Background

The Information Technology Indicators technical report provides a detailed, comprehensive view into Seattle residents' access to and adoption of technology. This is the fourth time since 2000 that this research has been done. Data in this report was collected in 2013, in three ways: a random dial telephone survey, an online survey, and through focus groups. The phone survey is the most statistically valid sample, while the online survey and focus groups provide valuable additions. The initial set of measures and goals that guide this project were created with community residents and experts in the fields of evaluation, data and technology adoption.

The topics covered have been updated each time the City collects this data to reflect new trends in technology, such as the development of broadband, social media, and mobile technology. This research provides insight into levels of broadband and social media adoption, digital literacy needs and barriers, and opportunities for electronic civic engagement and delivery of government and community services. Where possible, the new data has been compared with the earlier results, providing a longitudinal tracking of technology adoption in Seattle.

This information has already been used by the City to inform digital inclusion strategies, cable franchise regulation, and public engagement for city planning with future uses anticipated by the City as well as by other government, education, industry, social services and health, civil rights, neighborhood, and workforce and economic development bodies.

The City of Seattle Department of Information Technology (DoIT) Community Technology Program contracted with a consultant team (Elizabeth Moore at Applied Inference and Andrew Gordon of the University of Washington) to learn about:

- Residents' use of and attitude toward information and communication technology, such as computer and the Internet, cable TV, and mobile phones;
- Use of technology to interact with government and community and attitudes about the City's efforts to communicate with residents through technology;
- Residents' attitudes toward higher speed Internet (broadband) access ;
- Perspectives on technology and civic engagement in communities not typically reached through a telephone survey.

Methodology

The information for this study was collected in three ways: a telephone survey, an online survey, and focus groups.

Telephone and online survey

City staff and consultants developed an 18-minute telephone survey (see Appendix I) which was administered to 803 randomly selected residents. For the first time the sample included a subsample of cell phone users, 20% of the overall sample. The call sampling was done to produce a sample as close to

the City demographics as possible. The phone survey was conducted mainly in English, but also available in Spanish, Vietnamese, and Chinese. An online survey was conducted for the first time, using the same questions as the telephone survey and also translated into Spanish. This ran for a month and 1658 people completed the survey in that time. Questions were basically the same, but adjusted somewhat for the online format.

Despite efforts to reach a representative sample of Seattle residents, the resulting datasets over-represented some demographic groups and under-represented others. To produce a better balanced picture of Seattle residents, weights were calculated for the datasets with the aim of producing results that reflect the population of Seattle in terms of age, education, race/ethnicity, and income. Broadly speaking, respondents who are members of groups under-represented in the survey are assigned heavier weights to enable them to "speak for" themselves and some of their neighbors, while those who are members of groups over-represented in the survey are assigned lighter weights so that their voices, when combined with others in their demographic subgroup, do not dominate the survey results. (See Appendix II for details.)

Focus Groups

According to the 2010 Census, 10% of Seattle residents speak English less than very well and 17.3% are foreign born. Partnering with trusted community organizations, nine focus groups were conducted with immigrant/refugee and other communities who often are not reached by phone surveys, are less able to participate, or less trusting of the process. The groups included six non-English speaking groups, two African American groups, and a group of people with a range of disabilities. The immigrant/refugee community groups were Latino/Hispanic, Vietnamese, Somali, Chinese, and Ethiopian.

These focus groups were conducted in each group's native language, co-facilitated with community leaders, and hosted over a meal. Data collection relied on a method in which community members divide into four groups, each with its own topic area to research by interviewing participants in the other groups, discuss with other group members and summarize for discussion with the larger group. Each organization identified four or five community facilitators: one to provide overall direction and one to support each of the four topical groups. In the case of immigrant groups, the facilitators had good English language skills but engaged in the process using their native language. Facilitators were briefed on their roles just before the group and given support and direction by the consultants and staff throughout the process. Between 12 and 24 participants attended each focus group in addition to the five facilitators for a total of 182 participants and 43 facilitators, interpreters, and note takers. After a rather noisy process of simultaneous mutual interviews, the groups reconvene to discuss and summarize their findings, and report them out for discussion. It is an active and dynamic method which seems to create energy, enthusiasm, and confidence as it progresses. It requires and allows a high level of engagement by all for up to 24 participants, and offers a high level of confidentiality. Participants consistently and eagerly take responsibility for the success of the group, stepping forward to help resolve whatever challenges emerge, including supporting neighbors who cannot read or write, helping with translation, explaining technology (such a Twitter) or setting out the meal or helping with clean up.

In addition to the mutual interviews, short papers surveys were used to gather factual information (n=165 completed), leaving the precious minutes of mutual interviews for the more in depth and possibly complex discussions. Participants engaged earnestly in the activities with openness and interest. The community organizations were also given the opportunity to review the drafts of their focus group reports.

Who participated in the study?

Table 1 presents the unweighted and weighted distribution of survey respondents, both telephone and online, with the corresponding City distributions. Please see Appendix II for a detailed description of the weighting process to create a dataset that is representative of Seattle residents.

Table 1. Demographic description of survey respondents

	City Pop	RDD Phone Survey (valid n=803)				Online (valid n=1658)			
		Unweighted		Weighted		Unweighted		Weighted	
	%	#	%	#	%	#	%	#	%
Race/Ethnicity									
African American	8%	45	6%	60	8%	37	2%	134	8%
Asian/Pacific Islander	14%	85	11%	110	14%	101	6%	184	11%
Caucasian	66%	580	74%	517	66%	1370	86%	1090	68%
Hispanic/Latino	7%	52	7%	52	7%	42	3%	98	6%
Native Amer/AK Native	1%	6	1%	5	1%	4	0%	10	1%
Mixed	1%	10	1%	34	4%	39	2%	84	5%
Other	0%	3	0%	2	0%	9	1%	3	0%
Refused		22		24		56		54	
Total		**803**		**803**		**1658**		**1656**	
Age									
18-25	15%	49	6%	120	15%	139	8%	264	16%
26-35	25%	154	19%	202	25%	489	30%	398	24%
36-50	26%	247	31%	206	26%	501	30%	408	25%
51-64	20%	197	25%	161	20%	382	23%	359	22%
65+	14%	147	19%	106	13%	138	8%	222	13%
Refused		9		9		9		6	
Total		**803**		**803**		**1658**		**1656**	
Education									
Less than HS	7%	35	4%	51	6%	16	1%	136	8%
HS Grad	12%	72	9%	87	11%	35	2%	199	12%
Some college or 2 yr deg	29%	176	22%	236	30%	329	20%	492	30%
Four year degree+	52%	513	64%	421	53%	1270	77%	821	50%
Refused		7		8		8		8	
Total		**803**		**803**		**1658**		**1656**	
Income									
<$20K	16%	99	15%	115	17%	103	7%	241	16%

	City Pop	RDD Phone Survey (valid n=803)				Online (valid n=1658)			
		Unweighted		Weighted		Unweighted		Weighted	
	%	#	%	#	%	#	%	#	%
$20K to <$30K	8%	59	9%	55	8%	94	6%	118	8%
$30K to <$40K	8%	53	8%	58	9%	90	6%	125	8%
$40K to <$50K	8%	57	8%	53	8%	108	7%	112	8%
$50K to <$75K	17%	100	15%	120	18%	275	18%	260	17%
$75K to <$100K	12%	93	14%	81	12%	257	17%	188	13%
$100K+	30%	218	32%	192	28%	589	39%	444	30%
Refused		124		127		142		169	
Total		**803**		**803**		**1658**		**1656**	
Gender									
Female	50%	439	55%	448	56%	728	45%	764	47%
Male	50%	364	45%	355	44%	905	55%	871	53%
Refused						25		21	
Total		**803**		**803**		**1658**		**1656**	

Additional analysis comparing the cell phone respondents with the landline respondents shows that cell phone respondents were more likely to be younger, Caucasian, and male with less education but no difference in income.

Table 2 below presents the demographic distribution for the 165 focus group participants who completed a survey.

Table 2. Demographic distribution of focus group participants

	African American (2 groups) n=43	Chinese n=20	Ethiopian n=17	Latino (2 groups) n=43	Somali n=16	Vietnamese n=19	Dis-abilities n=7
Race/Ethnicity							
African American/ Black	91%		100%		100%		
Asian/Pacific Islander	2%	100%				100%	
Caucasian							83%
Hispanic/Latino				100%			
Native Amer/AK Native							17%
Mixed	7%						
Other							
***Missing**	0	0	0	0	0	0	1
Age							
18-25	15%		20%	29%	25%	13%	
26-35	10%	25%	20%	29%	25%	7%	14%
36-50	25%	35%	10%	21%	13%	27%	86%
51-64	38%	10%	20%	16%	13%	27%	

	African American (2 groups) n=43	Chinese n=20	Ethiopian n=17	Latino (2 groups) n=43	Somali n=16	Vietnamese n=19	Dis-abilities n=7
65+	13%	30%	30%	5%	25%	27%	
Missing	3	0	7	5	0	4	0
Median	**36-64**	**36-50**	**36-64**	**26-35**	**26-50**	**51-64**	**36-50**
Education							
Less than HS	10%	47%	11%	26%	39%	38%	
HS Grad	33%	26%	33%	41%	15%	50%	43%
Some college or 2 yr deg	36%	11%	33%	10%	39%	6%	11%
Four year degree+	21%	16%	22%	23%	8%	6%	43%
Missing	4	1	8	4	3	3	0
Median	**Some col/ 2 yr degree**	**HS Grad**	**Some col/2 yr degree**	**Some col/ 2 yr degree**	**HS Grad**	**HS Grad**	**HS Grad**
Income							
<$20K	53%	71%	43%	66%	92%	73%	100%
$20K to <$30K	21%	24%	29%	9%	8%	20%	
$30K to <$40K	3%	6%	29%	22%		7%	
$40K to <$50K	3%						
$50K to <$75K	12%						
$75K to <$100K	6%			3%			
$100K+	3%						
Missing	9	3	10	11	3	4	3
Median	**<$20K**	**<$20K**	**$20K to <$30K**	**<$20K**	**<$20K**	**<$20K**	**<$20K**
Gender							
Female	51%		56%	70%	38%	71%	14%
Male	46%		44%	30%	63%	29%	86%
Missing	6	20	8	3	0	5	0

*Those who did not respond to a question are not included in the percentages for that item.

Community partners were successful at recruiting diverse groups of participants. All groups had a reasonable representation of men and women and people belonging to a wide range of age groups. Participants in some groups ranged widely in education. Both the Chinese and Somali group provided substantial representation of participants with less than a high school education, while some of the other groups had participants with college degrees, as well as those with less education. Some of the participants in all of the groups were employed, but incomes tended to be low, especially in the immigrant groups.