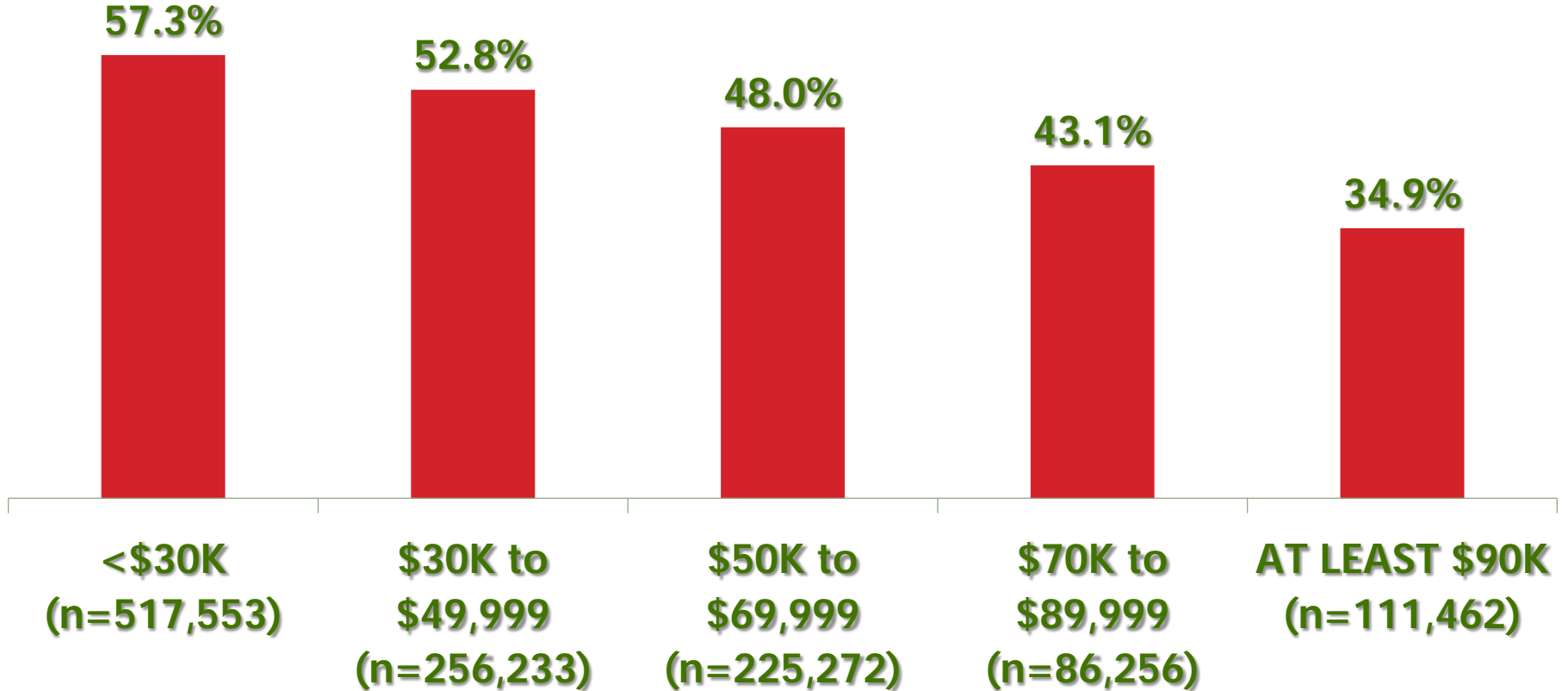
*Older customers tend to be  
more non-digital.*



# MEAN PROBABILITY of BEING NON-DIGITAL

BY INCOME

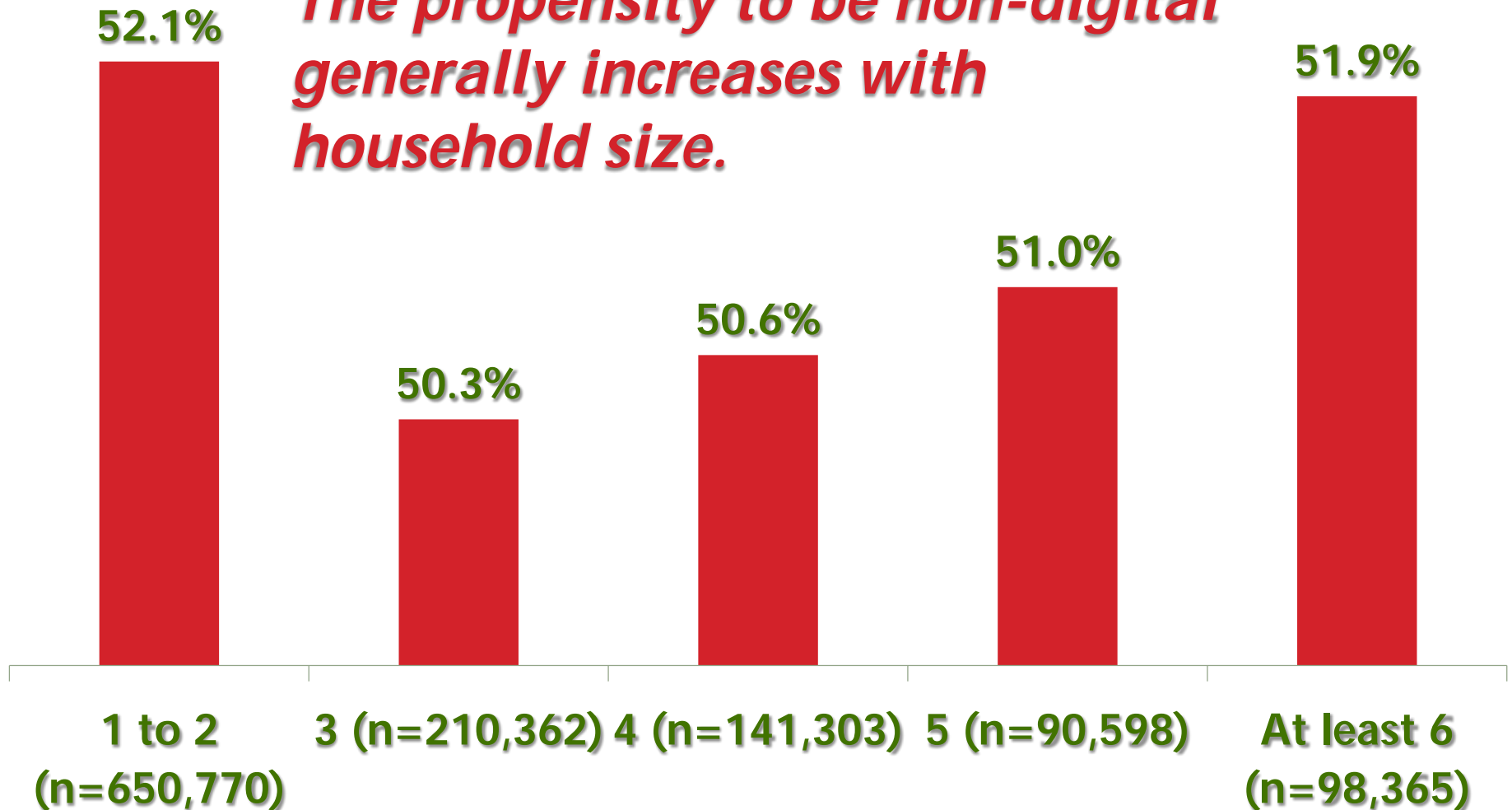
*The propensity to be non-digital significantly decreases with rising income.*



# MEAN PROBABILITY of BEING NON-DIGITAL

## BY HOUSEHOLD SIZE

*The propensity to be non-digital generally increases with household size.*





# MEAN PROBABILITY of BEING NON-DIGITAL

## BY HOUSEHOLD SIZE & INCOME

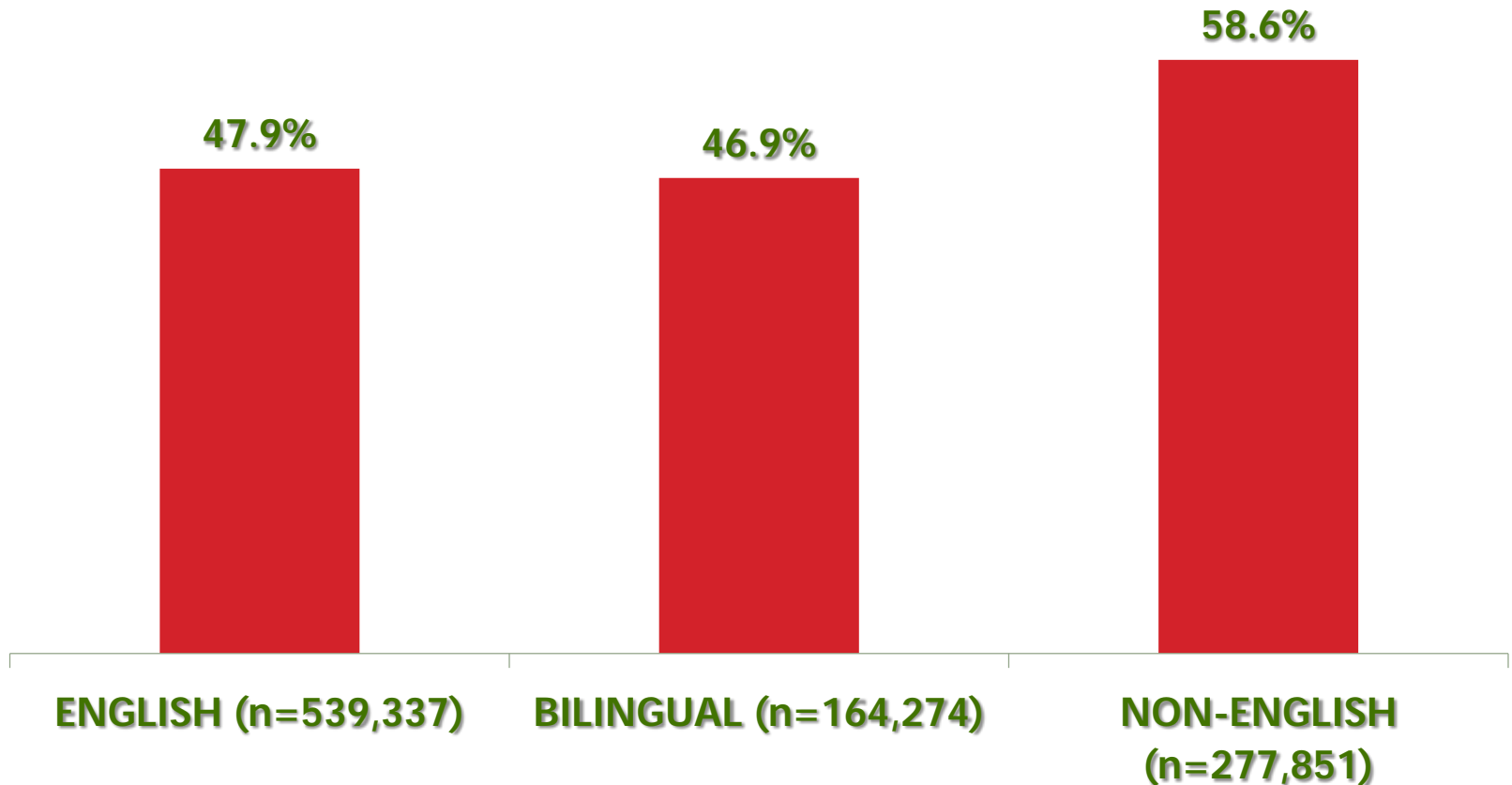
*The propensity to be non-digital is significantly highest among larger sized households with low income.*



# MEAN PROBABILITY of BEING NON-DIGITAL

*BY LANGUAGE PREFERENCE*

*There is a significantly high propensity to be non-digital among customers in non-English speaking households.*



# MEAN PROBABILITY of BEING NON-DIGITAL

## BY HIGHEST EDUCATION

52.0%



*Customers with at most high school or vocational &/or technical schooling have a significantly higher propensity to be non-digital.*

50.4%

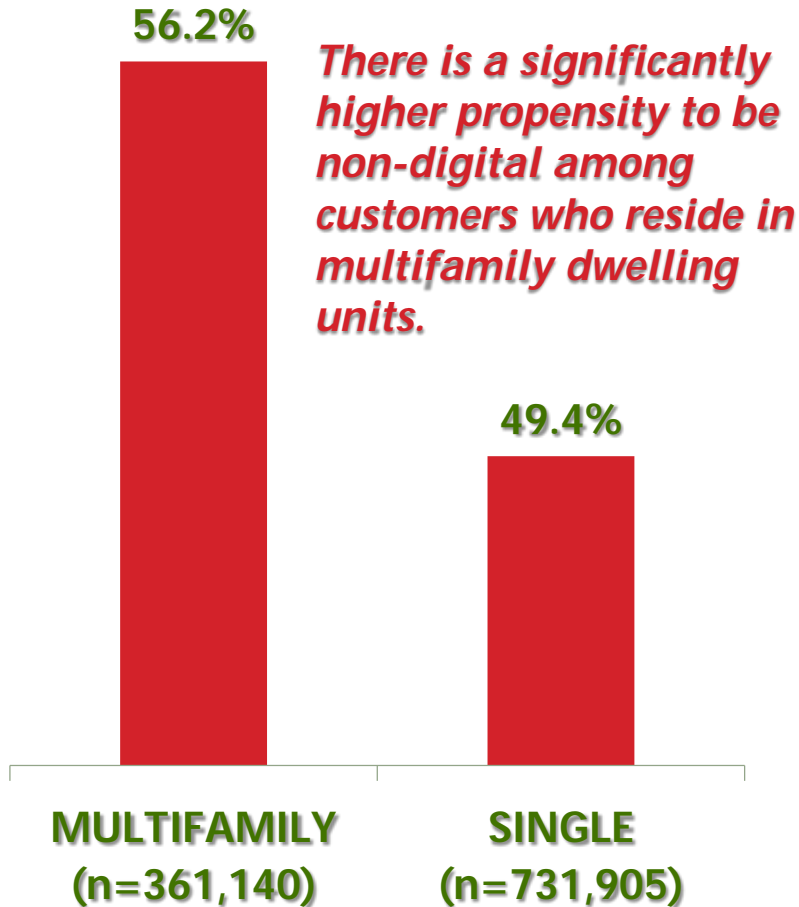


**HIGH SCHOOL or  
VOCATIONAL/TECHNICAL**  
(n=907,001)

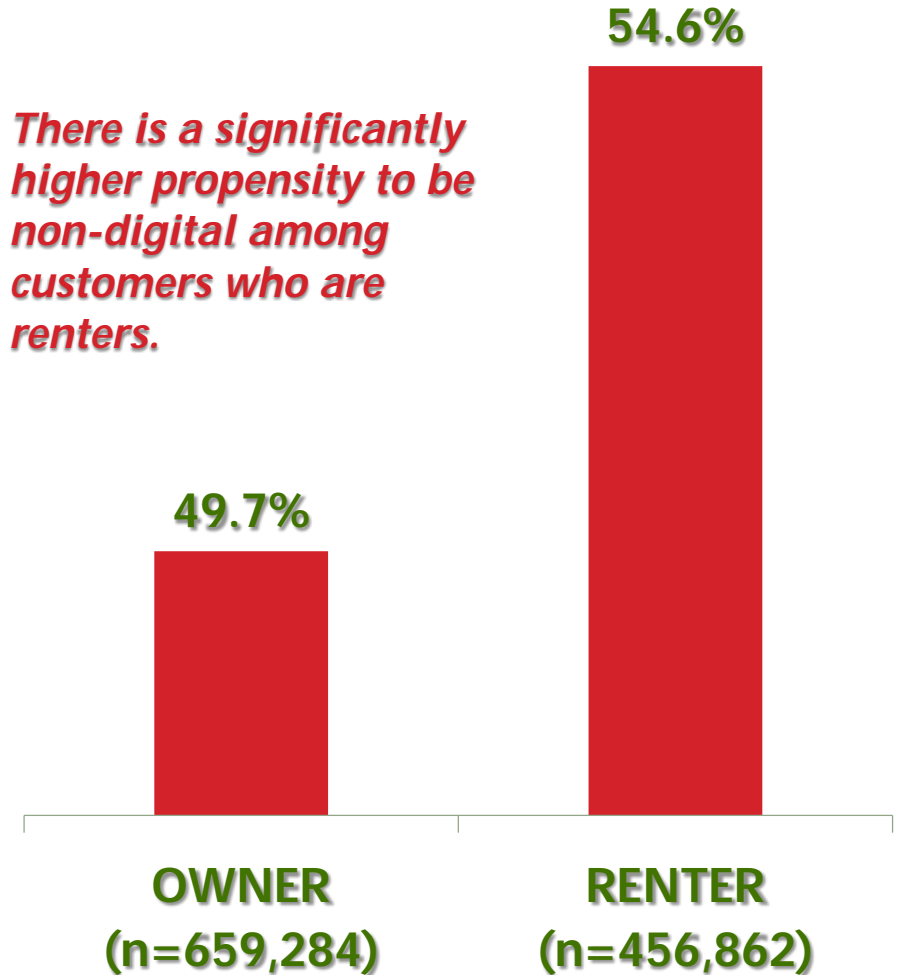
**COLLEGE or GRADUATE SCHOOL**  
(n=209,145)

# MEAN PROBABILITY of BEING NON-DIGITAL

## BY DWELLING TYPE



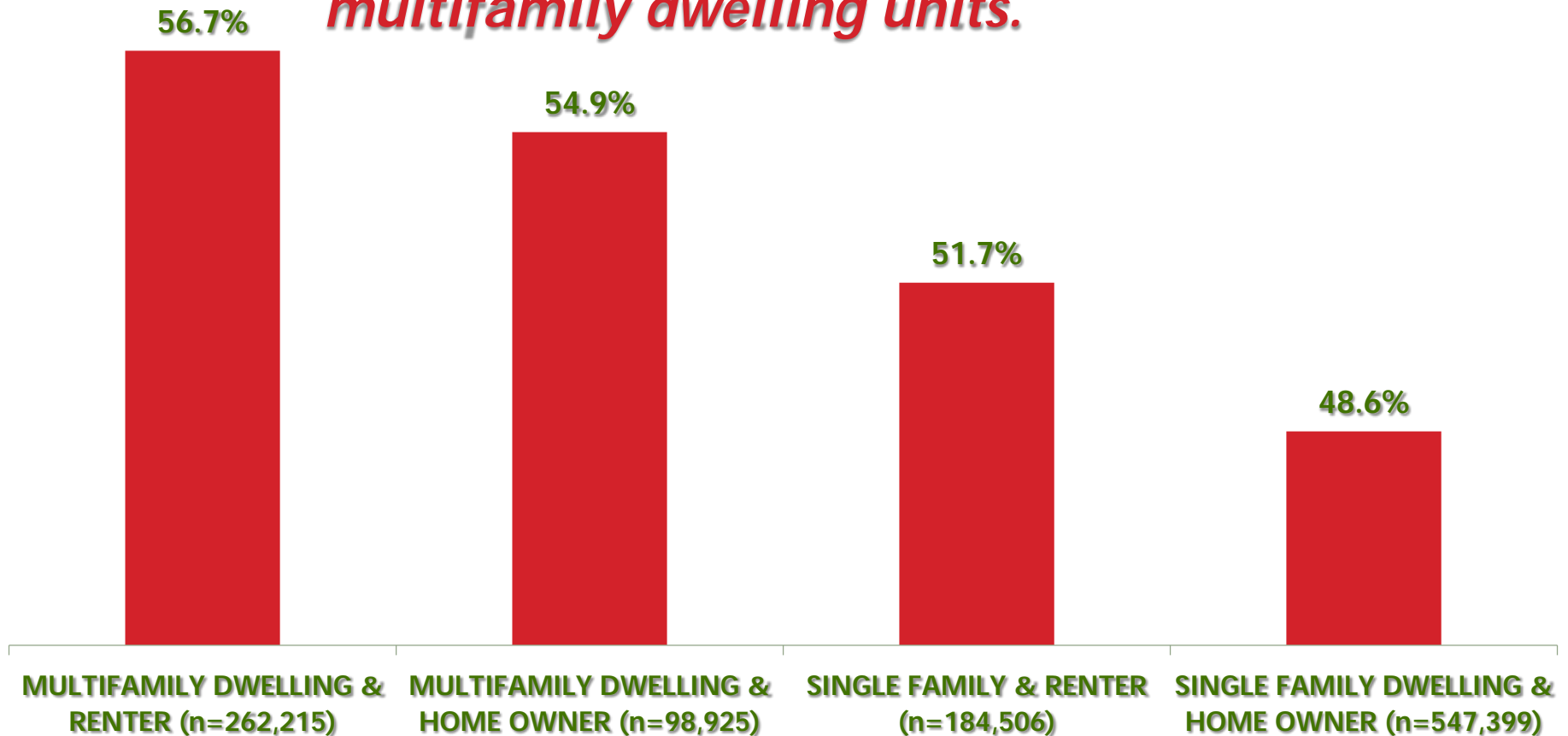
## BY HOME TENURE



# MEAN PROBABILITY of BEING NON-DIGITAL

BY DWELLING TYPE & HOME TENURE

*There is a significantly higher propensity to be non-digital among customers who rent in multifamily dwelling units.*



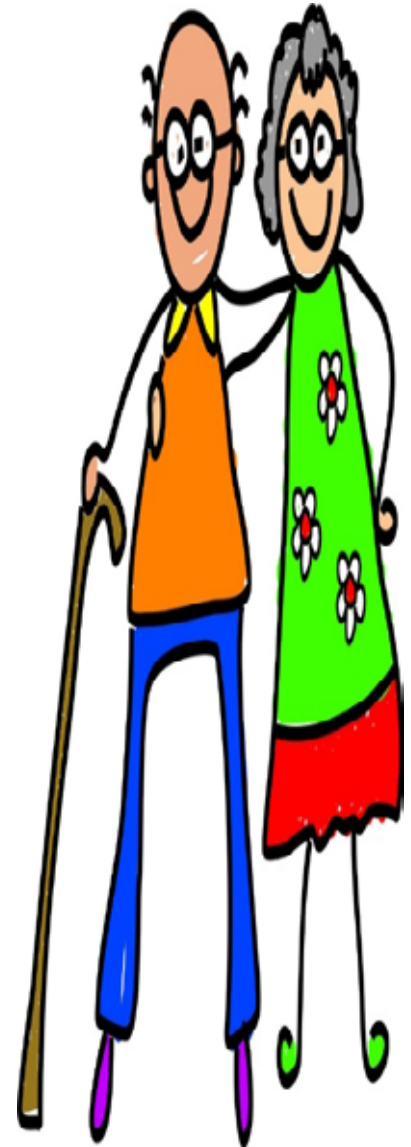
# Profile of Non-Digital IQP Customers

## Composite Structure



# SUMMARY PROFILE of NON-DIGITAL IQP CUSTOMERS

- 1) Older
- 2) Come from larger households with relatively lower income
- 3) Non-English speakers
- 4) At most High School or Technical/Vocational School Graduates
- 5) Renters living in multifamily dwelling units



# Future Prospects

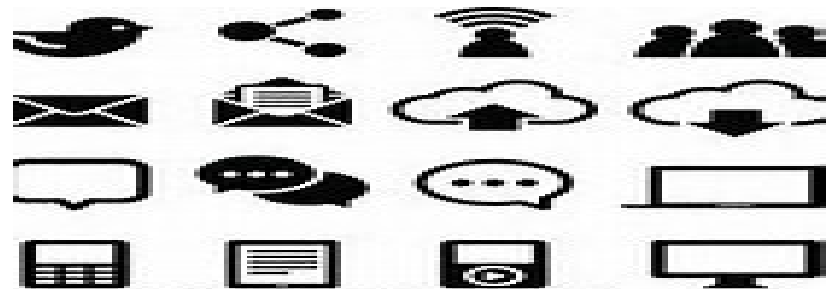
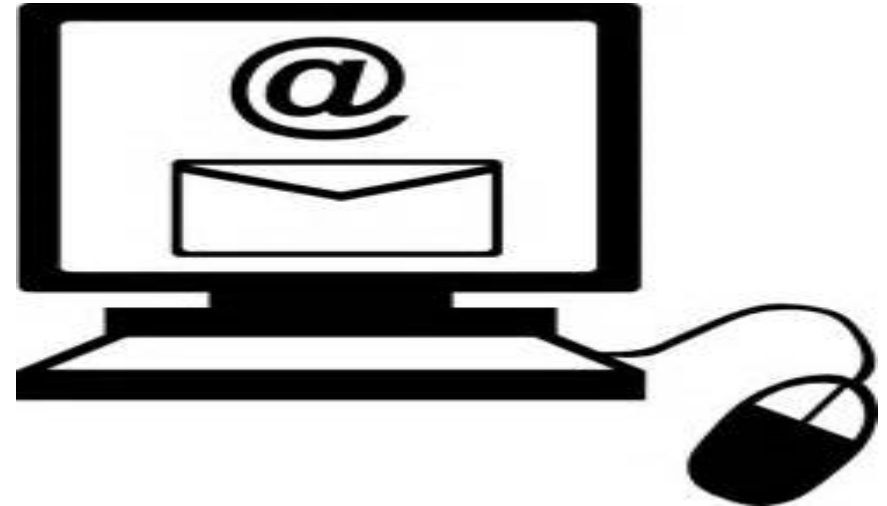
Developing a Digital Future while Honoring Tradition



# The Digital Future

Each generation increases their utilization of digital channels:

- Text
- Email
- Social Media



© Can Stock Photo

# Honoring Tradition

**However, there will always be a need for Non-Digital channels:**

- In person
- Over the phone
- Direct Mail

**Utilize various efforts to best reach Non-Digital households:**

- Door to Door canvassing
- Outbound Calling Campaigns
- Postcards
- Events

# Engaging your Non-Digital Population

Meet them where they are:

- Senior Centers
- Cultural Events
- Multifamily Residences
- Family Centric events
- Rural Events

# Refining Tactics

- Each population will have unique needs
  - Digital prefer succinct direct messages
  - Non-Digital prefer a deeper understanding
- Evaluate your responses
  - Test various messaging
  - See what works best
  - Solicit feedback
- Call to Action
  - Be clear
  - Be concise
  - Provide an avenue for follow up questions

# Providing Choice

Provide “Opt In” to Digital communication:

- More direct communication reduces wait times and provides Income Qualified households assistance immediately.
- Can link to other relevant information
- Lower cost to communicate
- Less chance of things getting “Lost in the Mail”
- Various tracking and reporting functions

Provide “Opt Out” to Digital communication:

- Prefer tangible materials
- Prefer interpersonal communication

# Questions?