User Experience Assessment for the Town of Natick

Art Department | Framingham State University

Fall 2020

Client

Town of Natick

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Principles of User Experience Design | Fall 2020

Professor Stephanie Grey, Art & Music Department

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Project Introduction

For the Towns of Acton and Wellesley, determine which platforms they use to market their trails and open spaces to gain an understanding of effective marketing strategies to implement in the Town of Natick.

Project Goals:

- Spread awareness of open spaces, trails and conservation areas within the Town of Natick
- Provide alternative map routes for those who dislike competing maps
- Revive interest in trails

Existing Media |
Natick, Acton, Wellesley

Existing Conditions Assessment
Town of Natick

Town Website

Natick currently markets their open spaces and trails via their website and Facebook pages. The link to the town GIS/Interactive Map is easily found under the "Popular Links" section on the home page. A Trail Maps page also exists that has links to PDF maps that can be viewed on desktop or mobile or printed from home. The Open Space and Trails page on the website has an Open Space & Recreation Plan from 2012. It is being renewed this year and the updated version will likely be posted on the website when approved. The Hunnewell Town Forest has a separate website which was difficult to find. There is a brochure they use to market the area but it may have outdated information.

Interactive Map Feature

The Natick Town website also features an interactive map which can be used to distinguish and locate the landmarks of Natick. The landmarks range from buildings to information about land use by citizens of the area. The "Themes" tab will pull down a list of filters to apply to the map, each showing different elements of the Natick area. In addition to this tab, there is a "Search" tab function, which can scour the map for specific locations by typing them into a field. There is also the "Selection" tab, allowing the user to identify locations on the map by directly clicking on them. The tab "Markup" can be used to digitally draw on the map with information the user deems appropriate.

There is an "Abutters" tab which can identify neighboring property. Once a property has been selected, there are options for a "Google Maps Link" and a "Property Record Card" to learn about the GPS location and property information, respectively. There is a "Pegman" icon which can be used to open a street view of a given location on the map. Lastly, there is a "Property Quick Search" which can be used on the fly to find specific features on the map.

Social Media Presence

The town has official Twitter and Facebook pages, as well as a separate Open Space Facebook page. An Instagram page exists but only has one post from 2019, so it may not be the official town page. The town Twitter page has been inactive for some time, and not much media have been posted. However, it has over 2,000 followers and could be a great platform to market open spaces. The town's Facebook page is quite active, however there are few mentions of the Open Spaces and Trails, which exists as a separate Facebook page and is not linked in the description. The town also has Facebook and YouTube pages for the Natick GIS system.

Existing Conditions Assessment
Town of Acton

Town Website

A quick scroll down the Town website brings you to a banner with multiple buttons, including a GIS/Mapping option. This is the only marketing on the home page for anything related to trails/open spaces. You have to make your way through the website to find information on things like natural resources, land use and recreation.

Interactive Map Feature

Acton seems to have two different interactive maps, one through MapGeo and one through MapBox. A Google search for "acton massachusetts trails" brings you to MapBox, while the town website links to MapGeo. In MapBox, clicking the Information button next to the name of an area on the map brings you to a separate town trails website with a page of information on the area selected. It includes a simple map, illustrations of native wildlife, trail length, terrain conditions, and a rich description of the site. The interactive map has color coded trails, indicators for parking lots, a toggle for Aerial View and the Bay Circuit Trail. You can also hit the bookmark button that shows a drop down list of the featured areas on the map, and clicking them will allow the software to pan and zoom to that area on the map.

Clicking the GIS/Mapping button on the home page brings you to the other interactive map powered by MapGeo which is the software Natick currently uses. Their map is updated quarterly by the town's GIS Office (gis@acton-ma.org). The layers you can toggle on the Acton Map are similar to Natick's, but they also offer topographical, archeological, and natural resource layers to explore. From their Open Space and Recreation Plan: "It should be noted that the Town of Acton contracts with App-Geo to maintain a GIS viewer on its website. Developing the maps involved an intricate coordinated effort between Natural Resources staff and App-Geo that resulted in enhanced accuracy of the GIS as well as excellent maps that will endure for future reference. Concurrently, a volunteer citizen expended hours meticulously researching each of the land parcels listed on the Land Chart."

Social Media Presence

Acton is quite active on their official Facebook, Instagram, and Twitter pages. It seems as if most of their posts are linked, or rather whenever they post, the same content is posted on each platform. However, while scrolling through their feeds I only managed to find a few mentions of open spaces/conservation lands, like this post on their Instagram account (Fig. 2). Note the date it was posted. Of course, many of their posts are related to COVID-19 because of its relevance, so other posts may be buried.
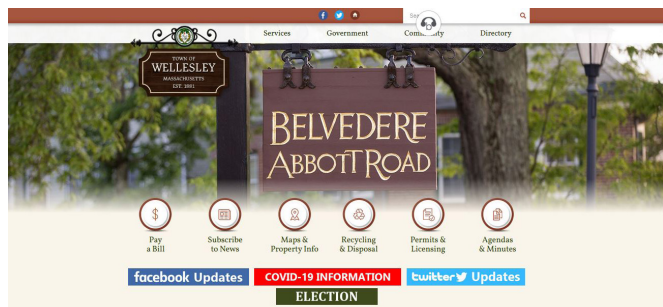

Fig. 2

Existing Conditions Assessment |
Town of Wellesley

Town Website

Upon reaching Wellesley's Town Website, there's a very large circular icon that reads "Maps and Property Info". After clicking this, it brings the user to their GIS map which informs the user of Wellesley's property info.


Interactive Map Feature

As you scroll down in the Maps and Property Info page, there are a number of web mapping applications including: "Public Tree Dashboard", "Wellesley Trails Viewer", and "Wellesley Park Finder". These are all interactive platforms in which users can view what points of interest are, amenities, et cetera. The GIS interactive maps don't advertise how often it is updated so people who refer to them should be made aware of this discrepancy.

Wellesley's Disclaimer states, "The Town of Wellesley provides this information with the understanding that it is not guaranteed to be accurate, correct or complete, and conclusions drawn from such information are the responsibility of the user. While every effort has been made to ensure the accuracy, correctness and timeliness of materials presented, the Town of Wellesley assumes no responsibility for errors or omissions[…]"

It is important to note that all of these interactive maps are powered by ESRI. They also incorporated PDFs of maps as you scroll even further down the Maps and Property Info page.
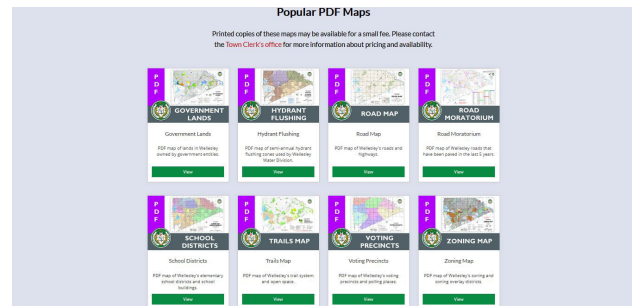
Social Media Presence

At the very top of the home page, one will notice two small icons in the header depicting their marketing outlets such as Facebook and Twitter. Both their Facebook and Twitter pages are updated regularly.

User Research

Improving Interactive Trail Maps |
Town of Natick

Target Audience Survey Questions

Hello outdoor lovers, Natick residents, and those who use parks and open spaces in nearby towns,

The Town of Natick and User Experience Design students at Framingham State University are partnering to help improve the trails and open spaces experience in Natick. We have a short survey of 10 questions about trails, open spaces and maps for you to answer. Your participation is greatly appreciated! Please respond by Thursday, December 3rd. Thank you!

1. Which town are you a resident of?

[   ]

2. Describe yourself. **Select all that apply.**

☐ Parent with younger children   ☐ Person with limited mobility

☐ Hiker / Explorer   ☐ Town Employee / Official

☐ Sightseer / Bird watcher / Environmental enthusiast   ☐ Dog walker

☐ Retiree   ☐ General trail user

3. Which of the following best describes how you use trails and open spaces (Parks, playgrounds, conservation land, etc.)? **Select all that apply.**

☐ Walking / Running   ☐ Sightseeing / Wildlife

☐ Hiking   ☐ Taking kids to the park

☐ Biking

Other (please specify)

[   ]

4. How often do you explore the trails?

○ Once a week   ○ A few times per month

○ Twice a week   ○ A few times per year

○ Multiple times a week

5. How can interactive mapping and navigating on the trails and parks be improved?

[   ]

Facebook Sources:

FIDO of Natick

Natick Rec Parks

Town of Natick

Natick MA Patch

Pet World Natick

AmVets Natick

Natick Public Works

Parents of Natick

High Schoolers

Discover Natick

Memorial Natick PTO

Keep Natick Beautiful

6. Do you look for trails that are close to other points of interest? (Such as a playground or picnic spot)

[▲▼]

Please explain.

[   ]

7. What do you currently use to navigate the trails?

[ ] Map posted at the trailhead

[ ] Paper map printed from home

[ ] Prior knowledge of the trail

Mobile device (please be specific as to which kind of device and which map or platform).

[   ]

8. Have you ever used an interactive trail map on a computer or mobile device?

( ) Yes

( ) No

If yes, please describe the quality of your experience with the interactive map.

[   ]

9. Are your options for choosing trails or open spaces limited due to a disability or mobility issues?

[ ] Yes

[ ] No

If yes, please explain how this affects your use of local outdoor spaces.

[   ]

10. When you are choosing a trail, what informs your decision? **Select all that apply.**

[ ] Weather   [ ] A clear map showing where to go

[ ] Parking   [ ] Amount of people on the trail

[ ] Difficulty   [ ] Accessibility

[ ] Length

Other (please explain).

[   ]

User Survey Results | User Data

Q2 Describe yourself. Select all that apply.

Answered: 45   Skipped: 0
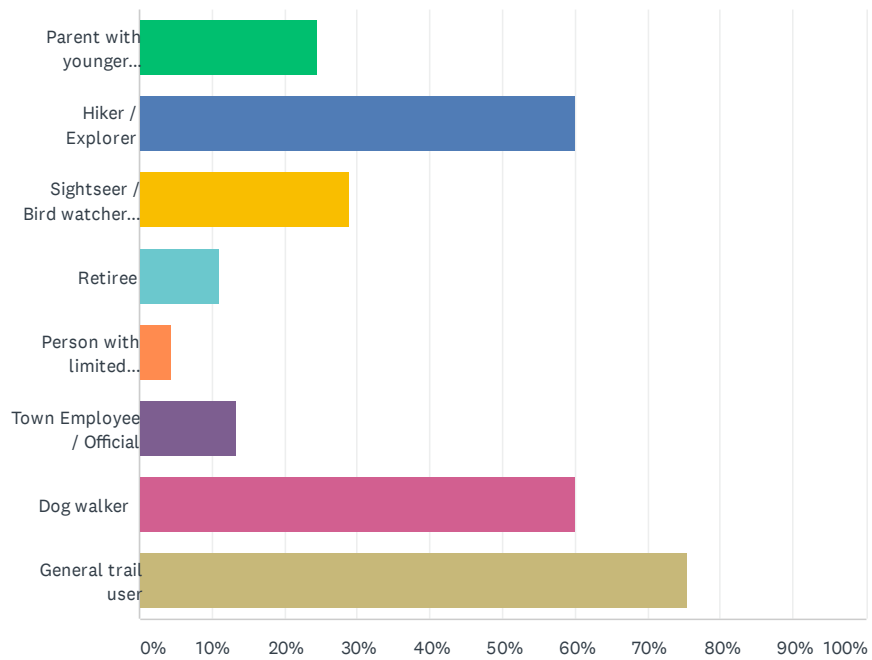
ANSWER CHOICES	RESPONSES	
Parent with younger children	24.44%	11
Hiker / Explorer	60.00%	27
Sightseer / Bird watcher / Environmental enthusiast	28.89%	13
Retiree	11.11%	5
Person with limited mobility	4.44%	2
Town Employee / Official	13.33%	6
Dog walker	60.00%	27
General trail user	75.56%	34
Total Respondents: 45		

User Survey Results | Individual Responses

#1

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, November 24, 2020 3:33:06 PM
Last Modified: Tuesday, November 24, 2020 3:51:47 PM
Time Spent: 00:18:41
IP Address: 209.6.53.101

Page 1

Q1

Which town are you a resident of?

Somerville, MA

Q2

Describe yourself. Select all that apply.

Parent with younger children,

Hiker / Explorer

Q3

Which of the following best describes how you use trails and open spaces (Parks, playgrounds, conservation land, etc.)? Select all that apply.

Walking / Running ,

Sightseeing / Wildlife

Q4

How often do you explore the trails?

Once a week

Q5

How can interactive mapping and navigating on the trails and parks be improved?

Respondent skipped this question

Q6

Do you look for trails that are close to other points of

Yes

Target Audience and User Groups

Hiker/Explorer

General Trail User

Dog Walker

Sightseer/Birdwatcher

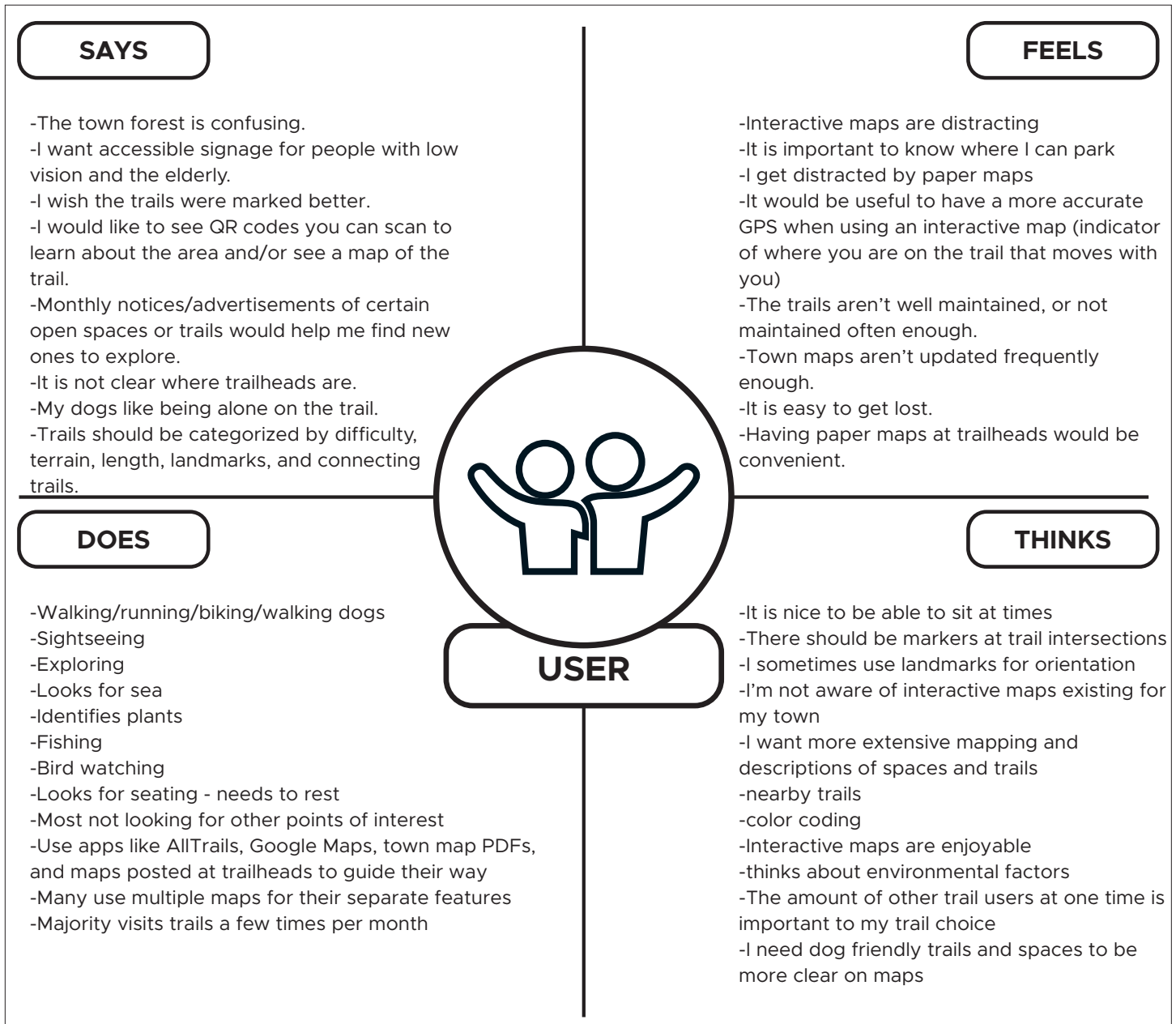Retiree

Person with
Limited Mobility

Parent

Town Employee/
Official

Empathy Map

An empathy map helps User Experience designers gain a better perspective of who their users are and how they feel and what they think, say, and do regarding an existing product or service.

SAYS

-The town forest is confusing.
-I want accessible signage for people with low vision and the elderly.
-I wish the trails were marked better.
-I would like to see QR codes you can scan to learn about the area and/or see a map of the trail.
-Monthly notices/advertisements of certain open spaces or trails would help me find new ones to explore.
-It is not clear where trailheads are.
-My dogs like being alone on the trail.
-Trails should be categorized by difficulty, terrain, length, landmarks, and connecting trails.

FEELS

-Interactive maps are distracting
-It is important to know where I can park
-I get distracted by paper maps
-It would be useful to have a more accurate GPS when using an interactive map (indicator of where you are on the trail that moves with you)
-The trails aren't well maintained, or not maintained often enough.
-Town maps aren't updated frequently enough.
-It is easy to get lost.
-Having paper maps at trailheads would be convenient.

USER

DOES

-Walking/running/biking/walking dogs
-Sightseeing
-Exploring
-Looks for sea
-Identifies plants
-Fishing
-Bird watching
-Looks for seating - needs to rest
-Most not looking for other points of interest
-Use apps like AllTrails, Google Maps, town map PDFs, and maps posted at trailheads to guide their way
-Many use multiple maps for their separate features
-Majority visits trails a few times per month

THINKS

-It is nice to be able to sit at times
-There should be markers at trail intersections
-I sometimes use landmarks for orientation
-I'm not aware of interactive maps existing for my town
-I want more extensive mapping and descriptions of spaces and trails
-nearby trails
-color coding
-Interactive maps are enjoyable
-thinks about environmental factors
-The amount of other trail users at one time is important to my trail choice
-I need dog friendly trails and spaces to be more clear on maps

Information from the Town of Wellesley

Conversation with Michael Thompson | Town of Wellesley GIS Manager

December 8, 2020

1. How long has Wellesley used ArcGIS?
   Was that the first interactive map they used?
   Were any other platforms used?

- Wellesley has been using ArcGIS since 1997.

- Integrates well with data for maps because it's hosted in one suite

- Public web maps are made with ArcGIS Online - easier than coding and programming

2. Is ArcGIS more convenient to use than other platforms?
   What made Wellesley choose this?

- Yes, other software requires coding or programming

3. What features of ArcGIS have you found to be most valuable?

- Widget-based system, easy to use

4. What kind of feedback have you received from Wellesley residents?

- Feedback from head of Trails Committee, barely any feedback from Wellesley residents

5. What kind of resources would you recommend another town have in place before adopting this system? (People, budget, time, etc.)

- Need base maps, trails layers, could take as little as 30 minutes

- Need trails data in GIS form, can be drag-and-dropped

6. Is it possible to create categorized layers in ArcGIS?

- No option for grouping layers in Online version, works in desktop software

- Can use subsections instead

Information from the Town of Wellesley

Continued...

7. Is there a reason that primary trails are multiple colors?
   (green, red, pink, orange, blue & purple)

- Color schemes came from paper trail maps, translated into interactive maps

- Smaller trails categorized into "woodland" trails, separate from primary trails

8. Is it possible to add trail features in the pop-up window?
   Such as trail length, difficulty, landmarks?

- Depends on attributes that the layers have

- Can edit attributes to reflect this information. Can be a paragraph or list/bullet points. Very customizable. Length and area are set fields in GIS, should be easy to display. Can also include a link to an external webpage with further information (like Acton's interactive mapping)

9. Are there other interactive maps that are interesting or useful to you?

- Maps Online, however has a cost associated with it

10. How extensive is your knowledge of MapGeo?

- Used to work for Applied Geograhpics

11. How difficult would it be to change from MapGeo to ArcGIS?

- See notes on question #5

Link to recording of our conversation for further information

Recommendations
for the Town of Natick

Town of Natick | Interactive Map Recommendations

This information is based on user data.

1. Trails should be clickable and labeled as primary or secondary, as well as have a link to an external page that has detailed information on each trail such as terrain & difficulty, length, features or nearby landmarks, rest areas, wildlife, popularity of trail, images, etc.

2. Trails should be color-coded by primary or secondary/unmarked trail.

3. The same clickable feature should apply to Open Spaces or parks throughout the town. The detailed information should include address, parking, amenities (picnic tables, grills, trash, playground, field, etc.), as well as popularity and nearby landmarks.

4. If possible, include a GPS indicator of a user's location that follows them as they move. This will help users who are not familiar with the space or trail navigate and not get lost.

5. If possible, create categories or themes for Natick's Open Spaces and Trails. It can include toggles for the following layers:

      - parks, open spaces, and trails

      - parking, trailheads/entry, and rest spots for these areas

      - land conservation/wetlands/natural resource protection

      - topographic map

6. Place markers at trail intersections or connecting trails so users can make the most out of them and use the route that works best.

7. Dog-friendly areas and areas that are not dog-friendly should be clearly labeled.

8. Trails that are accessible for those with low mobility should be clearly labeled.

9. Interactive and PDF format maps should be updated at least quarterly.

Town of Natick | Website Recommendations

1. Update or delete The Hunnewell Town Forest website. The Hunnewell Town Forest page should be integrated into the main website. If the brochure is going to be used continually, it should be updated regularly with accurate information.

2. The Open Space and Trails page on the website has an Open Space & Recreation Plan from 2012. When the 2020 version has been approved, upload to the website and advertise on social media pages then archive the old versions so they can still be accessed if necessary.

3. When you click on GIS / Mapping on the popular links section on the town website, include a list of related mapping options (PDF maps, brochures, further information on open spaces & trails) instead of going directly to the interactive map.

4. In the social media links section on the website, include all of the town's related pages (Facebook, Twitter, Youtube, etc.) for streamlined access to current events and all town-related information.

5. Assess the click rate of certain parts of the website to gain a better understanding of how users / residents interact with it.

6. Send out a follow-up user group survey every six months or so to assess the empathetic success of any changes to the website.

Town of Natick | Social Media Recommendations

1. Include niche Facebook groups or subpages on official town pages (Natick GIS, Friends of Natick, etc.).

2. Is @townofnatick the official Instagram page? If so, update regularly in accordance with other official social media pages.

3. When updating social media (Instagram, Twitter, Facebook) create the same posts for all pages or utilize a social media management app for this purpose, for example HootSuite.

4. More integration between all Town of Natick groups and pages. For example: When Natick Open Spaces posts, the Town of Natick could share it to their Facebook page.

5. Create a pinterest to share images of the trials and broaden social media presence.

6. Cultivate unique hashtags to highlight not only posts from the town, but to also encourage residents to post using the hashtags to discover new places or meet people with similar interests.

7. Monitor social media pages and comment on posts to engage with residents in order to establish an effective relationship with the community.

8. Send out a follow-up user group survey every six months or so to assess the empathetic success of any changes to social media pages.