Creating & Telling Your Sustainability Story through Data & Engagement

A presentation by

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Agenda

- Trends in Local Government
- Why Storytelling?
- Using Data to Tell Your Story
- Nashua's Experience
  - The Challenge
  - Our Story
  - Pulling the Pieces Together
  - The Reaction
  - Lessons Learned
- Q&A

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Trends in Local Government Transparency

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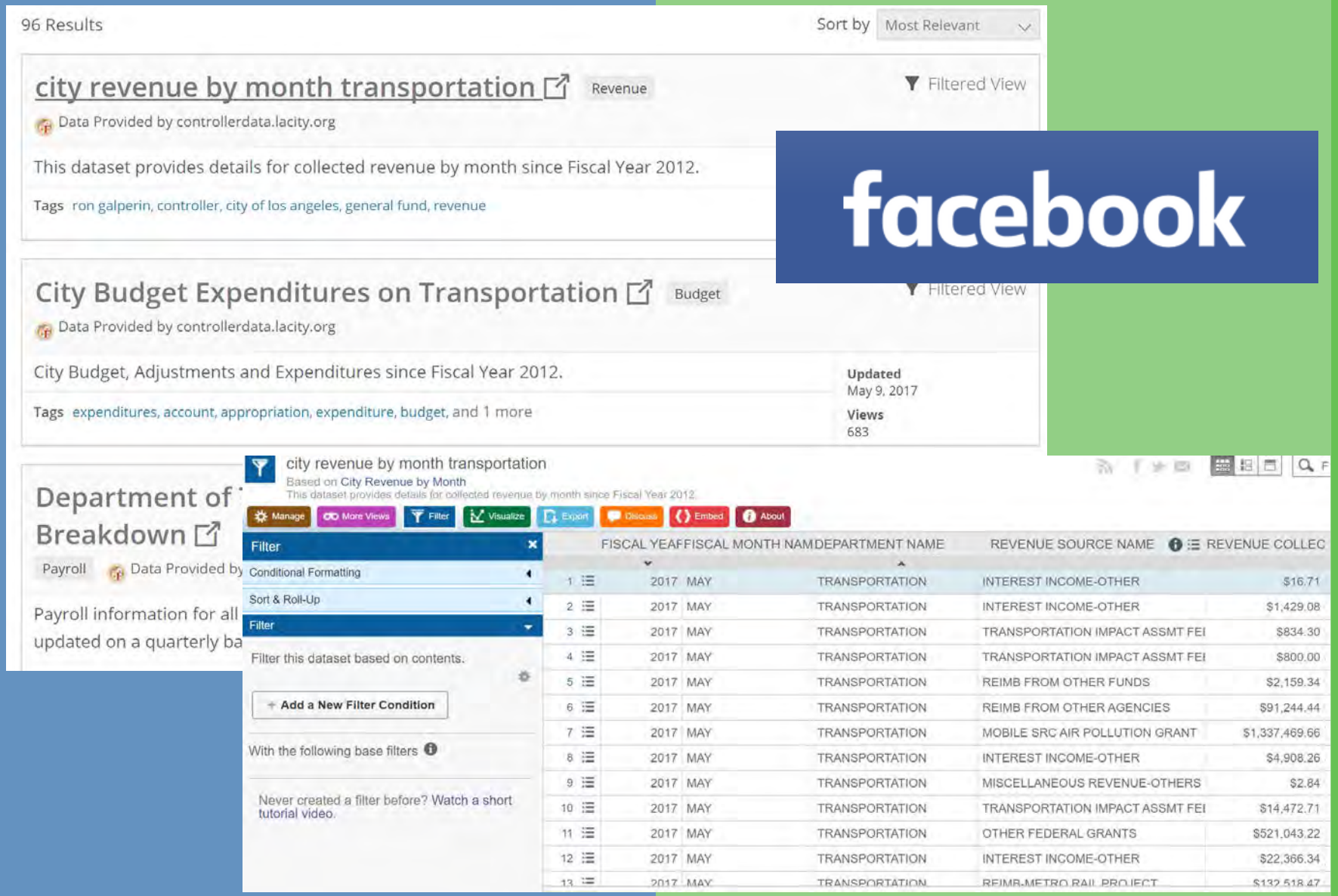

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Trends in Local Government: Engagement

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Trends in Local Government Technology

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Why Storytelling?

Neurobiology

Behavior Change

KLA STORYTELLING FRAMEWORK™

TURN YOUR DATA
INTO A STORY

4

INVITE THE COMMUNITY TO BE PART OF THE SOLUTION

The time to engage is when you have their attention.

Why is this Important?
If you are going through the effort of pulling data together to demonstrate progress and be transparent with your community, why not invite them to be part of your success story while you have their attenton?

Calls to Action
- Suggest easy actions
- Best practice tips
- Links to existing programs
- Social media links so they can share far and wide
- Refresh on a regular basis

1

SET THE STAGE

Provide simple explanations and connect on an emotional level.

Why is this Important?
50% of adults in the US cannot read a book that is written at an 8th grade level. Your brain pays attention to something when it connects with it on an emotional level. You must make your story connect through things that matter to your community members

Overview
- Why we care
- How we measure

Data & Goals
- Where we are at
- Where we want to be
- Help create a goal- perhaps some community members have ideas about this, this is a place they can share those ideas

3

PROVIDE CONTEXT

Offer perspective to truly understand where you are at.

Context Slider
- Equivalencies
- Success story highlights
- Comparisons
- Challenges

Why is this Important?
Data can only tell an effective story when we provide context and comparisons. A single data point on its own tells us very little.

2

KNOW YOUR AUDIENCE

Display the data in multiple ways and with multiple colors and images.

Charts & Graphs
- Audio options to explain in more detail or share a story
- Short description of what chart is showing
- Use multi-colored graphs to help the data standout
- Provide options of graphs to click through

Why is this Important?
People learn differently. Some people learn best when they listen, others need to see the information, and still others prefer to feel it or have some kinds of movement while learning.

BUILDINGS - SCHOOL ENERGY USE

School Energy Use

The City of Nashua measures the energy used to both heat and power our schools. We do this to learn where we've been successful at lowing our energy consumption and where we should focus our efforts in the future. We found that in 2016 we reduced our use by over 11MMBTUs from 2010 consumption values, saving $335,000 that year. That's the equivalent of all the energy used by Mt. Pleasant, Main Dunstable, Dr. Crisp, and New Searles schools combined annually. What makes this reduction in energy use most impressive is that the 2016 winter was nearly a month longer than our 2010 winter, in other words, we had a longer heating season.

Set the Stage

Provide Simple Explanations & Avoid Technical Jargon

UNIT	
MMBTU/Sqft Million British Thermal Units per Square Foot	Energy from different sources is measured in different ways – electricity is measured in kWh, natural gas in therms, oil in gallons. We can convert these different measures into a common measure-million British Thermal Units (MMBTU) -to better understand and compare total energy use. When we want to compare how different sized buildings use energy we find out how much energy is used to run one square foot of space in each building. This is done by dividing the total amount of energy used in a year by the total size of the building (total square feet). The result of this calculation is the building's "energy intensity". The lower the number, the less energy used to operate the building, the larger, the more energy used.

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Practice Exercise

1. What is it you want to share with the community?
   - Bike Lanes & Wayfinding project
2. How will this impact people?
   - Improve public health
   - Increased options for how we get around
   - Reduce GHG Emissions

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Know your Audience

Grab & Keep Their Attention with Images, Icons, & Infographics

Why is this Important?

- 50% of adults in the US cannot read a book that is written at an 8th grade level and 14% are illiterate.
- English is not everyone's first language
- Limited time to engage your audience
- The brain processes visuals 60,000 times faster than text.

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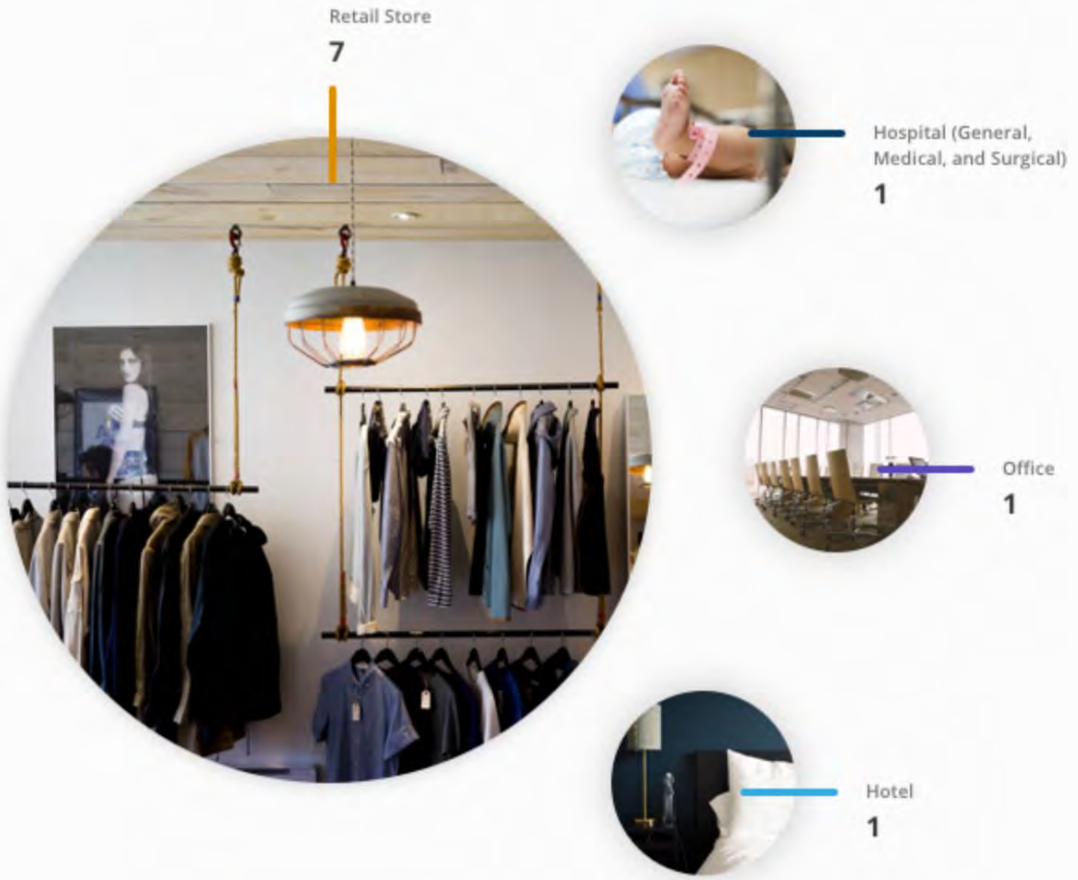
Know your Audience

BUILDINGS - NUMBER OF GREEN BUILDINGS

Energy Star Buildings by Building Type

LEED has four different levels of certification for their green building program: Certified, Silver, Gold, and Platinum. Nashua has more LEED silver buildings than any other category. There is one building that is not yet rated, which means it has been submitted to the program but is either not completed or has not been certified yet.



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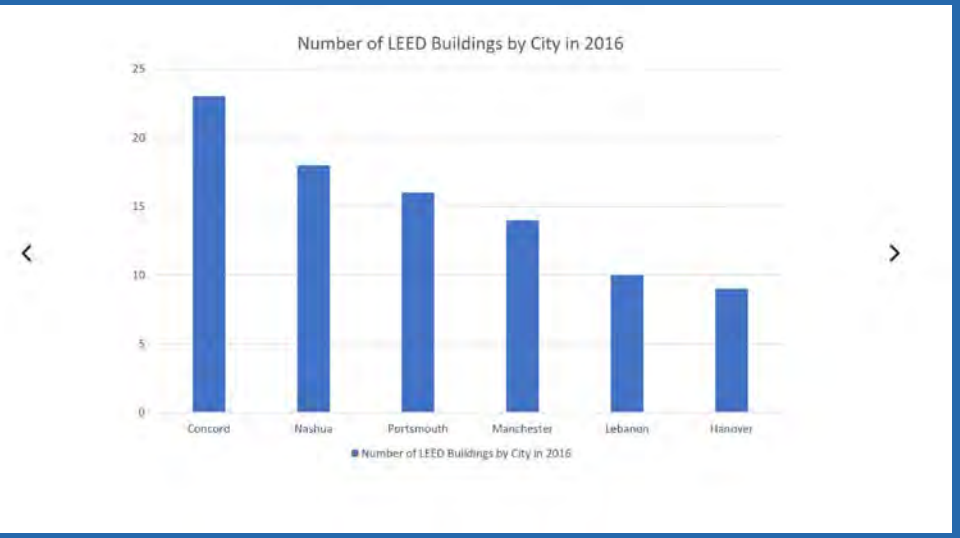
Practice Exercise

1. What kind of imagery could explain your program more effectively than words alone?
2. Who is the primary audience you are engaging? Is it your entire community or a small segment?
3. What does that group care about most?



There are 212 Buildings in 49 different New Hampshire communities that have been or are in the process of getting LEED certified through the US Green Building Council.

Provide Context

Compare Your Data to Others

Why is this important?

- Data can only tell an effective story when we provide context and comparisons
- A single data point on its own tells us very little.

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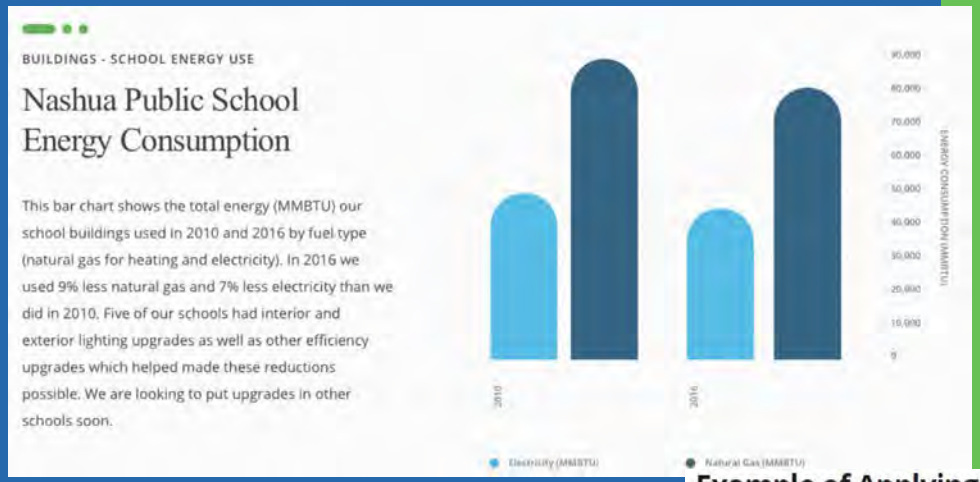
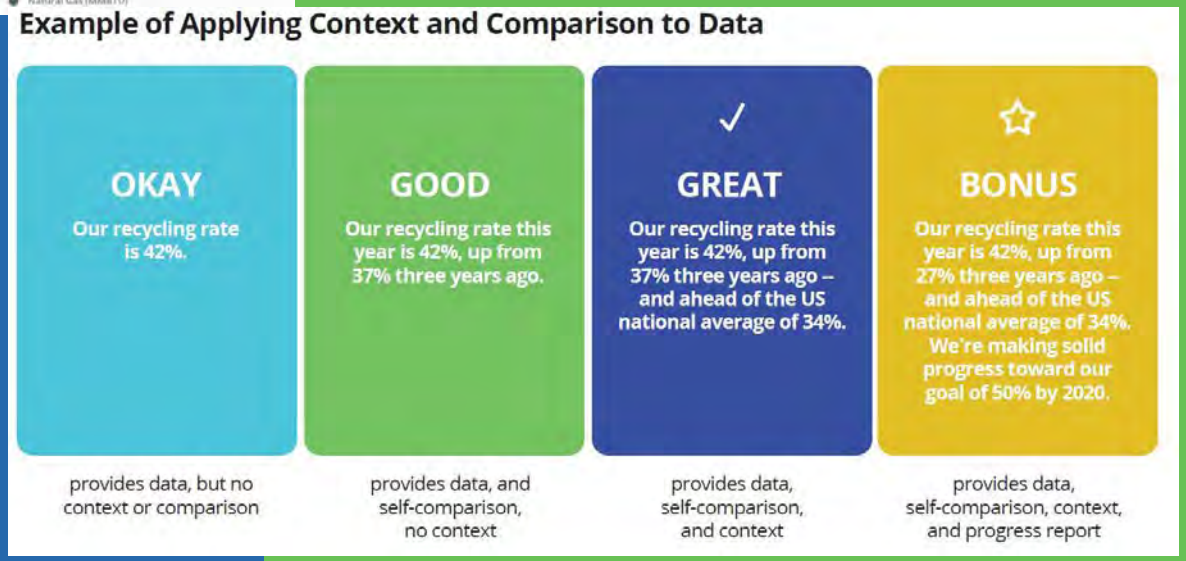
Provide Context





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Practice Exercise

1. What metrics would help tell your success story?
2. Is data available for that metric?
3. Have you established goals for that metric?
4. Is this metric something that is tracked at a local, regional, state, or national level?
5. Are there national or state averages for this metric that you can compare to?
6. Do other local governments have goals for this metric?

Invite the Community to be Part of the Solution

Include Calls to Action

Why is this Important?

- You got their attention- may as well invite them to be part of your success story
- Stories can be empowering. Use that connection as the spark for them to take an action step.

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Practice Exercise

1. Are there small actions your community members can take to help reach your goal or improve a particular metric? List them out.
2. What programs are available for your community members to participate in that would help you reach your goal or improve this metric? List them out and provide links.

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Nashua's Experience

- Population of 90,000
- Unique tax base
- Repeat winner of "Best Place to Live" in America

Nashua is:

- 1 hour to Boston
- 5 hours to New York City
- 2 hours to Lakes Region and White Mountains

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The Challenge:

What is Nashua doing to ensure long-term sustainability of the community and stabilize its tax base?

Nobody knows about all the great things we are doing!

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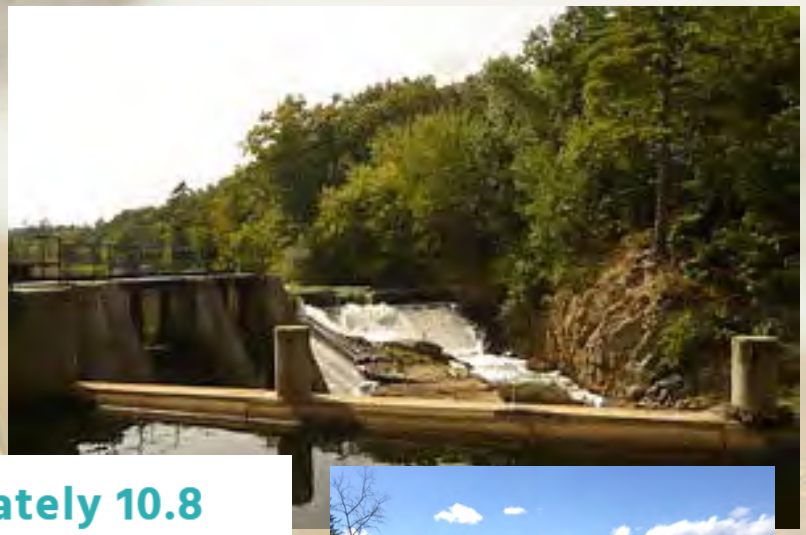
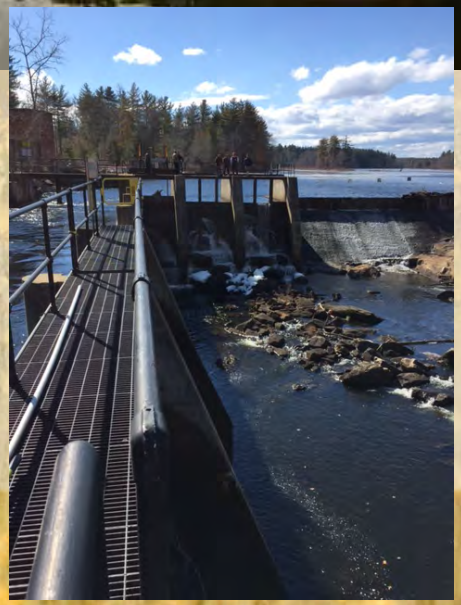
Investing in Renewable Energy



The average US home uses approximately 10.8 MWh of electricity every year. Therefore, Nashua could power on average 365 houses per year from hydro power. One house for every day of the year!



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Improving Water Quality

From 2014 to 2015 the City of Nashua reduced sewer discharge into the Nashua and Merrimack Rivers by more than 89%

That reduction is the gallon equivalent of 68.6 Olympic size swimming pools

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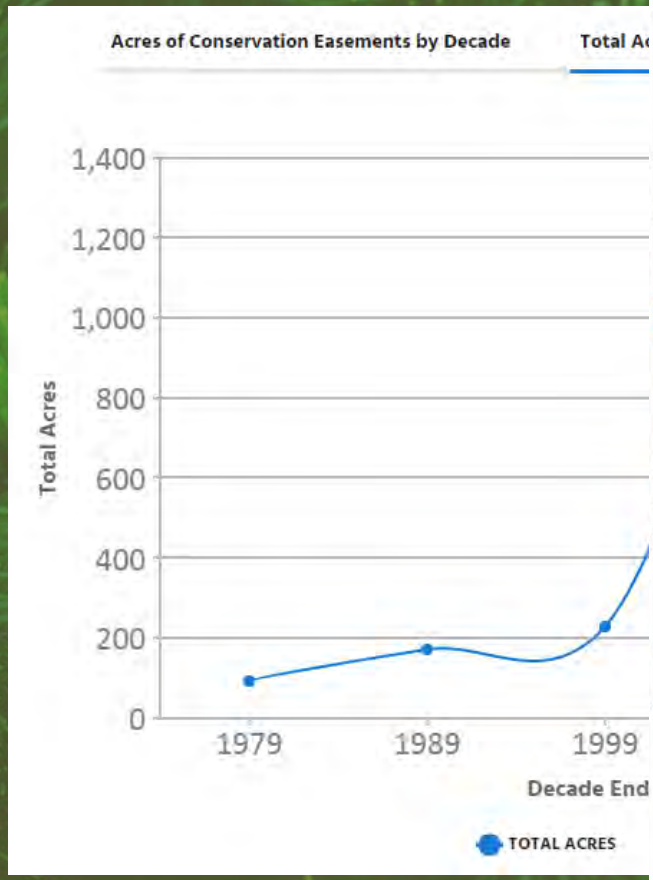
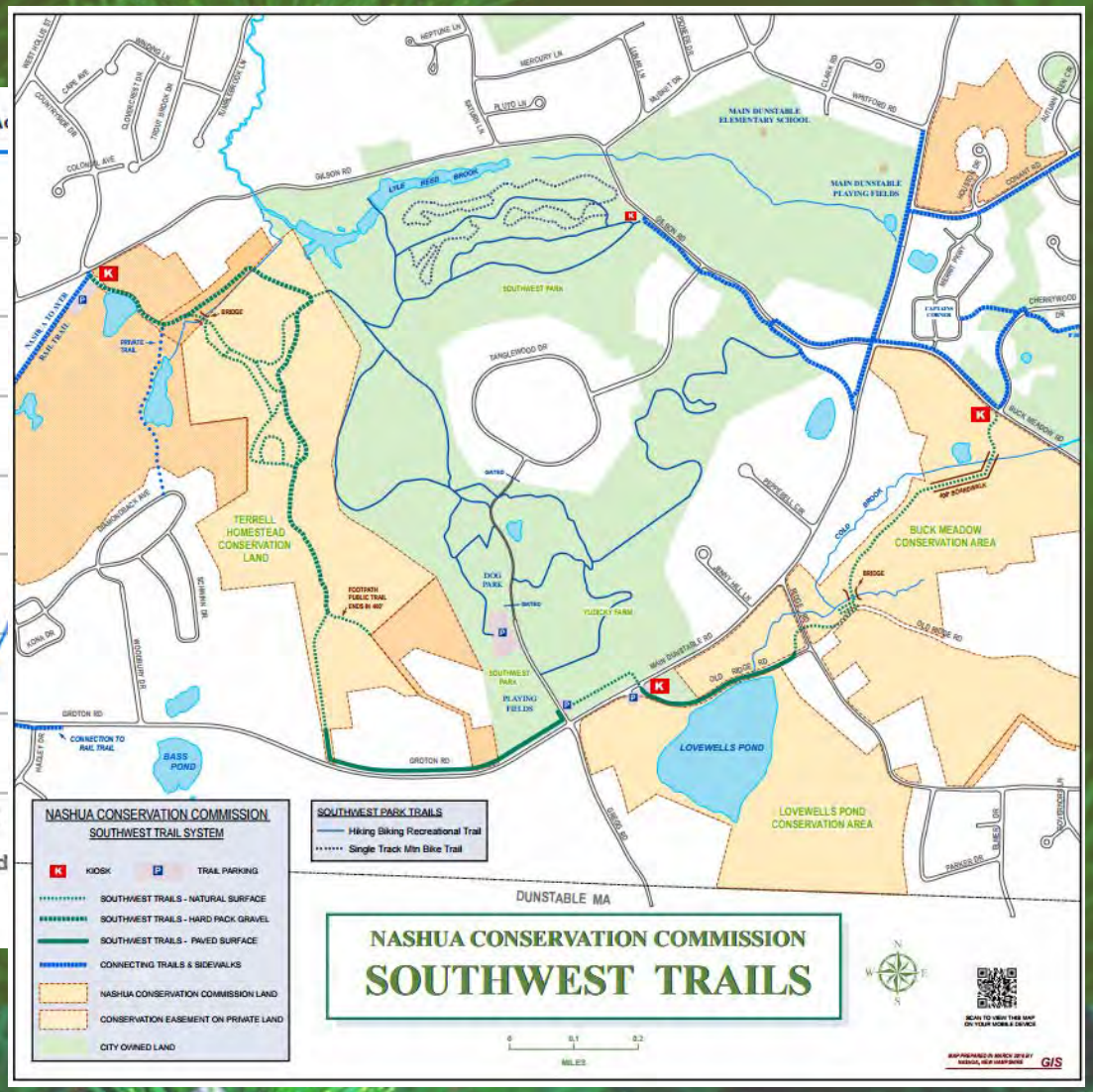
Protecting Natural Resources





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Complete Streets Infrastructure

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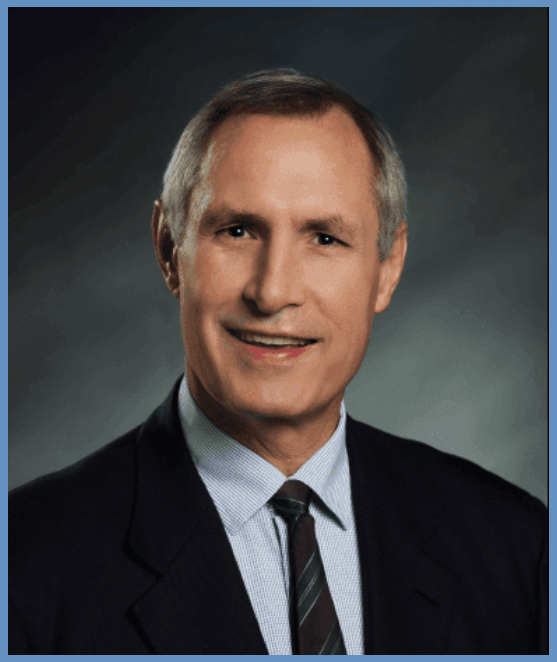
Reducing Energy Consumption

LED streetlight conversion

- Expected payback:
  2.3 years

- Annual energy savings:
  $750,000

Building a Legacy



- 1st Mayor in NH to support the Paris Climate Accords
- Mayors Climate Accord
- Greenhouse Gas Inventory
- Regional Renewable Energy Consortium

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The Goals

1st – Educate

2nd – Set Goals

3rd – Align City Programming

4th- Maintain Engagement

City of Nashua Environment and Energy Committee 2018 Recommendations

Goals

Reduce school, municipal building, and infrastructure greenhouse gas emissions by 25% by 2025.
Reduce municipal vehicle emissions by 25% by 2025
The school and municipal system will derive 100% of its energy from renewable, clean energy sources by 2050.

Improve building energy efficiency & resiliency

- Select 3 municipal buildings that are least efficient and/or have highest load to conduct energy audit and implement energy efficiency upgrades and retrofits.
- The school system is moving forward with an energy performance contract for the high schools. Monitor the outcome.
- Continue to maximize building energy efficiency by expanding energy performance contract City-wide or continue self-managed approach.
- Implement microgrids with storage in major municipal & school switchgear upgrades and new facility construction

Establish City-wide energy tracking, benchmarking, & reporting

- Create City-wide Energy Manager position to champion and facilitate energy projects

Optimize City policies to incentivize energy efficiency, resiliency, and sustainable development.

Reduce municipal vehicle emissions

- Achieve at least a 10% improvement in net fuel efficiency across municipal vehicle fleet by 2020
- Establish criteria for evaluating vehicle necessity and suitability for municipal fleet
- Introduce at least 2 zero emission vehicles with associated infrastructure by 2020

Increase renewable energy generation

- Issue a City-wide solar project request for proposals with a goal of at least 1MW of municipal solar installations by 2020.
- Use renewable electricity third party supply for school and municipal accounts, if cost competitive.
- Launch a Solarize Nashua program by 2018 to provide residents with discount pricing on solar projects.
- Determine feasibility of micro-hydro turbines in City outfalls.

Promote alternative modes of transportation

- Develop bicycle and pedestrian master plan by 2019.
- Implement a bike share/rental program by 2018
- Support passenger rail

Data Collection: Round 1

FOCUS AREAS

- Built Environment
- Energy
- Economy
- Food Systems
- Natural Resources

WHO HAS THE DATA?

- DPW Division
  - WWTP
  - Solid Waste
  - Engineering
- Finance Division
- Community Development
  - Building
  - Waterways

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FOCUS AREA	INDICATOR	DATA	SOURCE CONTACT DEPT/AGENCY	CONTACT NAME	CONTACT EMAIL & PHONE	T
Built Environment	# of Green Buildings	18	USGBC/EPA	http://www.usgbc.org/projects?keys=nashua%2C+nh	ONLINE	
	Combined Sewer Overflow Instances and/or #of Locations	Total Annual CSO Discharge, Million Gallons	Wastewater		Madeleine Mineau	
	2013	41.568				
	2014	50.834				
	2015	5.476				
Renewable Energy	Energy Produced by Hydro Dams (MW in a calendar year)	2013: 4943 MWh; 2014: 3915 MWh; 2015: 3925 MWh			Madeleine Mir	
	Residential Solar- # of systems/homes and/or total kWs produced	3.1 MW 2013-2016			Madeleine M	
Energy Use	Municipal Building Electricity Consumption (total in kWh for calendar year 2015)	Waiting for this from Eversource.		Derek Danielson		
	Municipal Building Natural Gas Consumption (total in therms for calendar year 2015)	CY2015: 35,713 dekatherms (357,216 therms) CY2013: 32,656 dekatherms (326,638 therms)		Derek Danielson		
	Municipal Building Oil Consumption (total in gallons for calendar year 2015)	CY2015: 11,057 gallons CY2013: 11,005 gallons		Derek Danielson		
	Street Light Electricity Use (calendar year data for a year before and after the conversion to LEDs)	LED Conversion underway. CY2015: 2,051,412 kWhs CY2013: 2,054,002 kWhs				
Economy	Unemployment Rate	Nashua: 3.8% (April 2015) 5.4% (June 2013); US: 5.5% (April 2015) 7.8% (June 2013)	Nashua: Bureau of Labor Statistics http://d			
Food System	% of population living within a food desert (more than 1 mile to a healthy food outlet)	2013 data year	USDA Food Access Research Atlas	http://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas.aspx		

KLA Sustainability Dashboard

Data Collection Template for _____

***Metric Title** (*Max character count: 45*):

Metric Overview/Why We Care (*Max character count: 350*):

***Data & Goals** (*be sure to provide the year and the units. Complete for as many years as you*

Baseline Year:

Baseline Data:

Units:

Interim Year 1:

Interim Year 1 Data:

Interim Year 2:

Interim Year 2 Data:

Goal Year 1:

Goal Year 1 Data:

How You Can Help (*Title 45 characters, Sentence Max 250 characters*)

1. Program/Tip 1: Provide Details or Link
2. Program/Tip 2: Provide Details or Link
3. Program/Tip 3: Provide Details or Link

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Customized Solutions for the Community You Want

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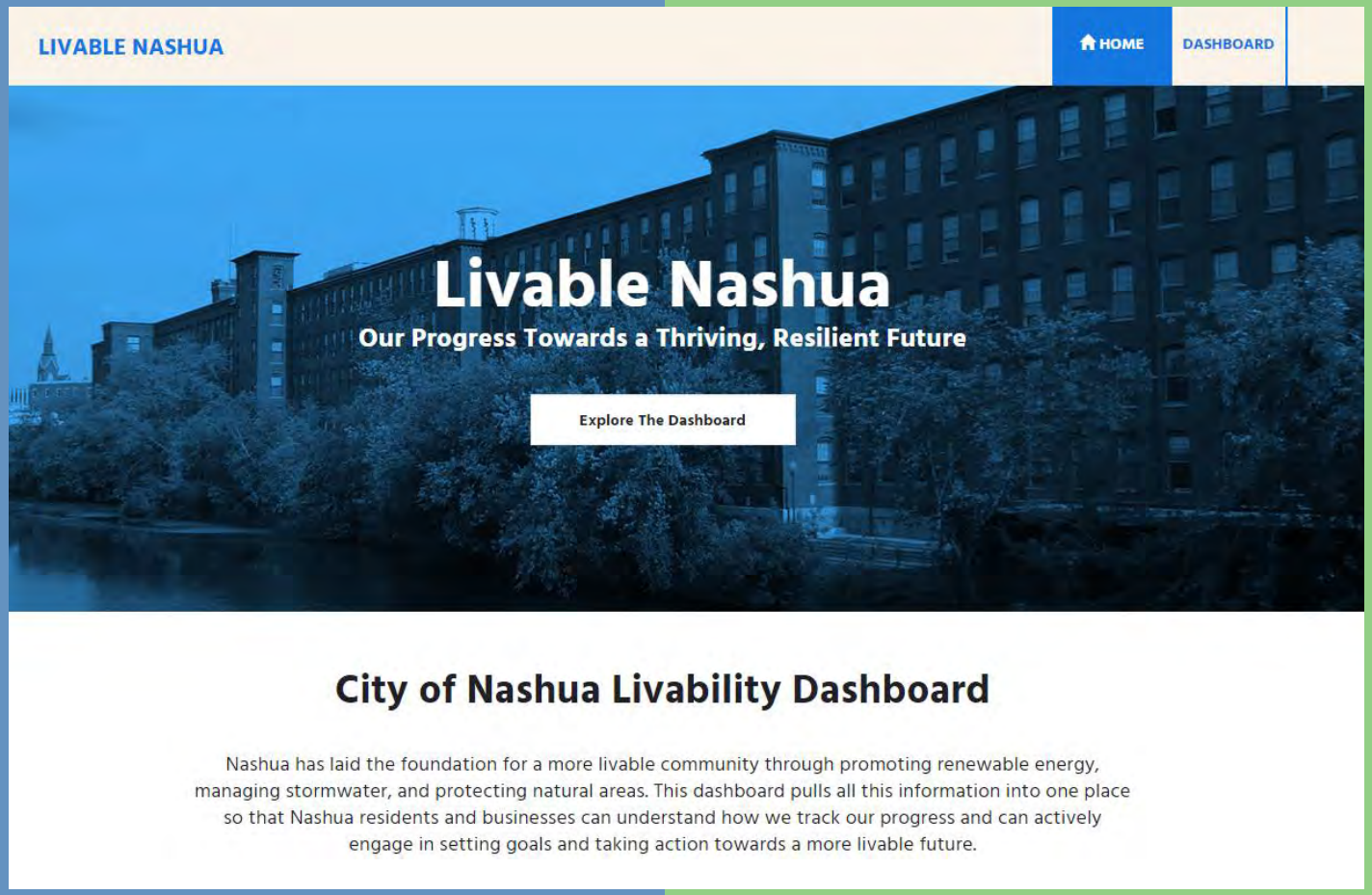
Next Steps: Getting to Launch!



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https://youtu.be/ct-ocT0MhXk

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Public Engagement

- Surveys = Win Free Stuff
- Booth in City Hall near Motor Vehicle Dept.
- City wide email
- City Academy
- Facebook
- Committees

What We Learned?

- Housing availability and affordability very important
- Most data presented is entirely new to people
- People WANT to understand the information and appreciate the explanations
- Viewing from mobile
- Improvements to layout
- Other Divisions/ Departments want to get involved!

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Data Collection: Round 2

FOCUS AREAS

- Built Environment
- Energy
- Economy
- Food Systems
- Natural Resources
- Public Health
- Solid Waste

WHO HAS THE DATA?

- Public Health
- Emergency Management
- Library
- Economic Development

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Keeping The Website Fresh

- New data from other departments = new media push
- Great community news articles = updated on the website
- Refreshing what we highlight as top tiles
- Annual updates to coincide with Annual Reports
- Environment & Energy Committee
  - Developing more baseline data
  - Utilizing as a tool for initiatives and areas of focus

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