Beyond Fear: Public Views on Emerging Transportation Technologies



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Dave Biggs Chief Engagement Officer MetroQuest



Agenda

Emerging technologies impacting transportation planning Introducing the NCDOT Public Involvement Team More lessons in public attitudes Q&A

20 years of best practices research





Administration



NCHR



Association of Metropolitan Planning Organizations

NATIONAL COOPERATIVE **HIGHWAY** RESEARCH PROGRAM







WARNING Technology Coming!



- Autonomous / self-driving vehicles
- Electric vehicles
- Water-fueled cars
- Shared mobility
- Smart / connected cars
- Next-gen GPS devices
- Hyperloop / high-speed rail networks
- String theory transportation
- Gyroscopic vehicles



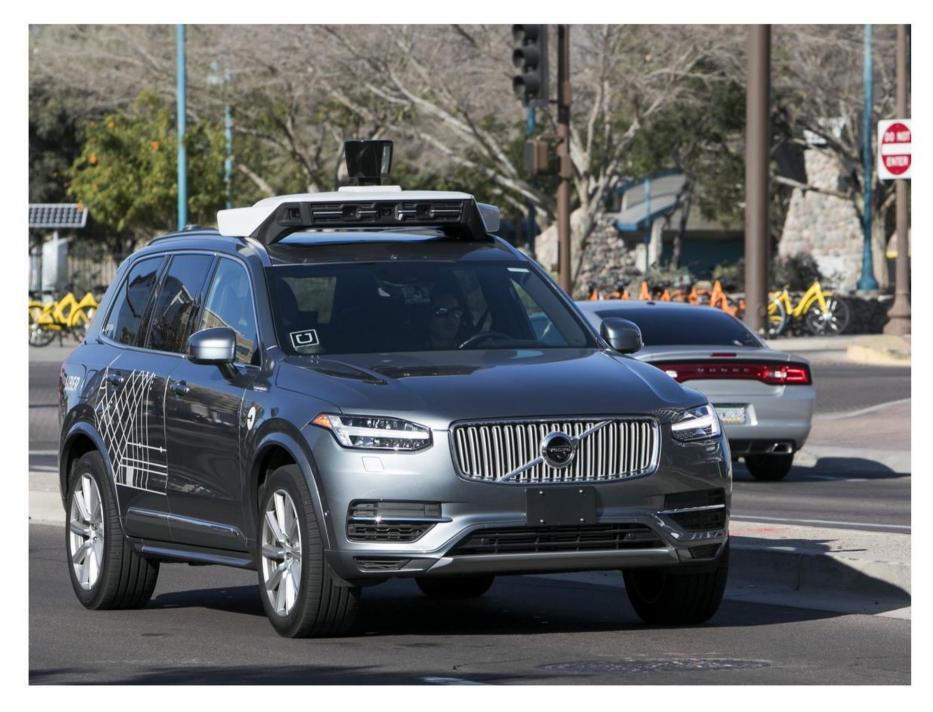
Benefits of innovation ...

Improved safety Zero emissions Reduced traffic Shorter commutes **Reduced costs** Improved performance Always connected Thriving economy



AARIAN MARSHALL AND ALEX DAVIES TRANSPORTATION 05.24.18 03:38 PM

UBER'S SELF-DRIVING CAR SAW THE WOMAN IT KILLED, **REPORT SAYS**



The National Transportation Safety Board says Uber's self-driving car had trouble identifying Elaine Herzberg as a human, and that it couldn't hit the brakes to avoid hitting her.

Accidents

TRIPPLAAR KRISTOFFER/SIPA VIA AP IMAGES

Public fears ...

- Technology failures
- Inequality of access
- Increased congestion
- Higher costs
- **Technology hacking**
- Loss of jobs

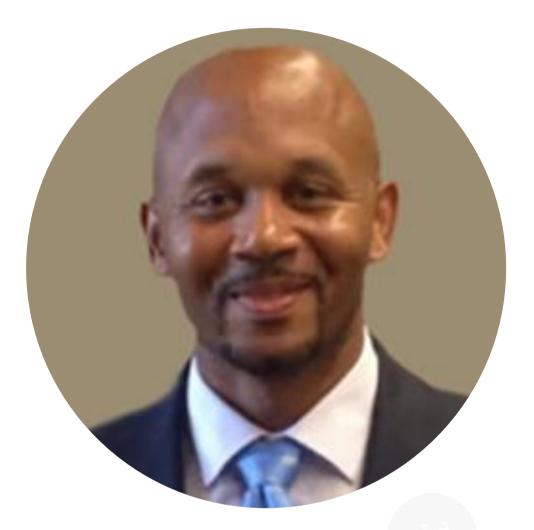


Planning our future together ...





Public Involvement Success at NCDOT!





NCDOT

Jamille Robbins Public Involvement Group Leader NCDOT

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Nastasha Earle-Young Statewide Initiatives Engineer III Colin Mellor Environmental Policy Advisor



NORTH CAROLINA Department of Transportation



Beyond Fear: Public Views on Emerging Transportation Technologies Jamille Robbins, Colin Mellor & Nastasha Earle-Young July 2019

Initiatives

Zero Emission Vehicle (ZEV)

NC Moves 2050



NC Moves 2050 Plan



Understanding N.C.'s Drivers & Oppor

Explore the possible changes and uncertainties that could affect North Carolina's future and how we need to prepare for them

Learn More 🔶

NORTH CAROLINA Department of Transpor	tation Search Q	NC.GOV AGENCIES JOBS SERVICES
About Y News & Events Y	Divisions Y Initiatives & Policies Y Travel & Maps Y	Projects
	ronmental » Climate Change & Clean Energy » Road Map to More E	lectric Vehicles in N.C.
Road Map to	o More Electric	Initiatives & Policies
	•	Adopt-A-Highway
Q NC.GOV AGENCIES JOBS SERVICE		Climate Change & Clean Energy
aps ∽ Projects ∽ Contact		Road Map to More Electric Vehicles in N.C.
		Litter Management
	Zipcars	Reducing Noise Pollution
	Company and Company	Roadside Beautification
		Sponsor-A-Highway
		Stormwater Management
orth Carolina's	achieve the goal set forth in the executive	Vegetation Management
tion Future		Wildflower Program
rtment of Transportation is updating transportation plan to help guide 's future transportation policies and		
valled NC Moves 2050, the plan year transportation blueprint for the	\$	
	ultidisciplinary team	
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unities		

Outreach Goals

- Establish early and continuous public participation
- Provide reasonable public access to educational, technical, and policy information
- Promote an open, inclusive and transparent public involvement process

Outreach Goals

- Provide adequate public notice of all public involvement activities
- Implement measures for seeking input from and considering the needs of those traditionally underserved
- Reach the broadest audience possible and effectively gather feedback

Outreach Marketing

- Advertising Methods
 - Electronic Toolkit
 - Educational Videos
 - Traditional Media
 - Paid Ads
 - Social Media Ads
 - Next Door
 - State Agency Networks
 - Transportation Planning Division Newsletter
 - Webpage

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Outreach Marketing

novative: Future Led by Technology	Renewed: Future Led by Community Investment
trongly Strongly isagree 1 2 3 4 5 Agree	Strongly Disagree 1 2 3 4 5 Agree
2 3 4 5 Computers running the system could fail, causing more accidents or unreliable service.	1 2 3 4 5 Small towns will grow too fast and transportation needs won't keep up.
2 3 4 5 Jobs replaced by machines will reduce the number of lower-paying jobs.	1 2 3 4 5 Funding will not be even across the state and transportation needs will not be met.
2 3 4 5 Access to technology will not be even across North Carolina.	1 2 3 4 5 traffic.
ilobally Connected: Future Led by a Growing Economy	
2 3 4 5 Older workers will find it more difficult to	Unstable: Future Led by Uncertainties
develop new technical skills.	1 2 3 4 5 Transportation costs will be more expensive.
2 3 4 5 Goods will not move efficiently across the state and will increase transportation costs.	1 2 3 4 5 Traveling from home to work will be less reliable.
2 3 4 5 The rural workforce will find it more difficult to travel to their jobs.	1 2 3 4 5 North Carolina will fall behind other states in providing new travel options.
2 3 4 5 Traffic will increase within urban areas and on	Economies will decline in areas of North

The following questions are voluntary. You are not required to provide the information requested below to participate in this survey.

	What is your age?
	Less than 18
	18 - 29
	30 - 44
	45 - 64
	65 or older
2	

How well do you speak English?

Very Well	
Well	
Okay	
Very Little	
Not at All	

vnatis	your total	nousenoid	incomer	

What is your race/ethnicity?

White
Black / African American
Asian
🗌 American Indian / Alaskan Native
Native Hawaiian / Pacific Islander
Hispanic / Latino
Other

We thank you for participating in this survey. NC Mo Your input will help shape future investments for transportation in North Carolina.



LET US KNOW WHAT YOU THINK.



NCMOVES, METROOUEST, COM

C MOVFS

Help the N.C. Department of Transportation develop proactive strategies to prepare for changes that will impact transportation. Fill out the survey provided or online at ncmoves.metroquest.com by May 17, 2019 to help shape the future.

possible options of North Carolina's future are:

- to national and global economies.
- services they need.
- management.

BE A PART OF THE FUTURE! #NCMOVES f 🎔 🖸 🧿

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There are many options for what the future could look like. Some

· A future where technology changes the growth and economy of North Carolina. This will lead to an environmentally friendly and affordable transportation system for all types of travel.

• A future where North Carolina's economy is growing in manufacturing, technology and jobs. North Carolina becomes a leader for attracting a skilled workforce and is well connected

 A future where economic growth has slowed while the population has aged in rural communities. A focus on transportation infrastructure is critical in connecting people in these areas to the

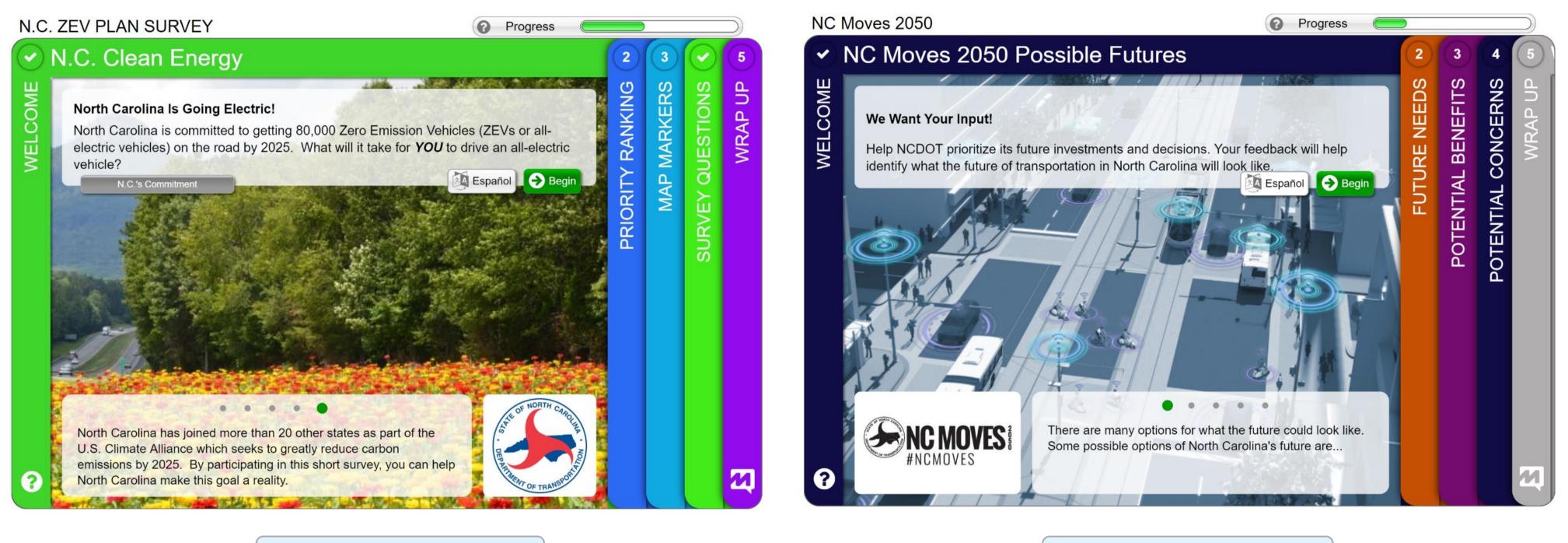
· A future where economic growth has slowed, extreme weather events cause delays and travel conditions are less reliable. This leads to funding uncertainties and a state focus on risk





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Initiatives





Data points for this Site:Participants:10083All data points:325415All comments:930

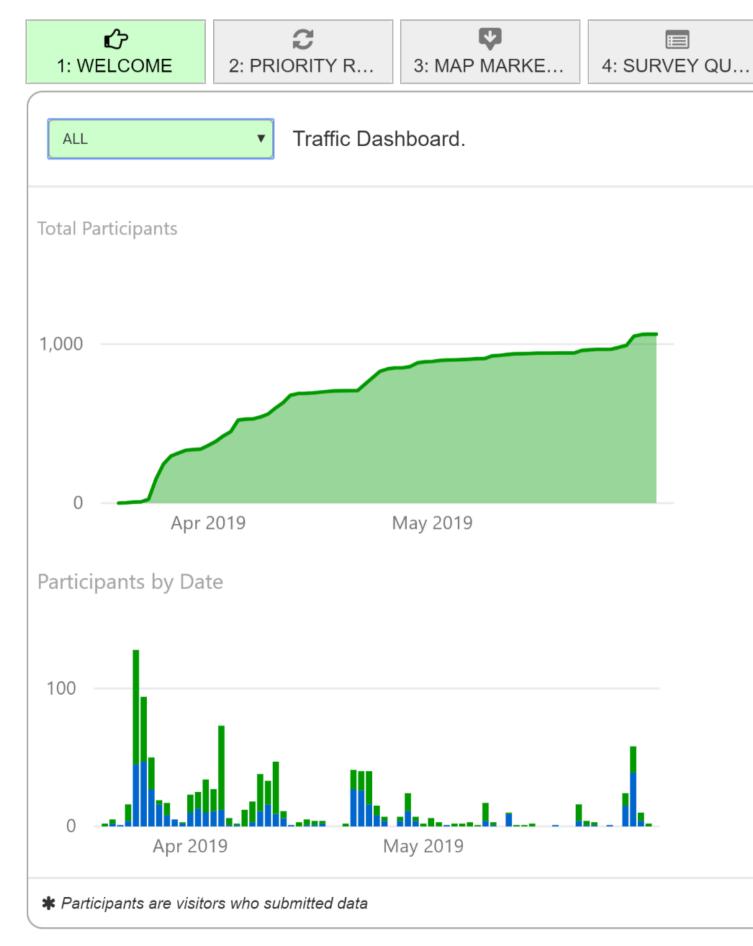
NCDOT ZEV Plan



N.C. Clean Energy

WELCOME

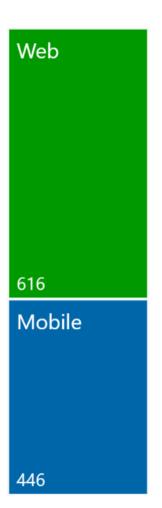




Beyond Fear: Public Views on Emerging Transportation Technologies

1062 Participants

5: WRAP UP



Data Center Introduction

1: WELCOME



Type: 🏠 Welcome Screen



To Drive Electric I need... 2

PRIORITY RANKING

Order your top 5 ↑ items above this line ↑

Cost = Current car + \$2K

Charging spot at work

Tax break / Cash rebate

More charging stations

Charging spot at home

I need a Phone App

Better range per charge

Cost = Current car + \$5K

an electric vehicle.



Suggest another

Beyond Fear: Public Views on Emerging Transportation Technologies

Rank, from most important to least important, the Top 5 priorities that would help you decide to buy

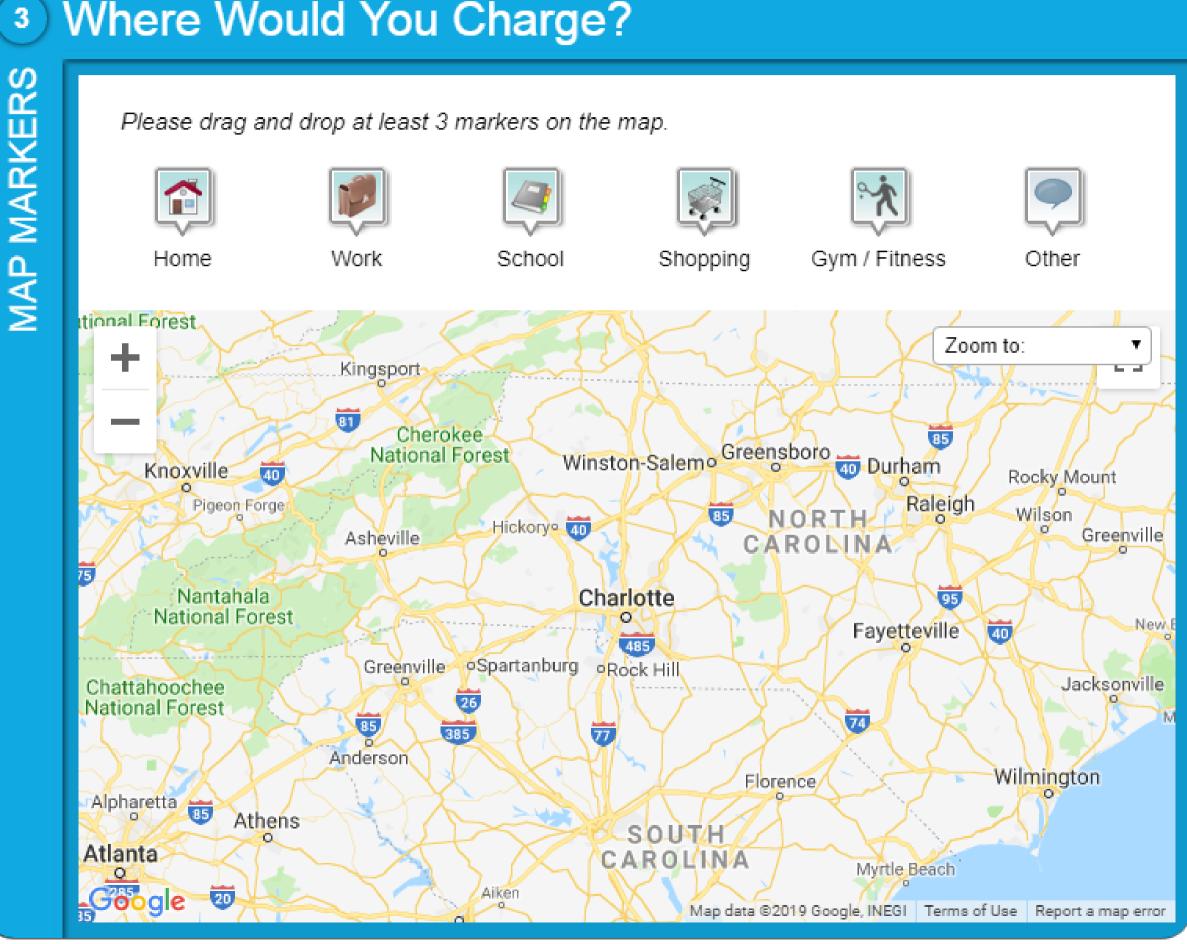


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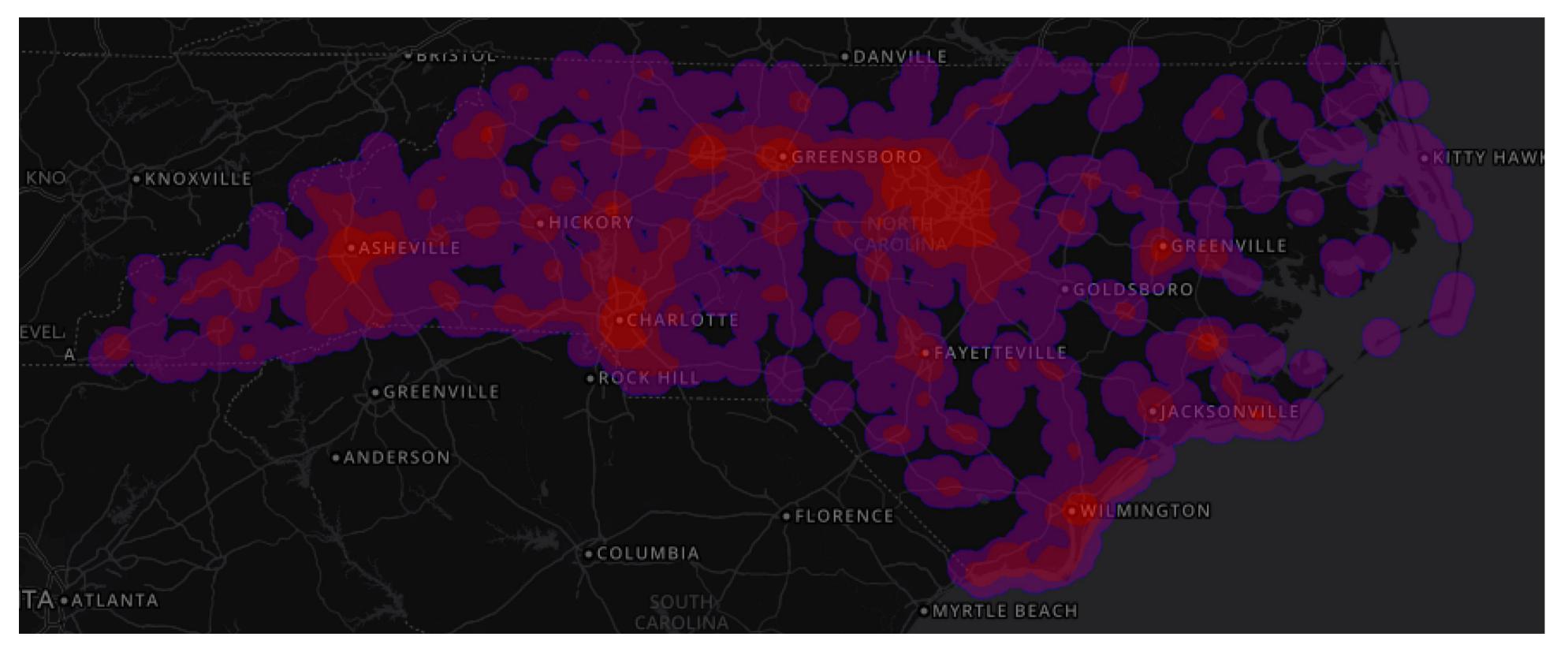


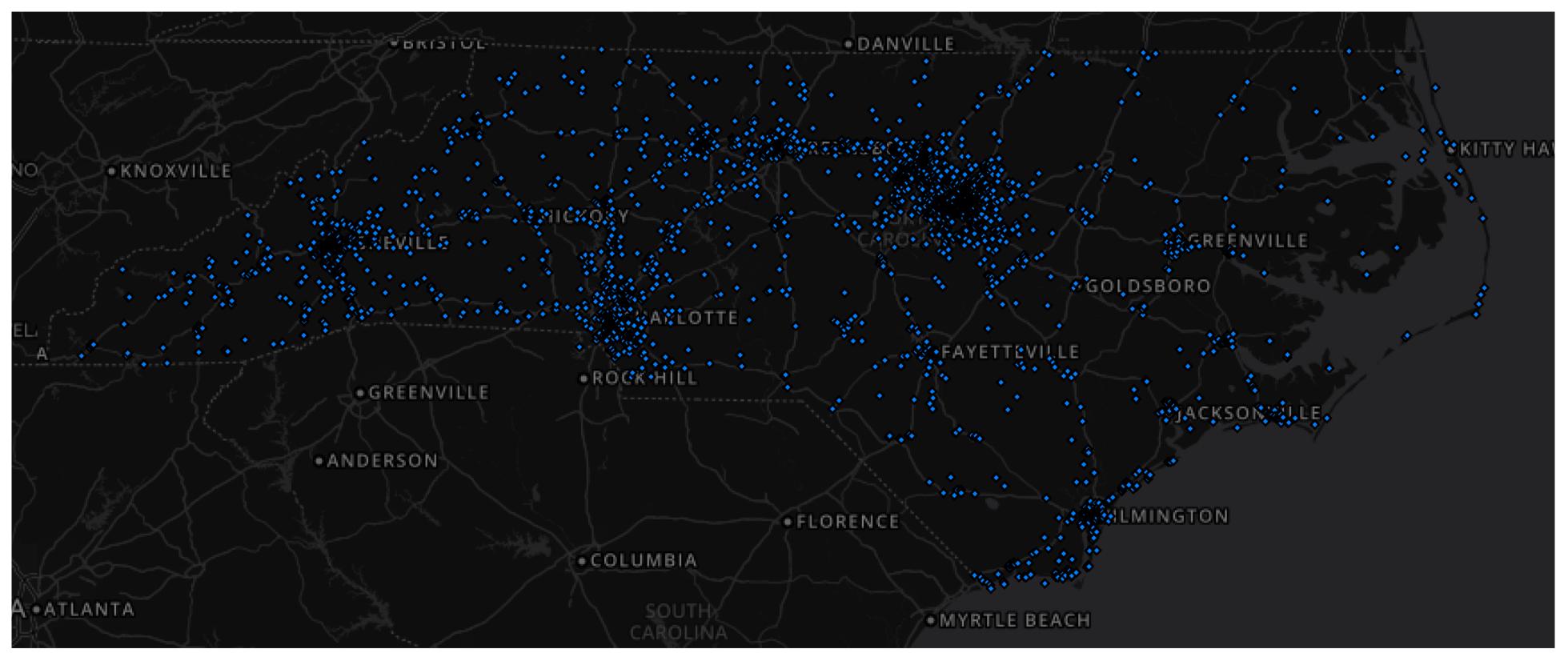
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Where Would You Charge?



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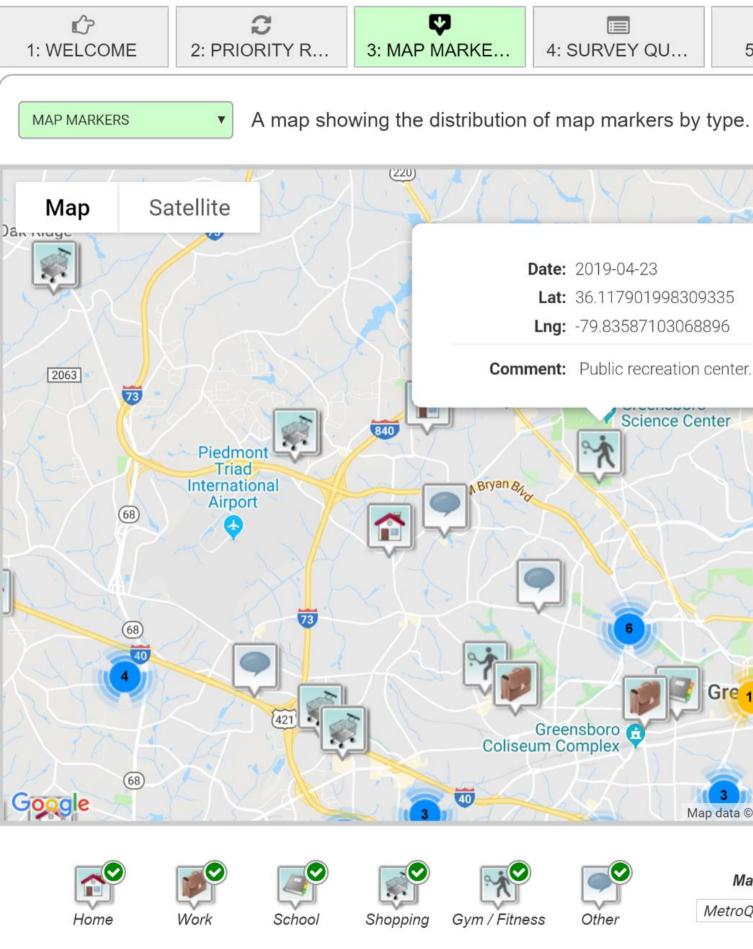




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ZEV Outreach

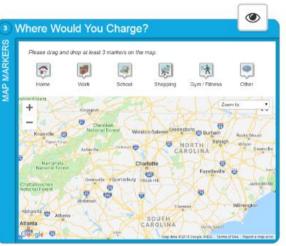


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Map Styles MetroQuest Icons ▼

Data Center Introduction

3: MAP MARKERS

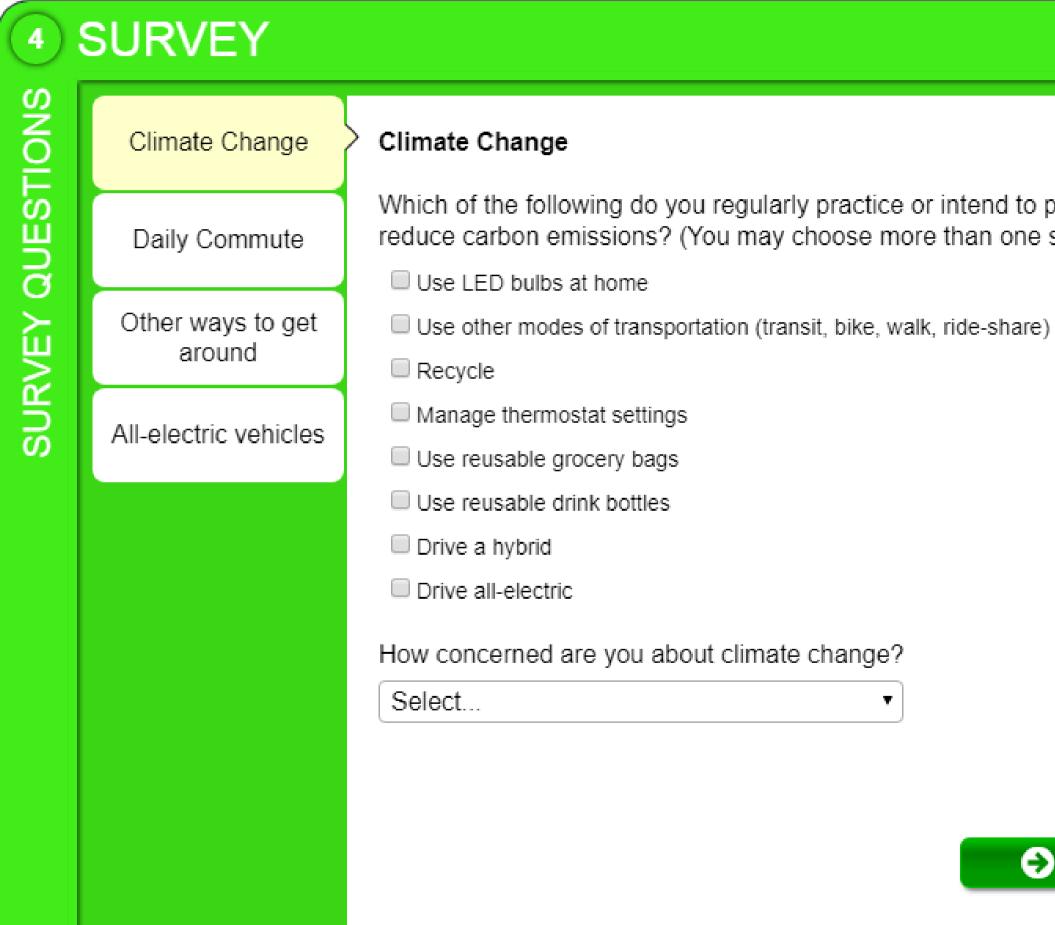


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A	3424529 What is your daily commute oneway from he	the state of the s	A REAL PROPERTY AND A REAL	Male	Haywood	13 years from now	The local design of the lo	S4_P2_T0_Q1_Daily_Commute_1	S4_P2_T0_Daily Commut	
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10 11 1	3424529 O1 Climate Change 1 O1 Use LED bulbs at	checked	61 to 80	Male	Haywood	13 years from now	and the production of the second statements	S4_P1_T0_Q1_Climate_Change_1_C	A DESCRIPTION OF THE REPORT	
	3424529 de GetAround 1 O1 Electric scooter	checked	61 to 80	Male	Haywood	13 years from now		S4_P3_T0_Q1_GetAround_1_O1_Ele		
Y A A	3426764 Q1 GetAround 1 O8 Bike lanes	checked	41 to 60	Male	Buncombe	In less than a year	55000 74000	S4_P3_T0_Q1_GetAround_1_O8_Bil	and where the second	
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5 , A NG-	3426764 Q2 EV 2 O1 TaxCredit	checked	41 to 60	Male	Buncombe	In less than a year	55000 74000	S4_P4_T0_Q2_EV_2_O1_TaxCredit		
Y BULLY		checked	41 to 60	Male	Buncombe	In less than a year		S4_P3_T0_Q1_GetAround_1_07_Pe		
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L	3426775 Q2 EV 2 O1 TaxCredit	checked	26 to 40	Male	Henderson	13 years from now	THE R. P. LEWIS CO., LANSING MICH.	S4_P4_T0_Q2_EV_2_O1_TaxCredit		
	3426775 Q2 EV 2 O2 Rebate	checked	26 to 40	Male	Henderson	13 years from now		S4_P4_T0_Q2_EV_2_O2_Rebate	S4_P4_T0_EVAllelectric	
A + ATLANTA		checked	26 to 40	Male	Henderson	13 years from now		S4_P3_T0_Q1_GetAround_1_07_Pe		
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	3426775 How concerned are you about climate change			Male	Henderson	13 years from now		S4_P1_T0_Q2_Climate_Change_2	S4_P1_T0_Climate Chan	
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Which of the following do you regularly practice or intend to practice to reduce carbon emissions? (You may choose more than one selection).

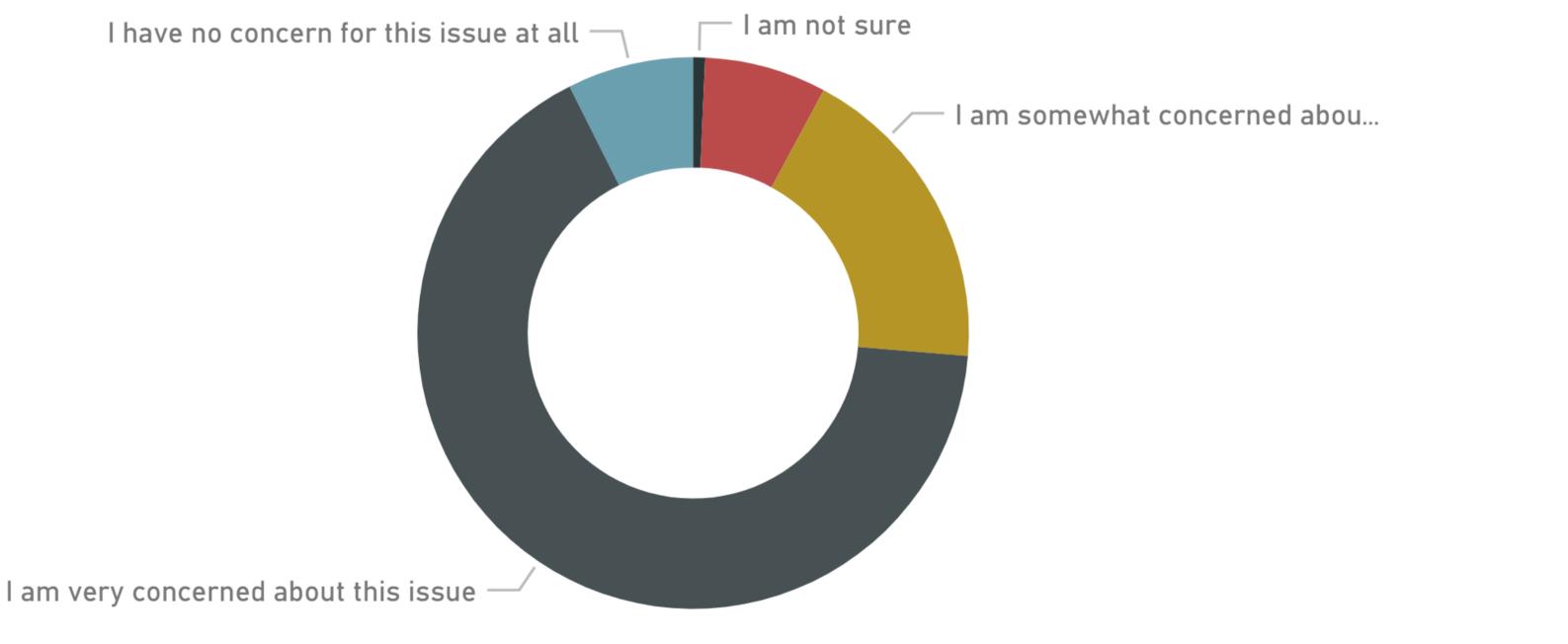
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ZEV Outreach

How concerned are you about climate change?



Which are necessary for you to be comfortable switching to an all-electric (ZEV) vehicle?

The cost per mile would have to be equal to or less than that of a gas-fuel car (cost of fuel + maintenance)

I am not concerned about the cost differential between all-electric and gas vehicles

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I would require a tax credit

would need a manufacturer's rebate



NG MOVES 8

NC Moves 2050 Plan Outreach

WELCOME

NC Moves 2050 Possible Futures 1

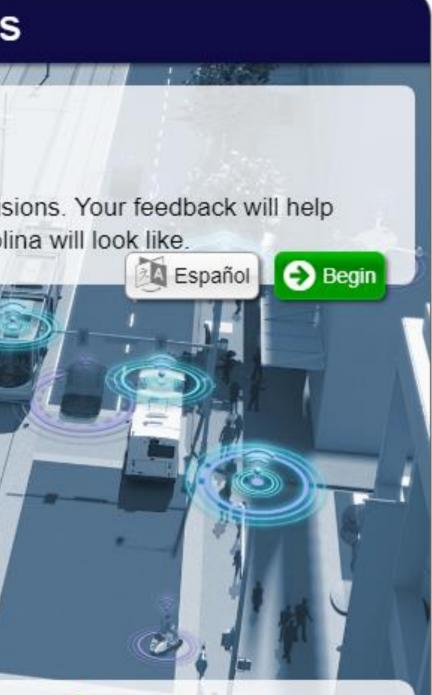
We Want Your Input!

Help NCDOT prioritize its future investments and decisions. Your feedback will help identify what the future of transportation in North Carolina will look like.



A future where North Carolina's economy is growing in manufacturing, technology and jobs. North Carolina becomes a leader for attracting a skilled workforce and is well connected to national and global economies.

Beyond Fear: Public Views on Emerging Transportation Technologies



NC Moves 2050 Plan Outreach

Future Transportation Needs 2)

> Order your top 5 ↑ items above this line
> ↑

NEEDS

FUTURE

High-Speed Internet

Core Industry Access

Knowledge-Based Workforce

Rural Development

Weather Preparedness

Self-Driving Cars

Connecting Seniors

Goods Delivery

Let us know which outcomes are the most important to North Carolina's future in 2050. Click on each outcome to learn more about them before ranking them in order of priority.



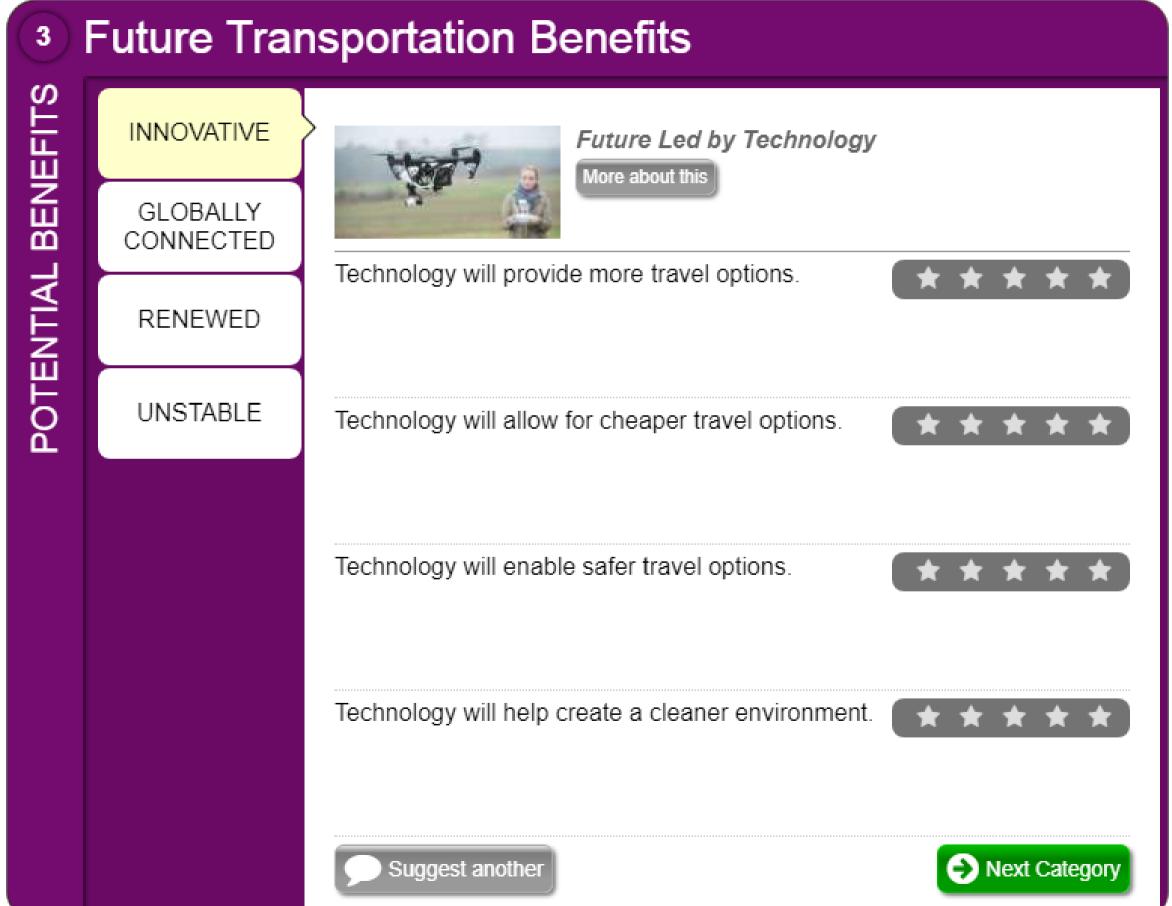
Suggest another

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Please drag 5 of the items above the line in your preferred order.

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CONCERNS POTENTIAL

4





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)	Future Transportation Concerns						
	INNOVATIVE	Future Led by Technology More about this					
	GLOBALLY CONNECTED						
	RENEWED	Computers running the system could fail, causing more accidents or unreliable service.					
	UNSTABLE						
		Jobs replaced by machines will reduce the number of lower-paying jobs.					
		Access to technology will not be even across North Carolina.					
		Suggest another Next Category					

NC	Moves	2050	Pla

-	Wrap Up
	Final Questions (Optional)
WRAP UP	Zip code? Type
	Age? Select •
	Total Household Income? Select
	Race/Ethnicity?
	How well do you speak English? Select
	Gender? Select •
	Submit Final Questions Skip
4	

Beyond Fear: Public Views on Emerging Transportation Technologies

an Outreach

Thank You!

We thank you for participating in this survey. Your input will help shape future investments for transportation in North Carolina.

To learn more about the NC Moves 2050 Plan visit ncdot.gov/ncmoves



Plan Development: Phase II Engagement Accomplishments



Outreach

- Attended
- 7 college events
- 9 conferences
- 6 DMV events
- 10 festivals
- Emailed 7,829 stakeholders
- Sent surveys to 15 county schools
- Placed 31 intercept survey boxes



Survey #2

- 10,100 participants
- 7,220 took survey on website
- 2,880 took survey on phone
- 14,754 visitors on website
- 325,902 data points
- 929 comments

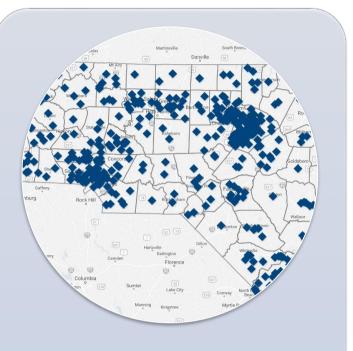


Table Topics

- 18 Conversations held

- 25% African American
- 7% Hispanic

• Over 100 participants engaged • 59% participants ages 18-29

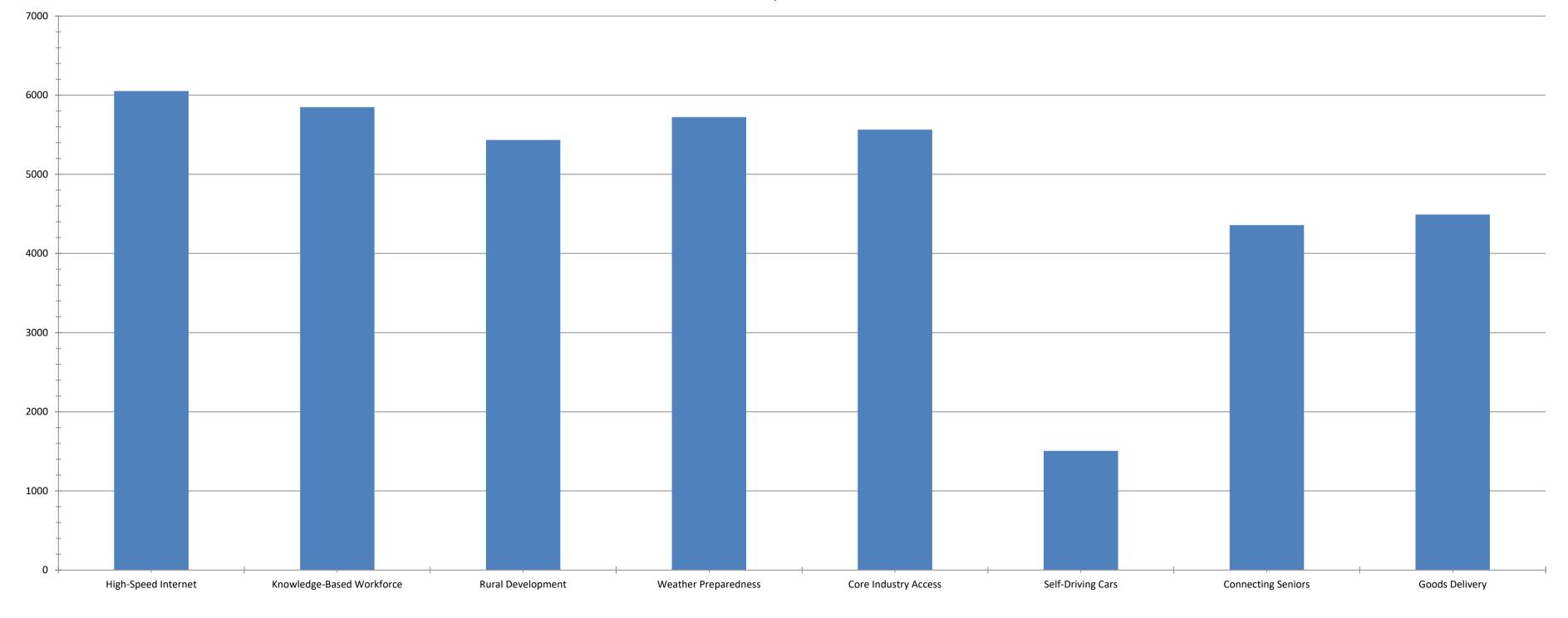


Public Comment Map

- Over 1000 comments received
- Comments made in all 100 counties
- 70% of participants were residents

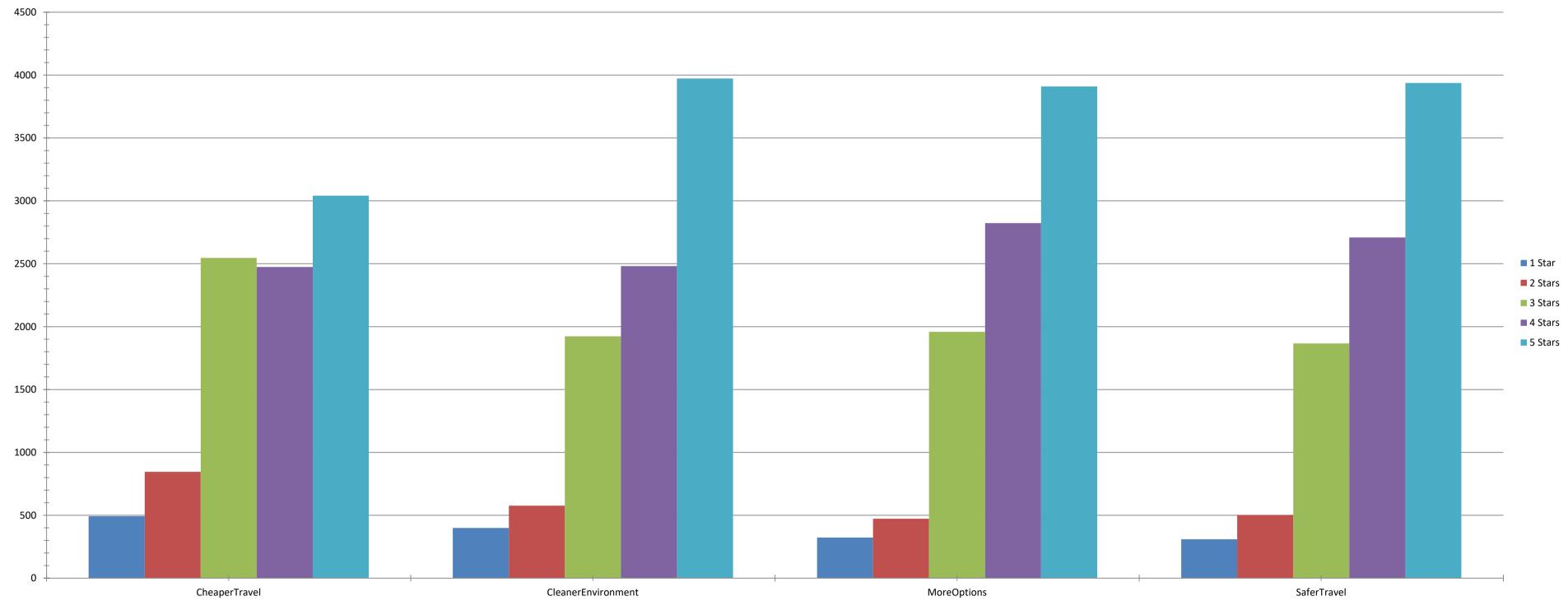
NC Moves 2050 Plan Survey Results





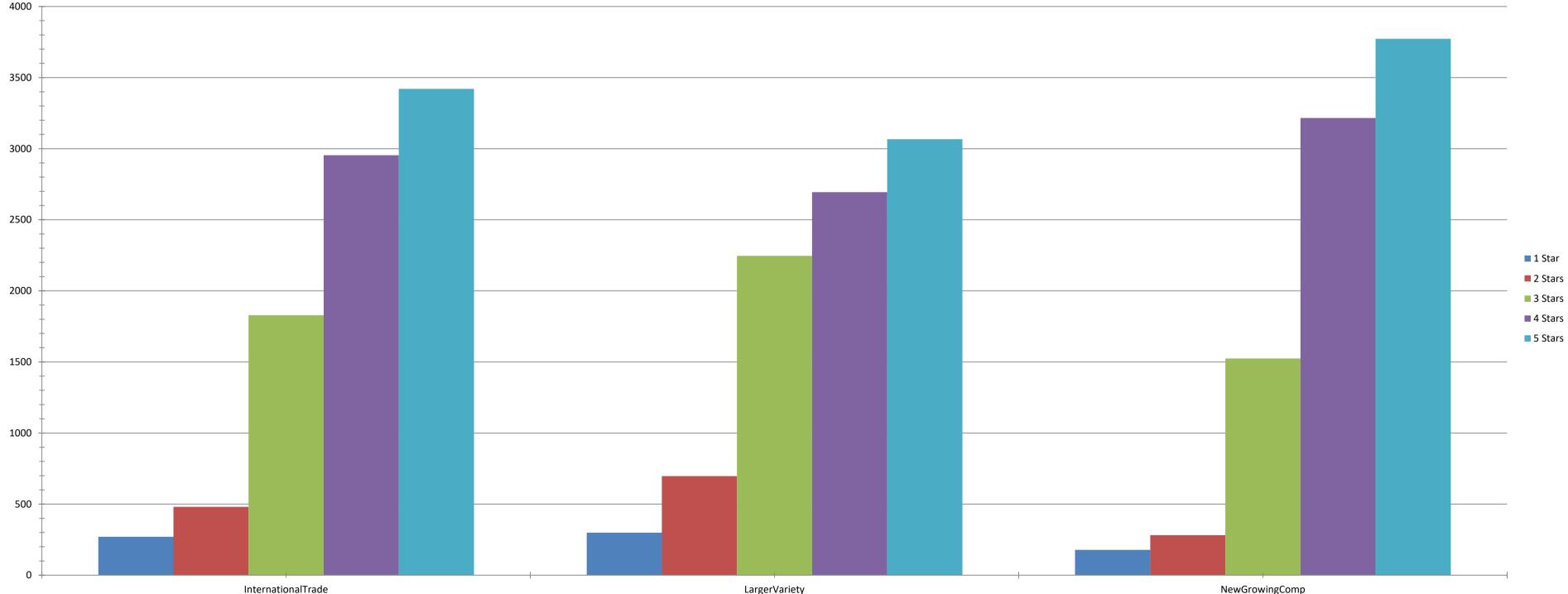
NC Moves 2050 Plan Survey Results

Future Transportation Benefits Innovative: A Future Led by Technology



NC Moves 2050 Plan Survey Results

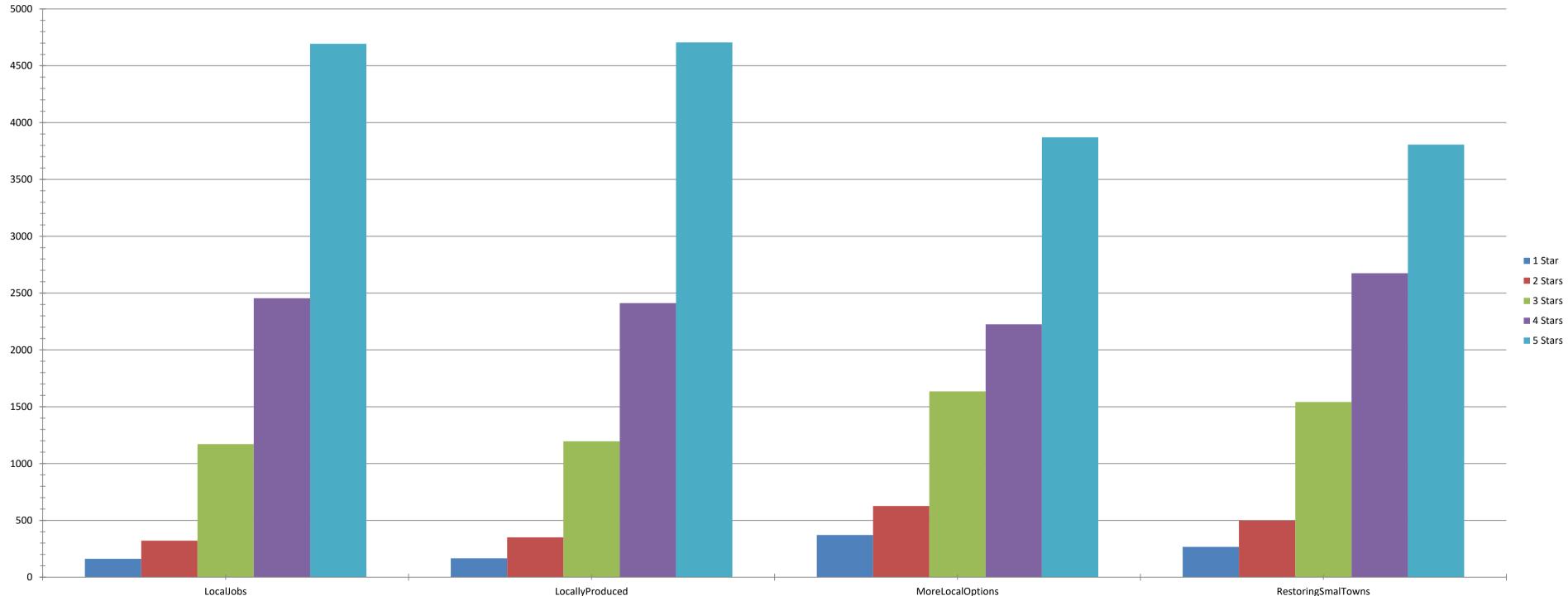
Future Transportation Benefits Globally Connected: A Future Led by a Growing Economy



NewGrowingComp

NC Moves 2050 Plan Survey Results

Future Transportation Benefits Renewed: Future Led by Community Investment

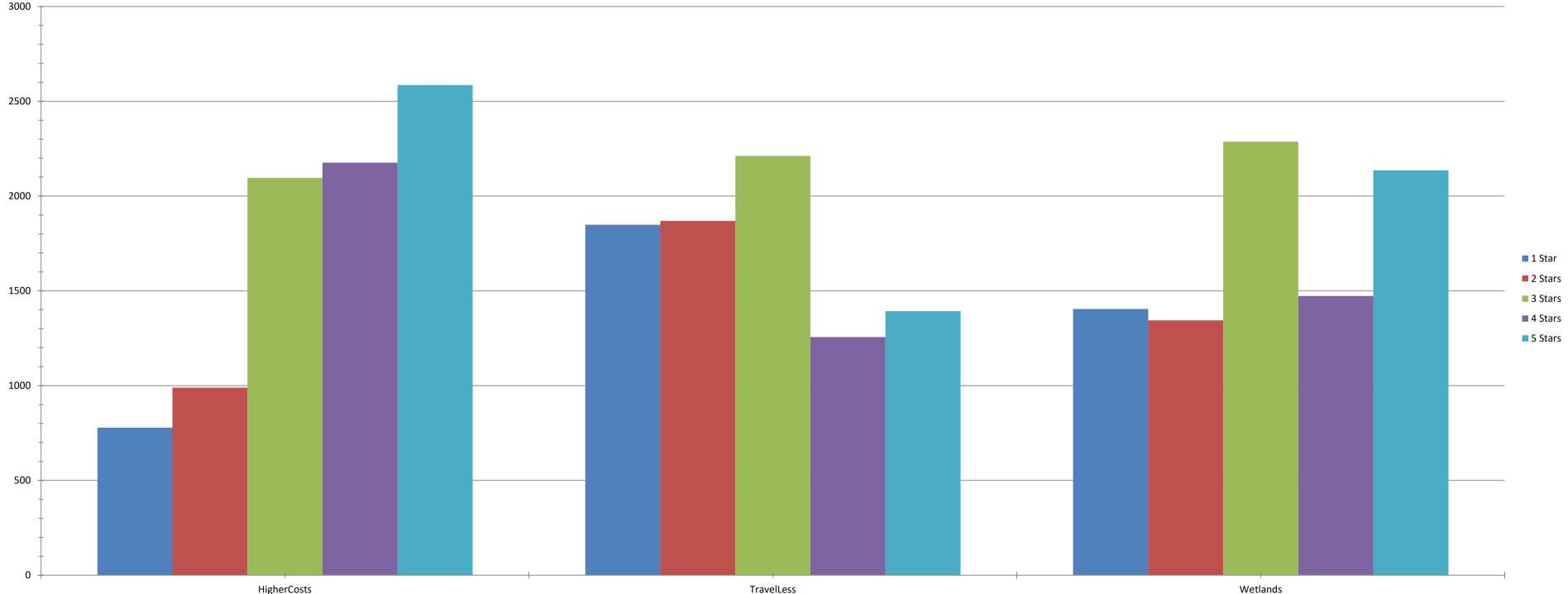


MoreLocalOptions

RestoringSmalTowns

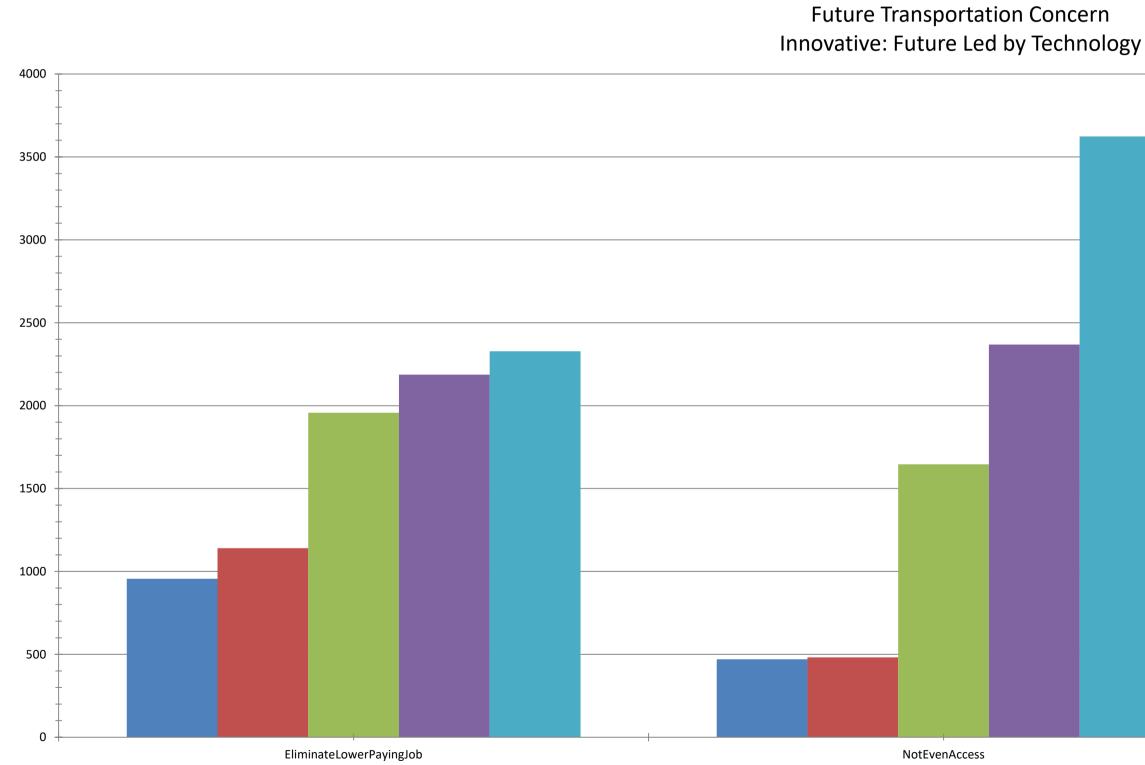
NC Moves 2050 Plan Survey Results

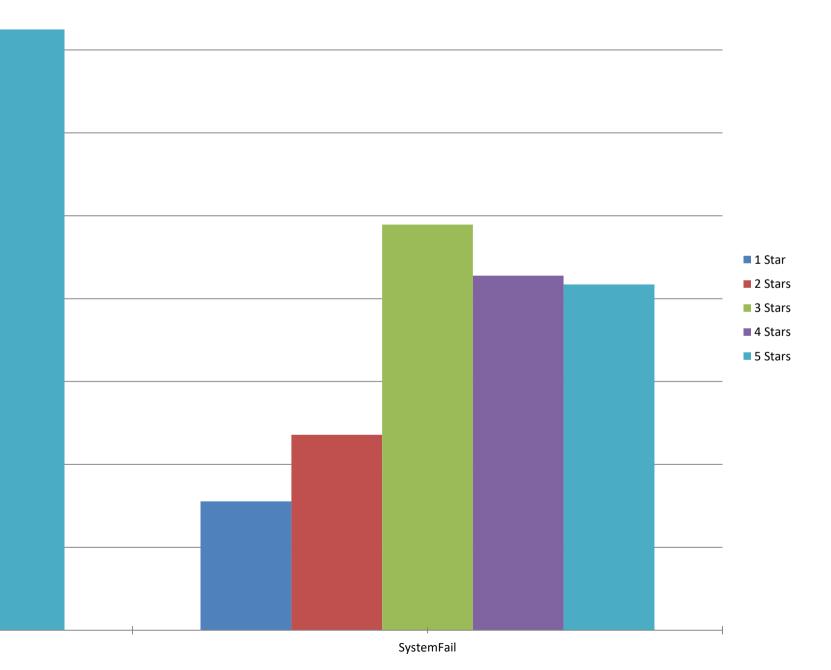
Future Transportation Benefits Unstable: Future Led by Uncertainties



Wetlands

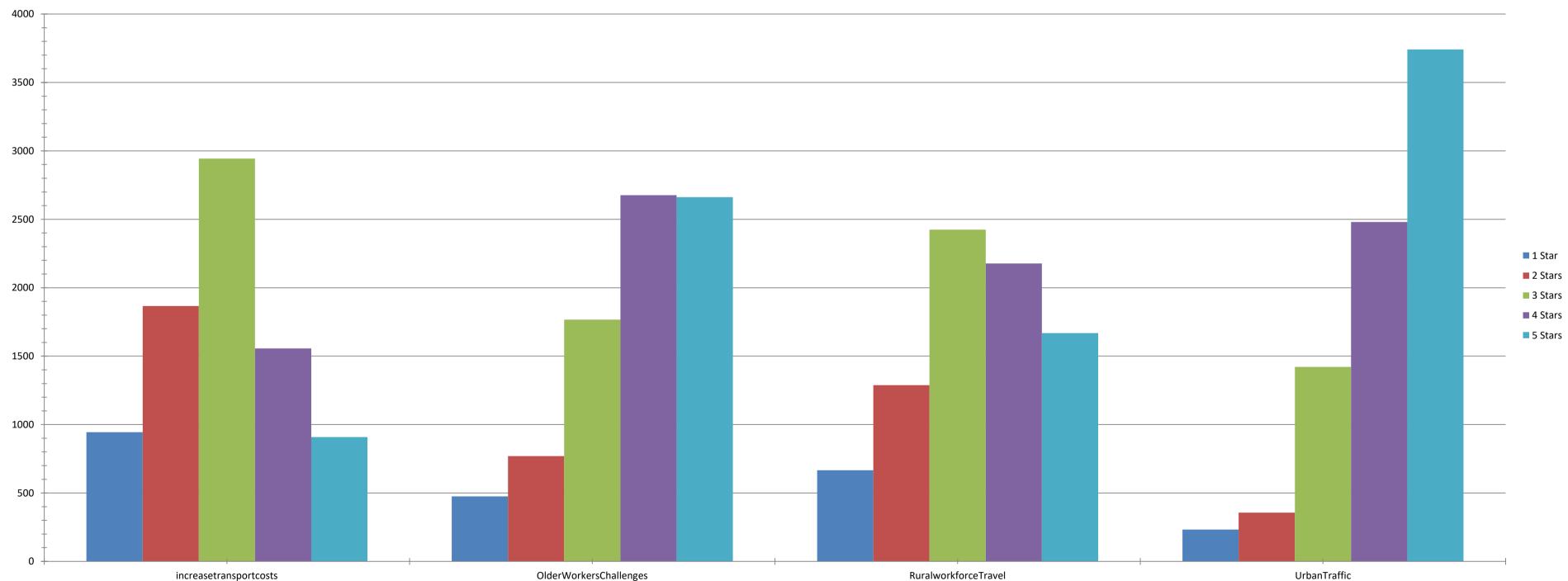
NC Moves 2050 Plan Survey Results





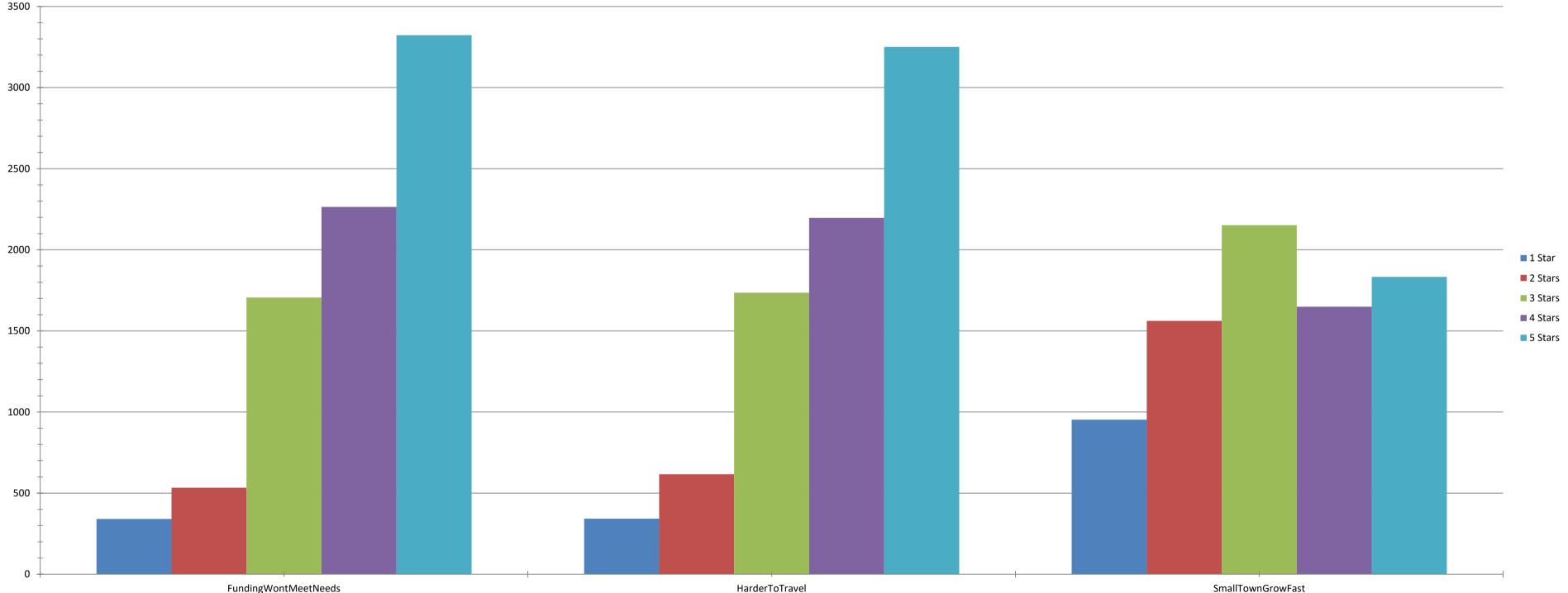
NC Moves 2050 Plan Survey Results

Future Transportation Concerns Globally Connected: Future Led by a Growing Economy



NC Moves 2050 Plan Survey Results

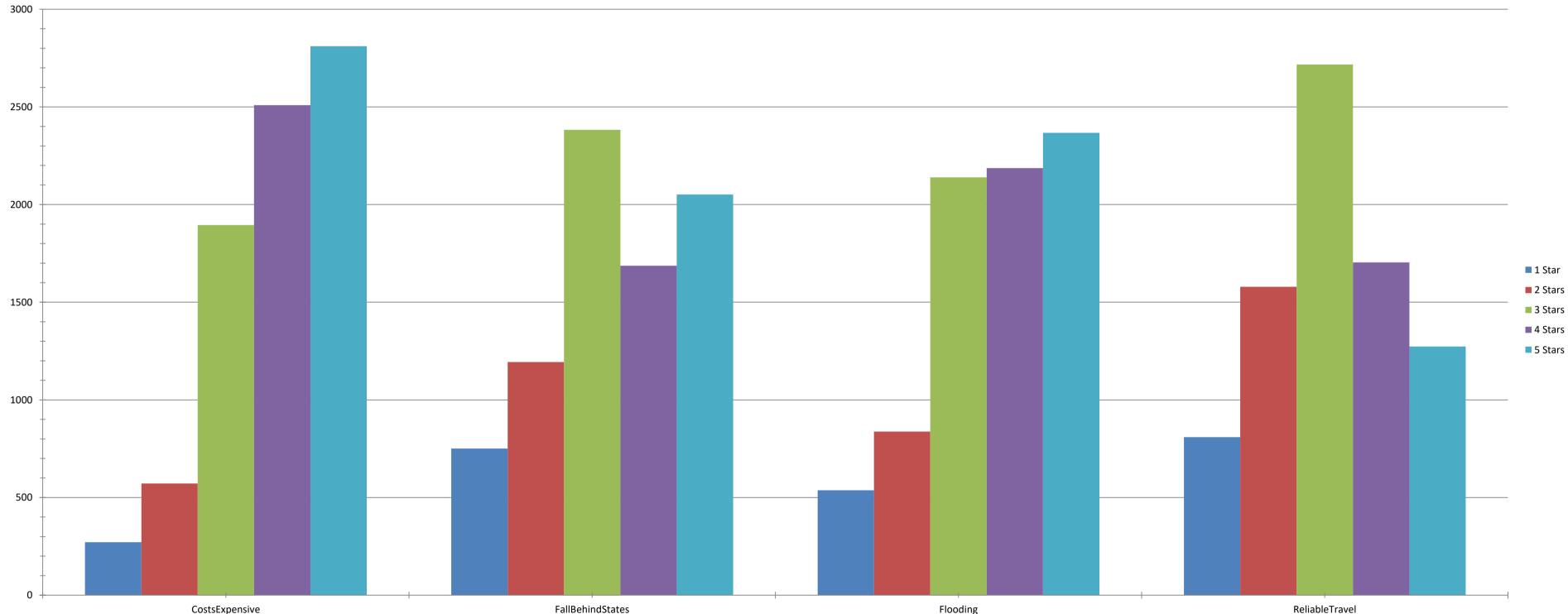
Future Transportation Concerns Renewed: Future Led by Future Led by Community Investment



SmallTownGrowFast

NC Moves 2050 Plan Survey Results

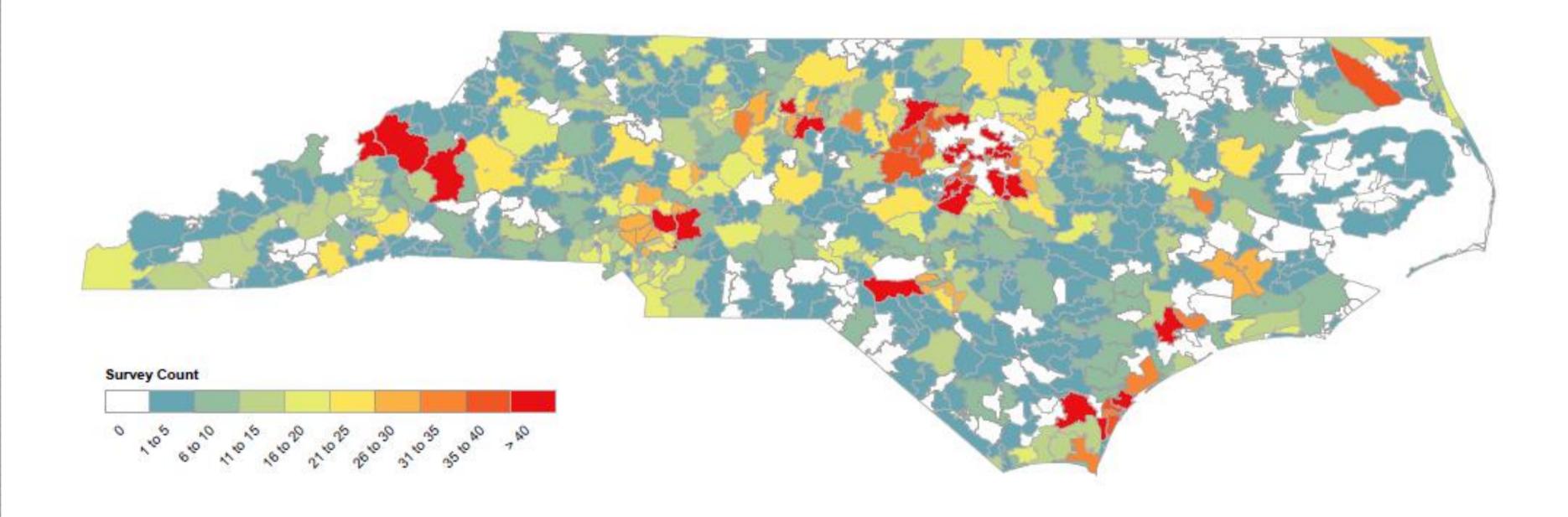
Future Transportation Concerns Unstable: Future Led by Uncertainties



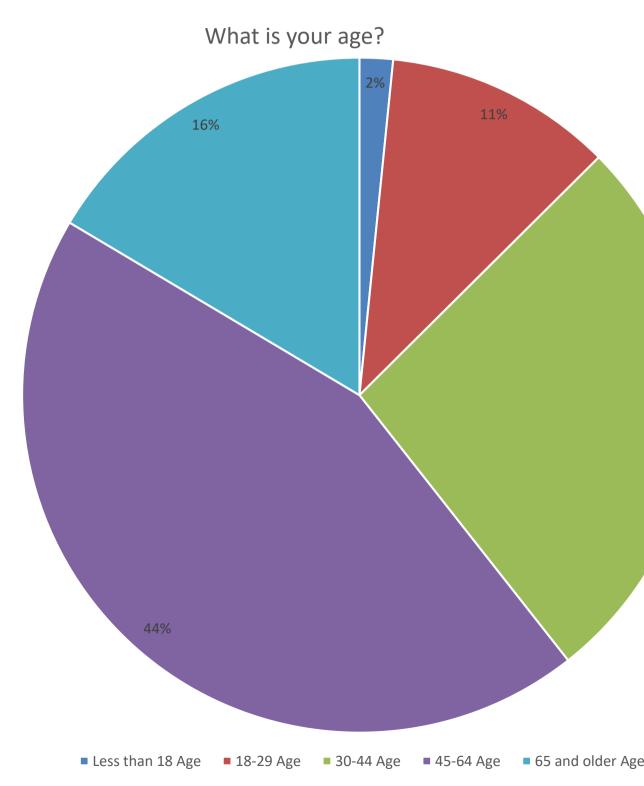
CostsExpensive

NC Moves 2050 Plan Survey Results

NC Moves 2050 Plan Survey Counts by Zip Codes



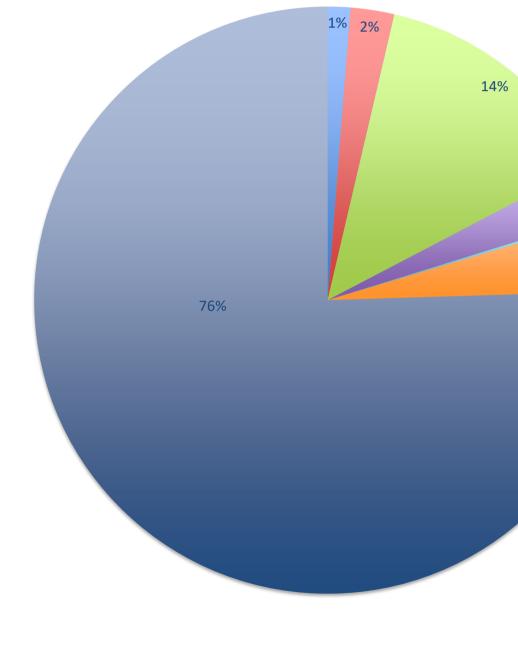
NC Moves 2050 Plan Survey Demographics



27%

NC Moves 2050 Plan Survey Demographics

What is your race/ethnicity?





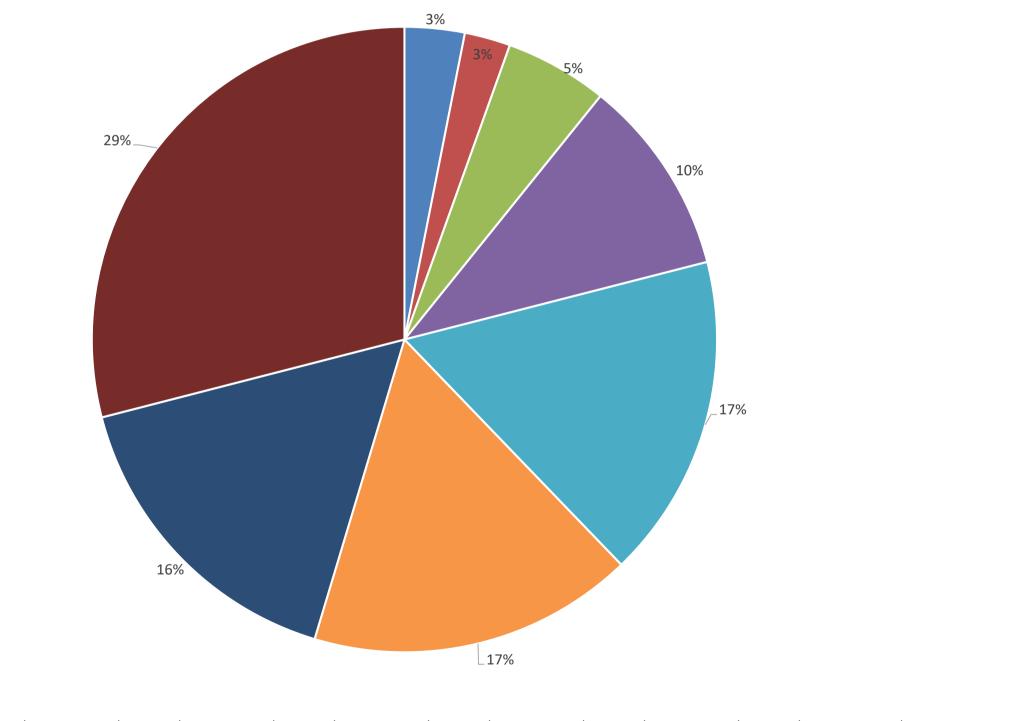
3%

0%

50

NC Moves 2050 Plan Survey Demographics

What is your total household income?



■ \$70,000- \$93,999 ■ \$94,000- \$117,999 ■ \$118,000 or greater

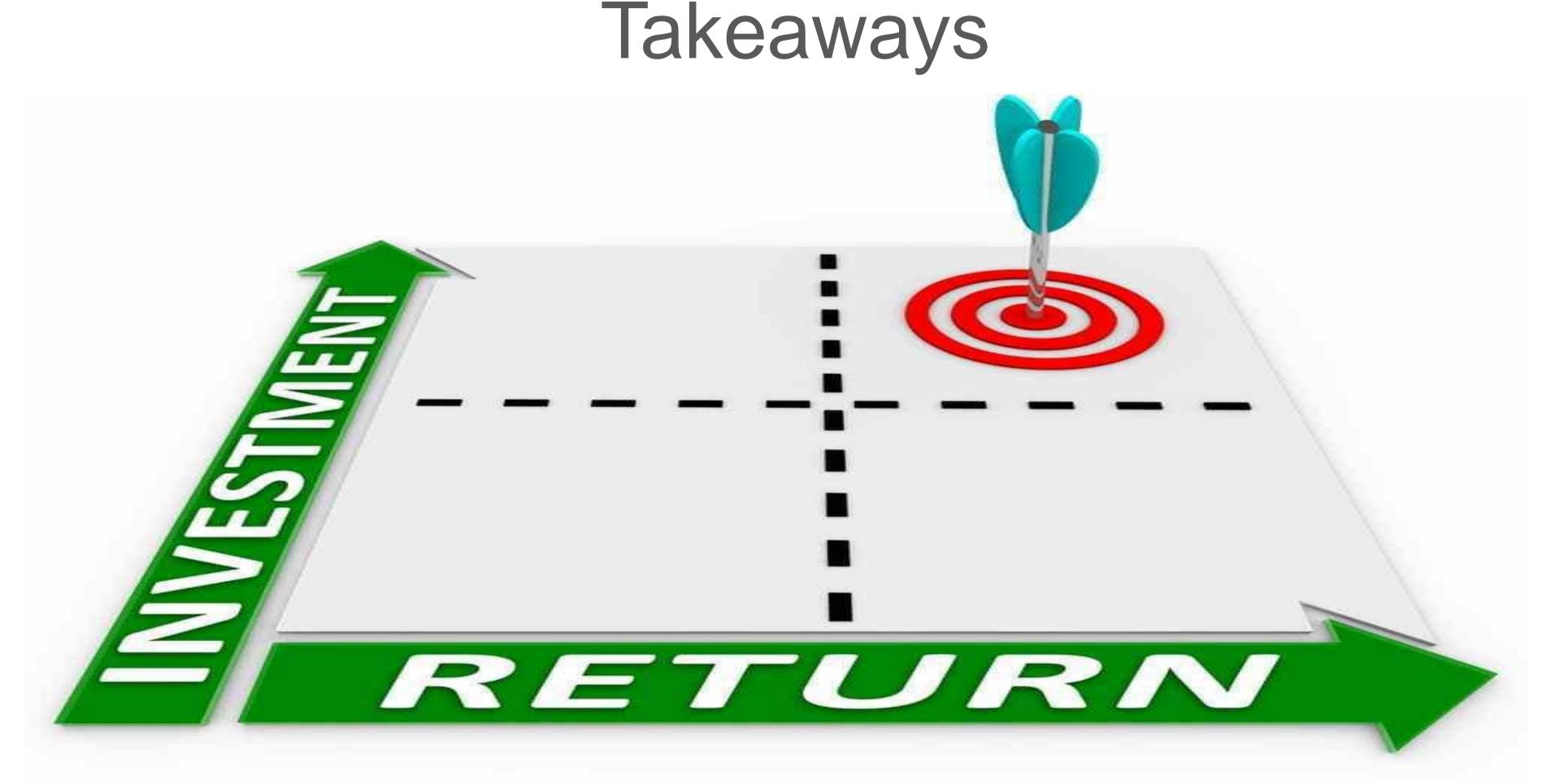
NC Moves 2050 Plan Survey Demographics

How well do you speak English?					
8000 —				95.85%	
7000 —					
6000 —				-	
5000 —					
4000 —					
3000 —					
2000 —					
1000 —					
0 —	0.20%	0.73%	0.15%		3.07%
0	Not at All	Okay	Very little	Very Well	Well

Project Schedule







Beyond Fear: Public Views on Emerging Transportation Technologies

Takeaways

"A 21st Century Transportation System Needs to be Built on the Foundation of a 21st Century Public Involvement Strategy."

Top public engagement goals

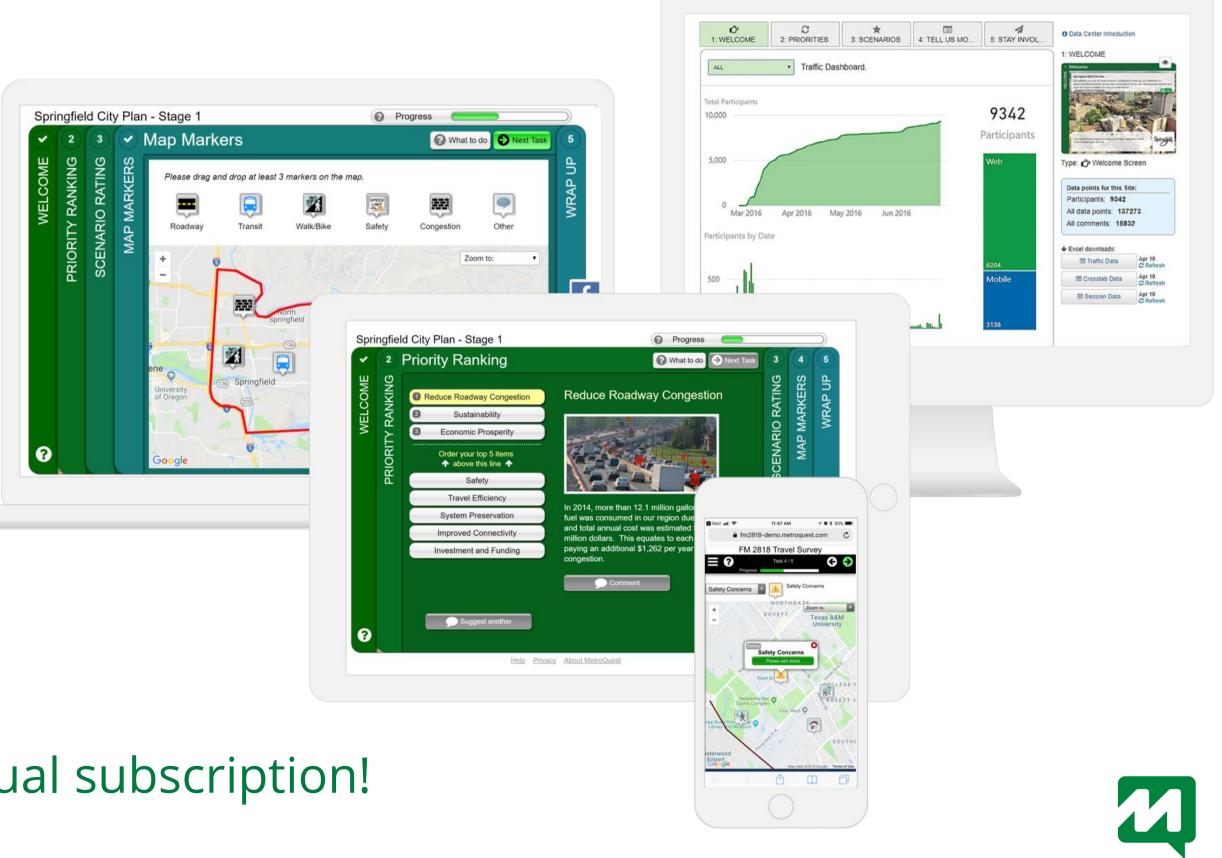
Critical mass Diversity

Improved decision making & greater public support

Informed input Quantifiable results

MetroQuest – Engagement Optimized

- Engage thousands online
- ✓ Involve a diverse audience
- ✓ Educate the public
- Collect informed input
- Deliver actionable results



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Local Agencies



















Four case studies



Virginia DOT

VTrans2040 - Future Transportation Choices

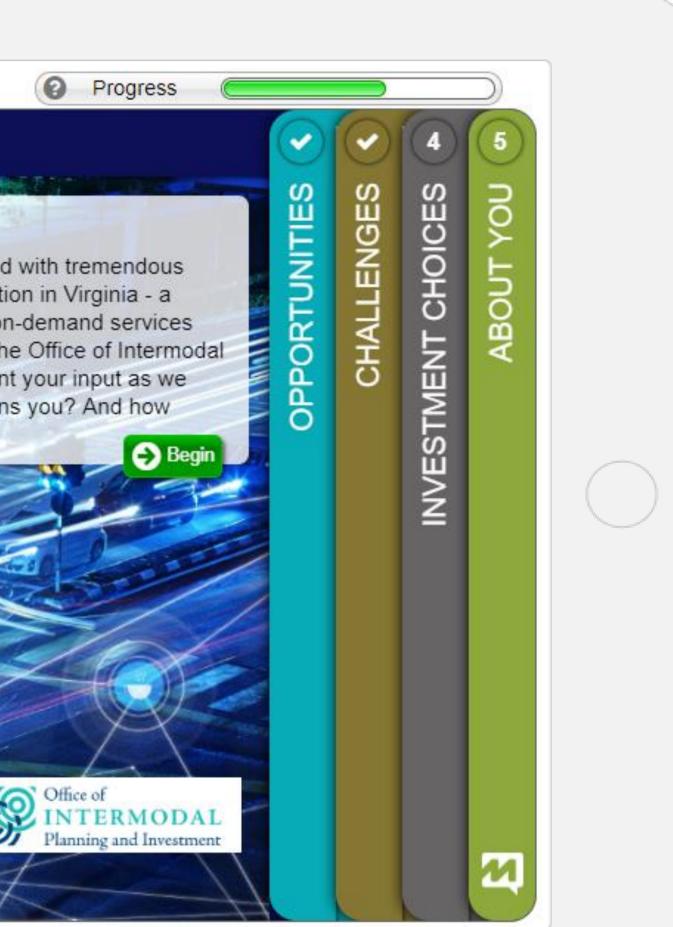
Welcome

WELCOME

Tell us what you think!

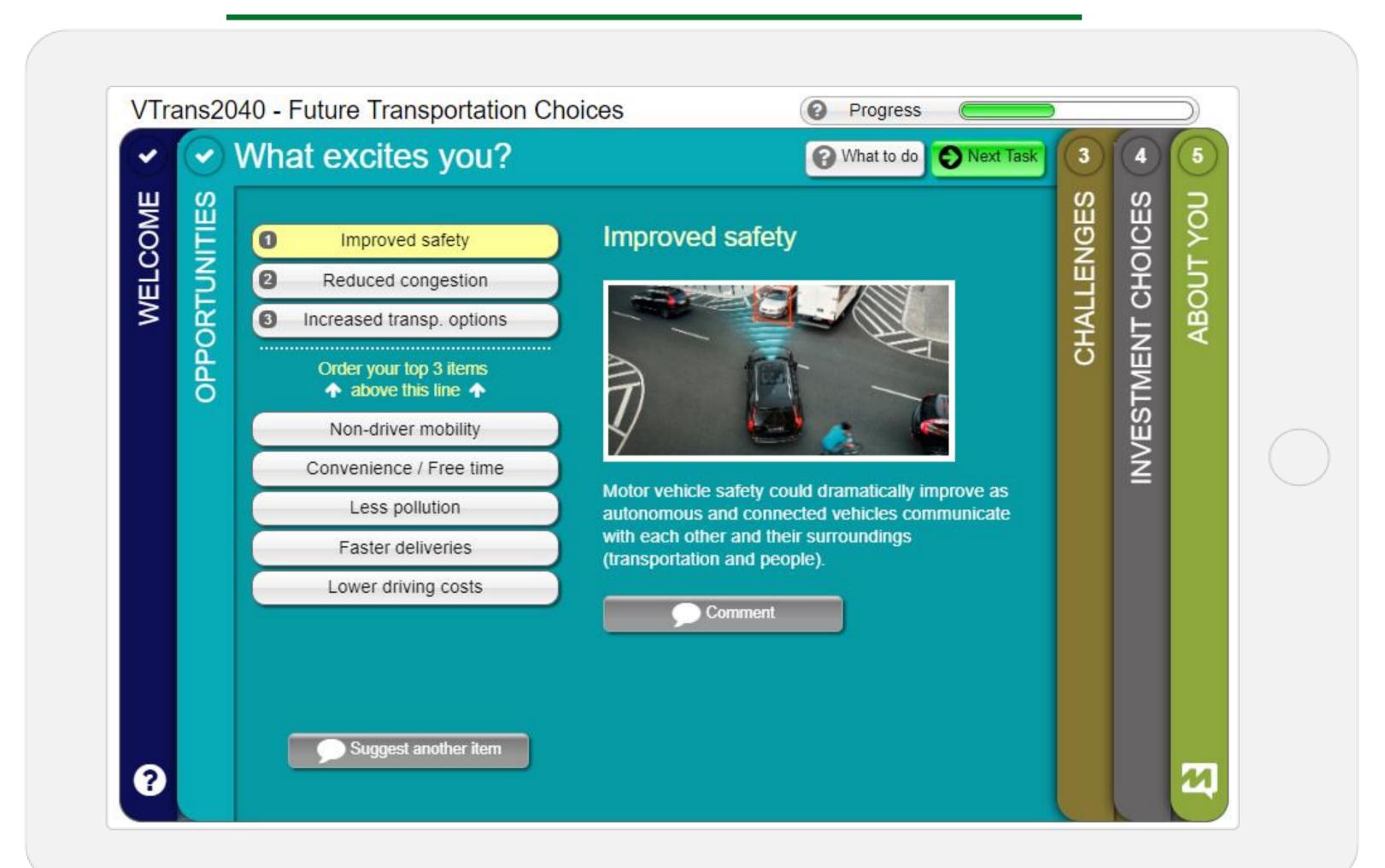
With rapid advances in technology and infrastructure, we are faced with tremendous opportunities and concerns as we plan for the future of transportation in Virginia - a future where autonomous vehicles (driverless cars) and mobility-on-demand services (like Uber and Lyft) could completely change the way we travel. The Office of Intermodal Planning and Investment (OIPI) and its partner state agencies want your input as we prepare for this brave new world. What excites you? What concerns you? And how should we plan to spend our tax dollars?

Did you know? Driver error is responsible for approximately 80-90% of all crashes.



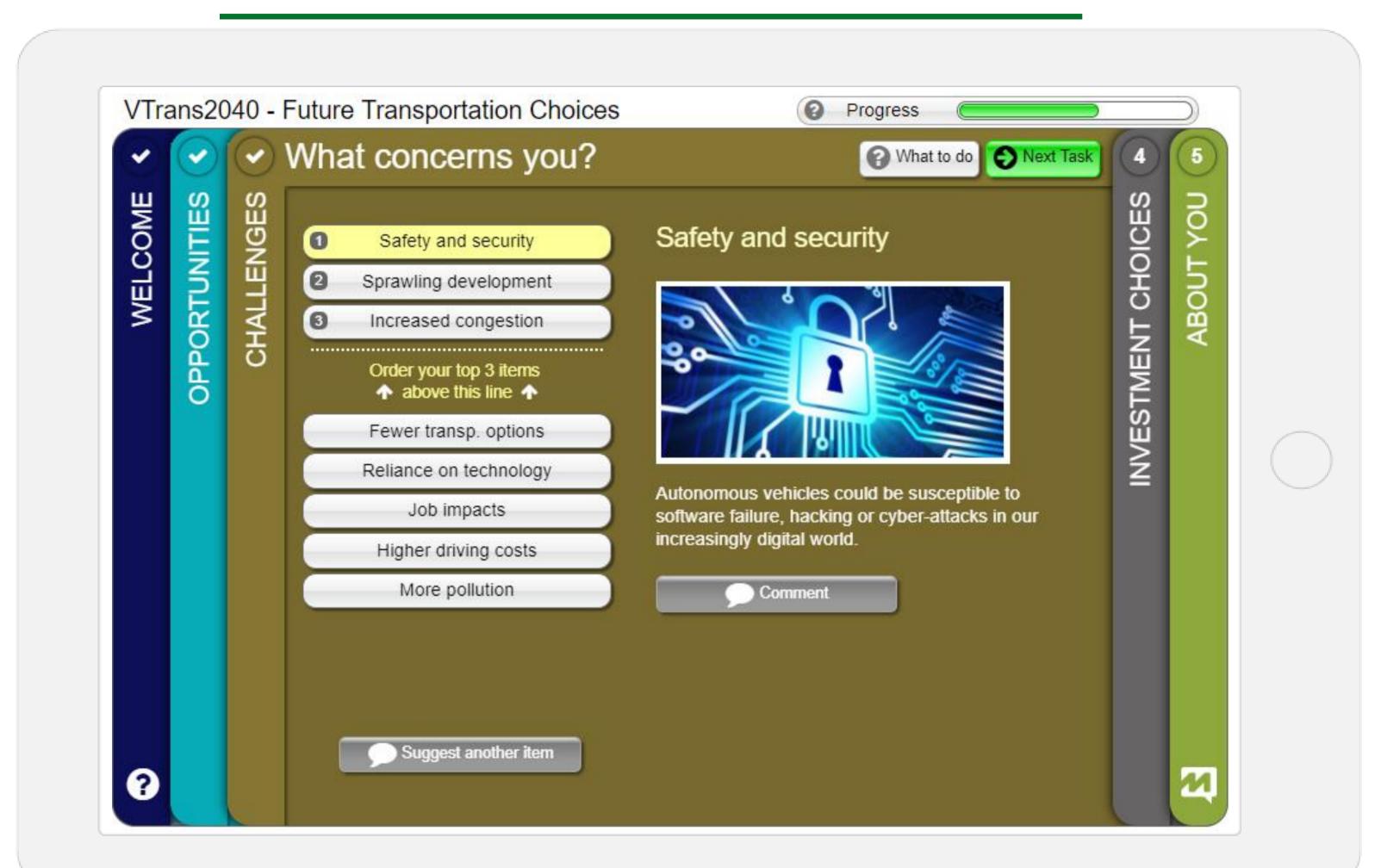


What excites people?



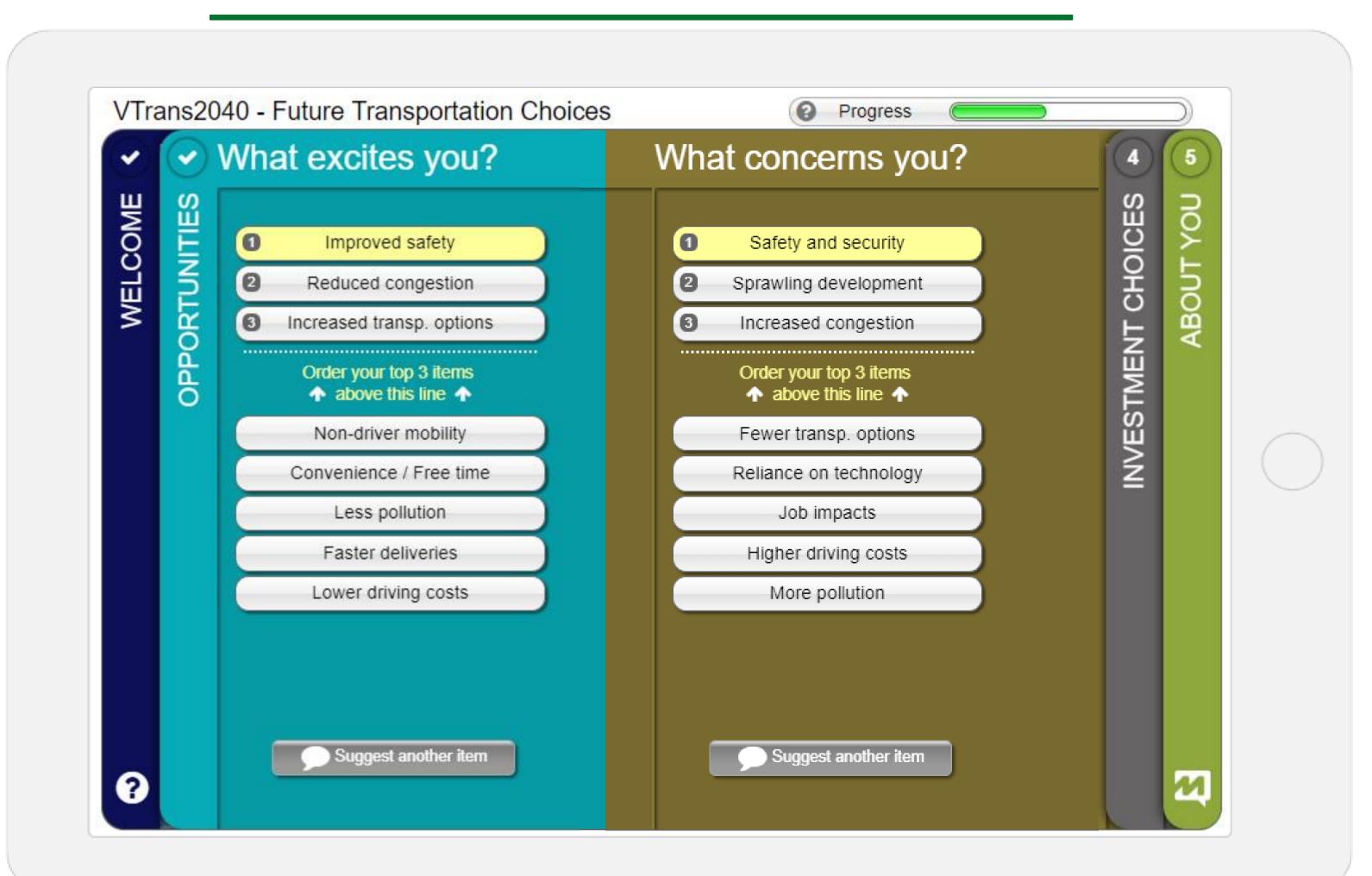


What concerns people?



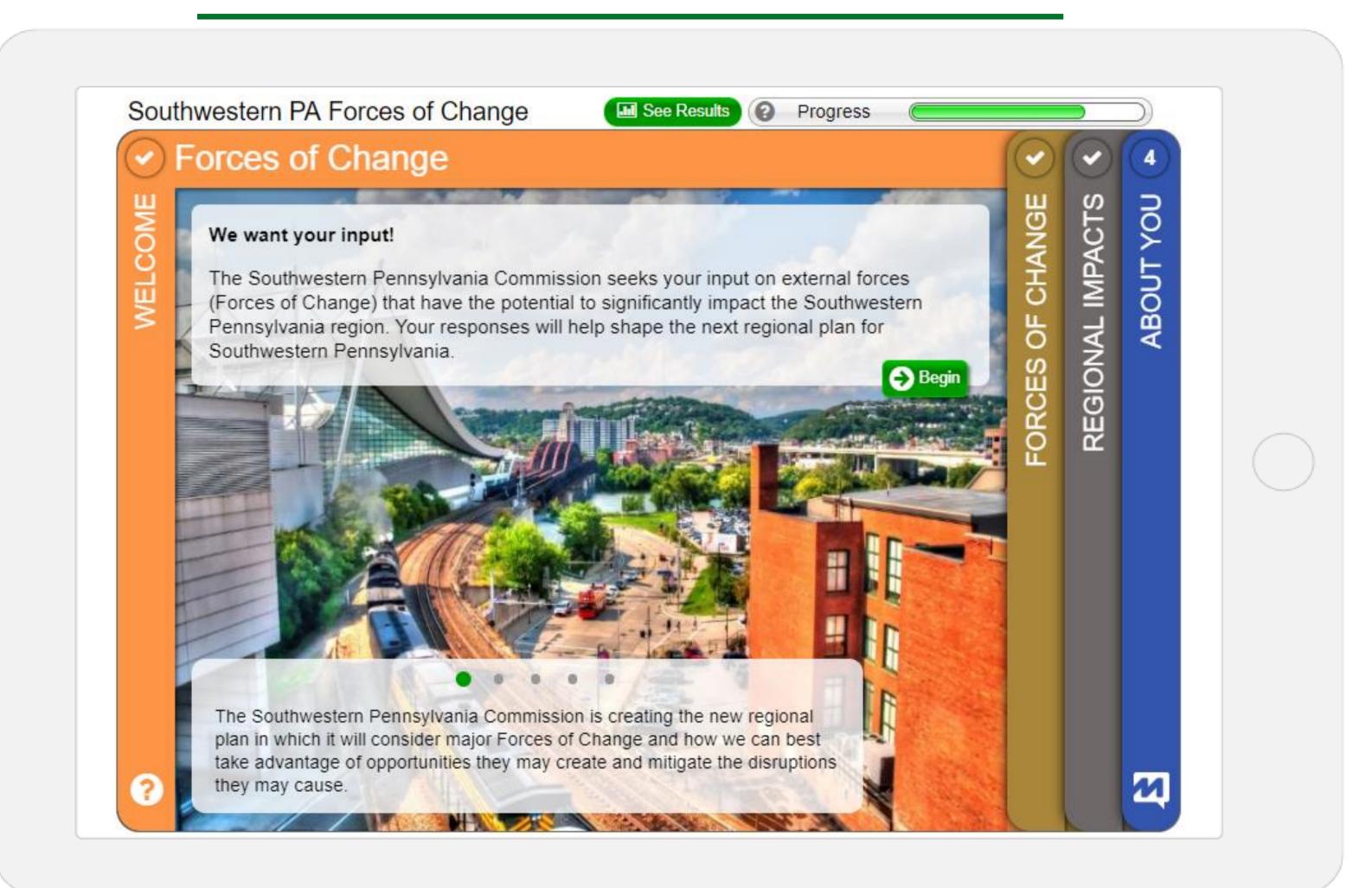


Polarization



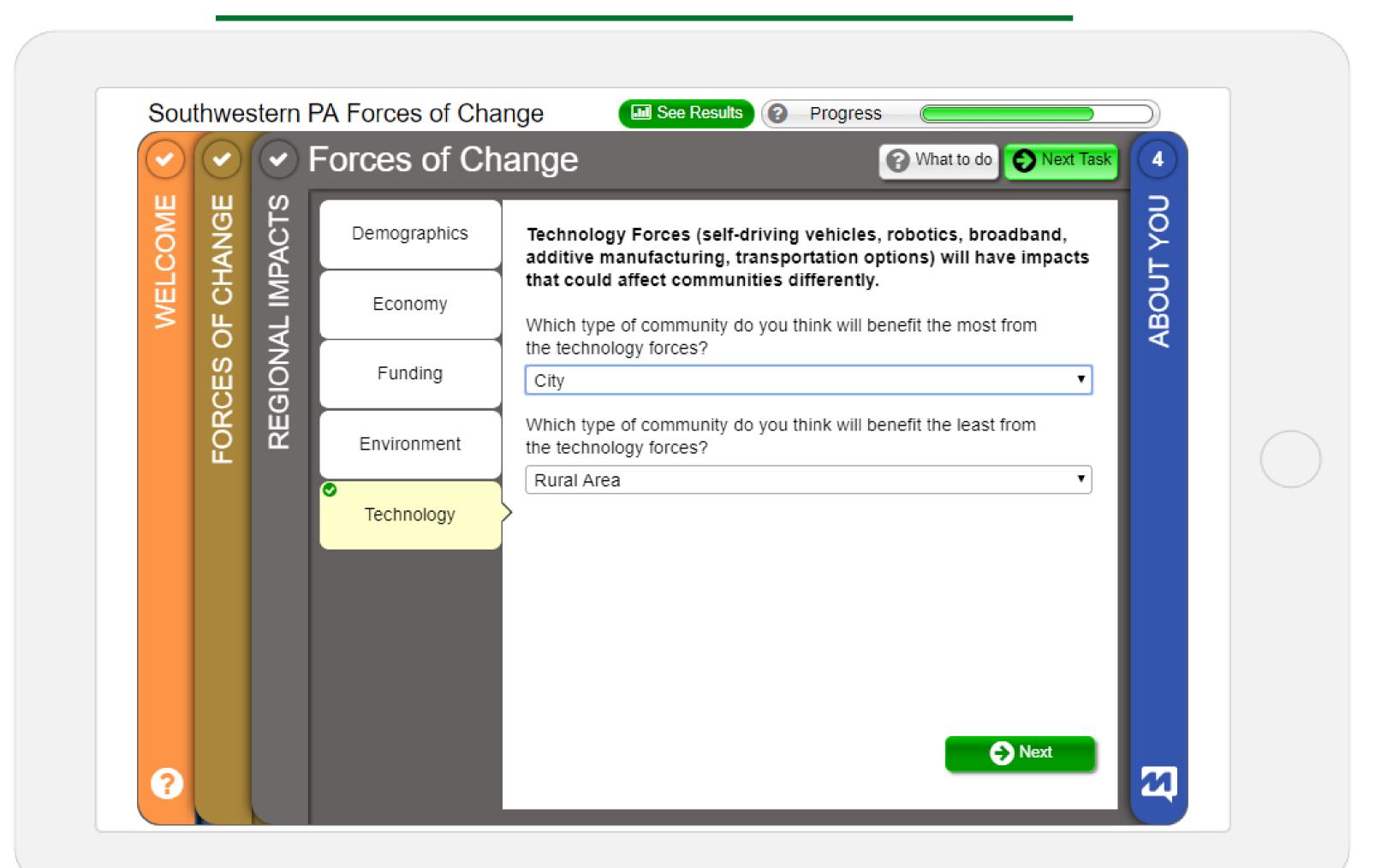


Southwestern PA Commission





Who benefits?





Atlanta Regional Commission

The Regional Plan

WELCOME

?

The Challenge: Anticipating the future

In the summer of 2014, the Atlanta Regional Commission conducted a survey asking how to prepare for the population growth expected by 2040. In this survey, we are asking how the region should address a future of rapid change and innovation. Your survey answers will help inform Regional Plan policy.

Please take five minutes to tell us how you think we should respond to upcoming trends in technology and remain economically competitive.

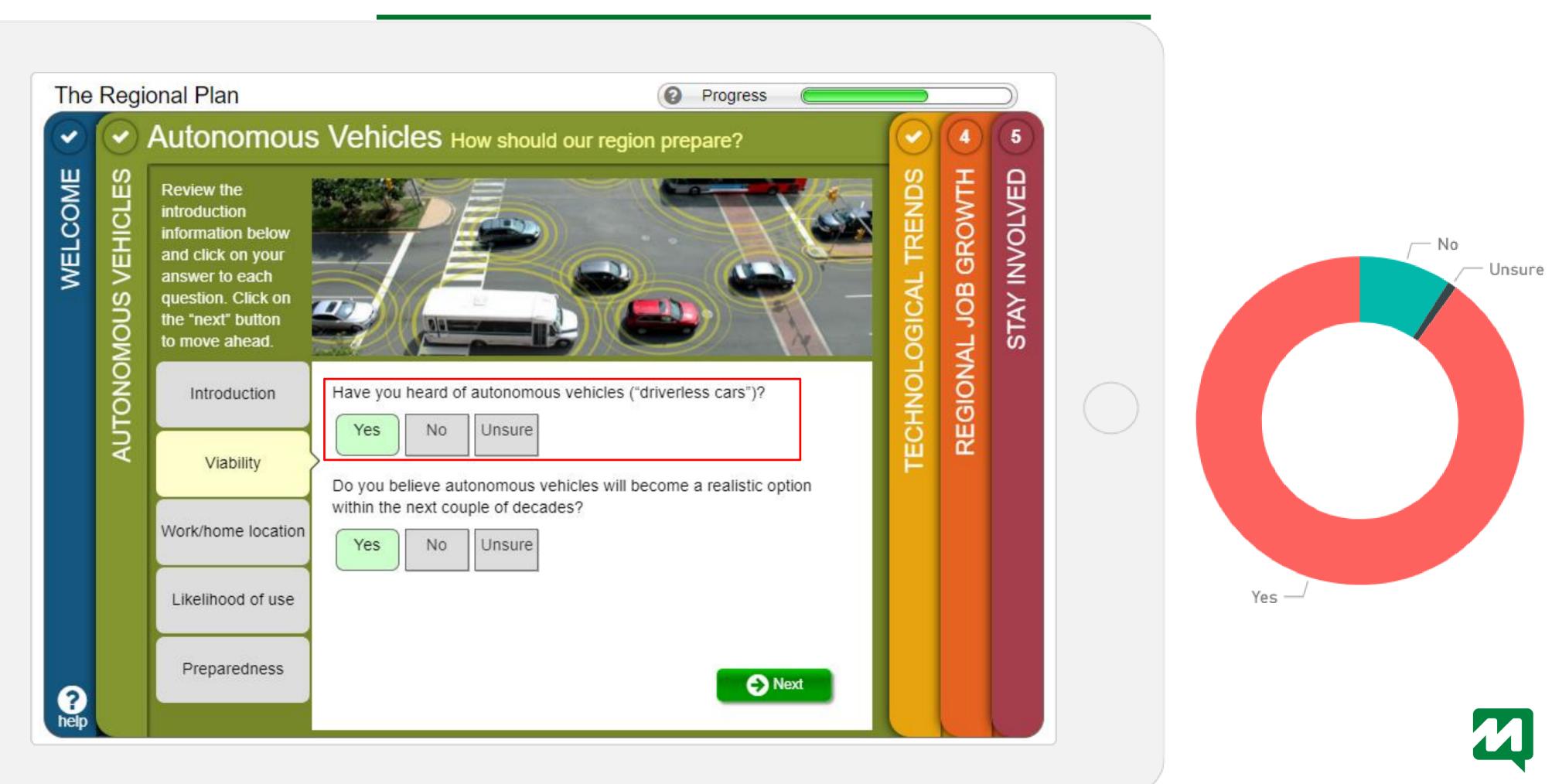
Review the results of our first survey & learn more at atlantaregional.com/theregionalplan

0 0





Awareness



Level of comfort



Support



Autonomous Vehicles How should our region prepare?



~

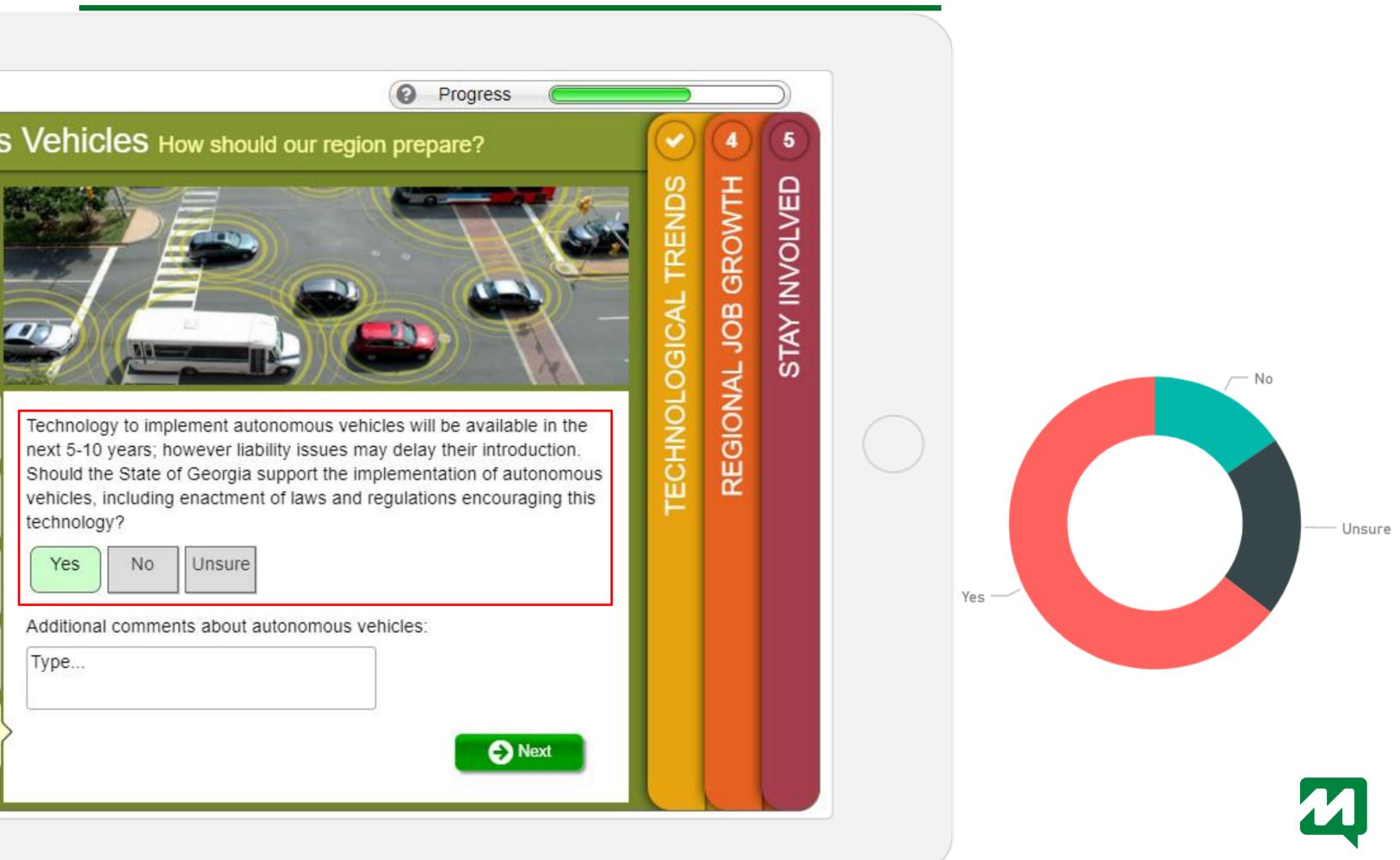
Review the introduction information below and click on your answer to each question. Click on the "next" button to move ahead.

Introduction			
Viability			

Work/home location

Likelihood of use

Preparedness



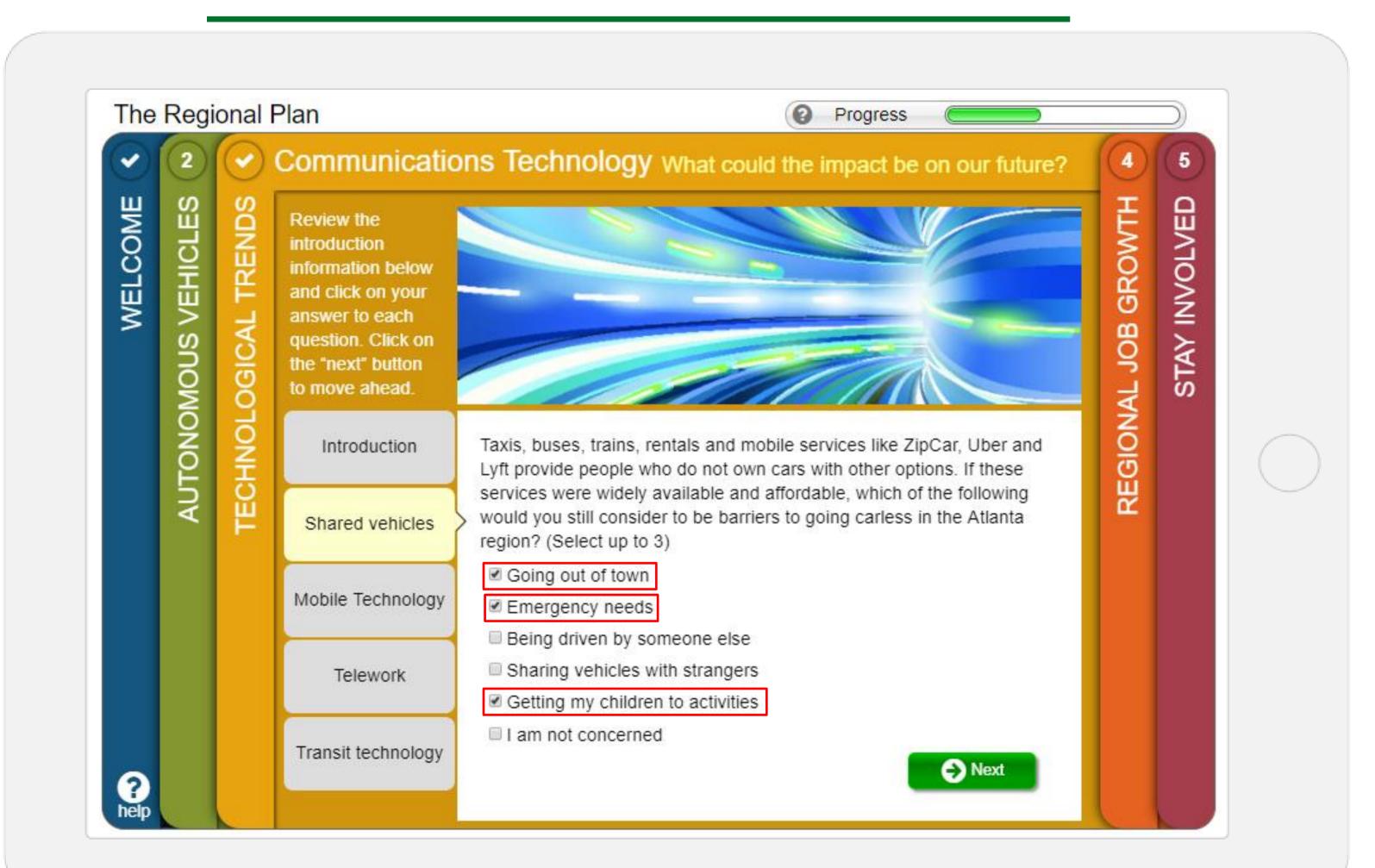
Yes	No	Unsu
	11	

Туре			



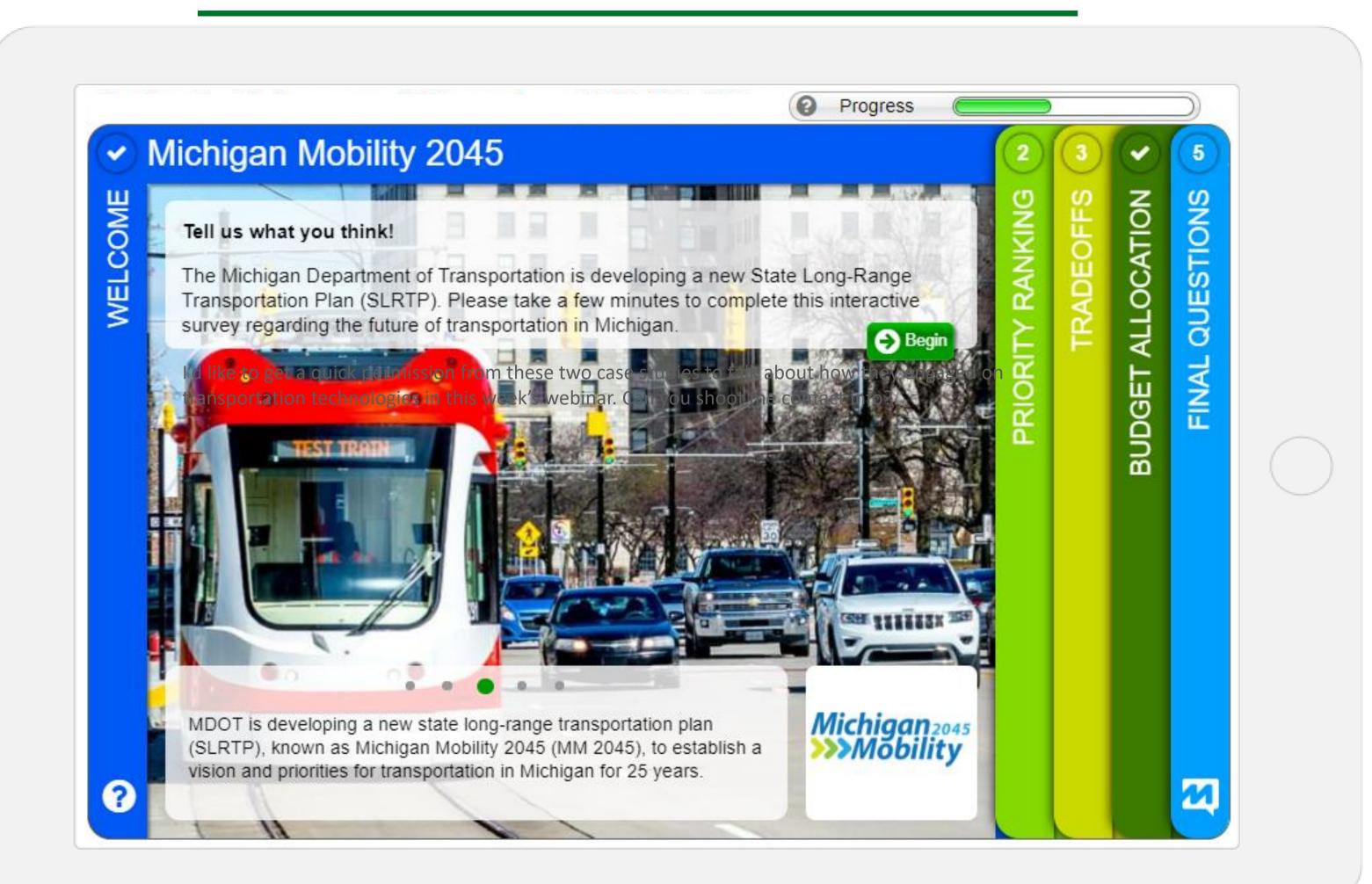
? help

Barriers





Michigan DOT







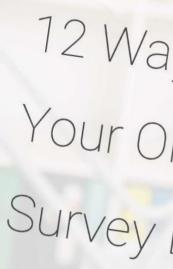
Four case studies



Promotional Playbook

12 Ways to Promote Your Online Survey Like a Pro

- 12 proven promotional strategies
- 70+ tips & tricks
- We will email you a PDF copy!





Thank you: MetroQuest subscribers!

12 Ways to Promote Your Online Public Survey Like a Pro



Poll. What additional information would be helpful?

July 28 – 31 in Indianapolis!

- Meet the MetroQuest Team
- Get an inside look at MetroQuest
- Attend our speaking sessions
- Come bowling with us



A MetroQuest Engagement optimized



Questions?





Jamille Robbins

 \wedge

Nastasha Earle-Young





Colin Mellor

Dave Biggs



Thank you for participating!

AICP CM: https://www.planning.org/events/course/9181433







