

VIRGINIA
No Wrong Door
ACCESS. OPTIONS. ANSWERS.



VITA IT Project Management Summit

November 1, 2023



DARS
VIRGINIA DEPARTMENT FOR AGING
AND REHABILITATIVE SERVICES

Presented by:



Sara



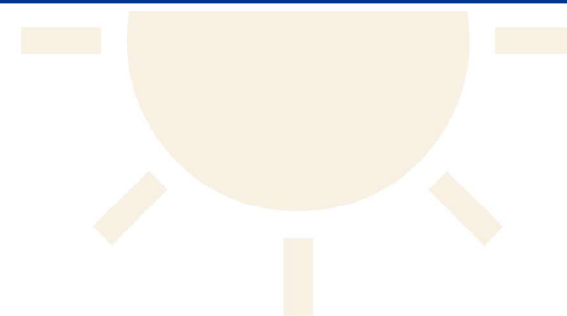
Erika



Priya



Today's Agenda



- What is No Wrong Door Virginia?
- Why build a Social Health Connector?
- Timeline of building it
- Social Health Connector walk-through
- What's behind the scene - technical discussion
- Q&A

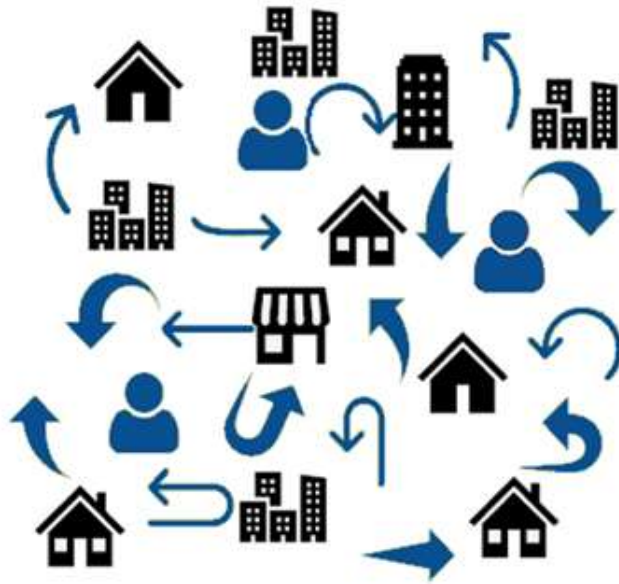


[EasyAccess.Virginia.Gov](https://www.easypass.virginia.gov)



What Is a No Wrong Door System?

Before NWD Implementation



After NWD Implementation



is a partnership
between...



NWD Virginia Easy Access – Award winning site



Virginia Department for Aging and Rehabilitative Services
An official website of the Commonwealth of Virginia [Here's how you know](#) v

Find a Commonwealth Resource



Service Finder

888-992-0959

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WELCOME TO VIRGINIA EASY ACCESS

Life's challenges can feel so heavy. When we support each other, the load is lighter. When we share ideas, our minds open. When we light the way for someone else, hope shines like the sun. Remember, you're not alone. You're right where you need to be. This is about making a better life.

<https://easyaccess.virginia.gov>



SERVICE FINDER

Get help with housing, in-home services, transportation programs and more.

Service Finder

SOCIAL HEALTH CONNECTOR

This tool encourages you to consider social connections in your life right now. You'll receive your own Social Connection Plan based on your responses to a short questionnaire.



Lets Go!

Chat with a live 211 specialist



LIVE CHAT

211

Virginia

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TOLL-FREE:
1-888-992-0959

AVAILABLE 24/7
WITH LANGUAGE
INTERPRETATION

Why build a Social Health Connector?



The Connectedness Continuum

(Amateau, G., Gendron, T., Hickey, P., Link, S., MacDonald, C., Watson, T., Welleford, E.A., 2016)



Definition of social isolation:

- A state in which the individual experiences less social engagement with others than they would like, and they report that this interferes with their quality of life. *(based on Nicholson)*

Definition of social connectedness:

- A state in which the individual experiences a satisfying number of social gatherings, close relationships and/or satisfaction with social contacts and reports that these experiences maintain their quality of life. *(based on Toepoel)*

Social Health Connector

WINNER!
ACL Mental
Health
Challenge

What is the Social Health Connector?

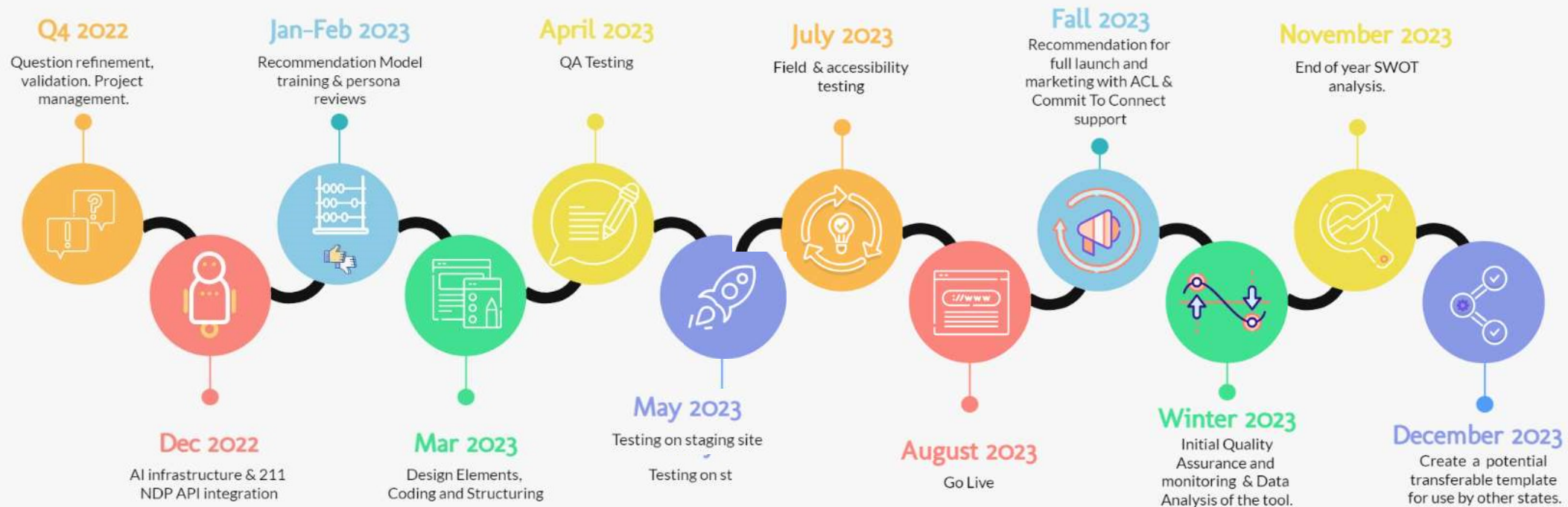
A tool to engage an individual in a reflective, person-centered virtual conversation about the benefits of social connections and providing resources to support good health and quality of life.

How does it work?

The Social Health Connector asks the individual a series of questions. The answers to those are analyzed to enable the recommendation model to craft the personalized **Social Connection Plan** for the individual. This plan can be saved into the individual's personal profile on Virginia Easy Access.



Social Health Connector - Roadmap



Let's Meet Ethan



Ethan Patterson

Background:

- Age: 61
- Occupation: Retired librarian
- Location: Urban area

Personal life:

Ethan lives a solitary life since his retirement.

He is unmarried and has no immediate family or close relatives.

He is passionate about literature and reads and writes a lot.

Dealing with health issues that limits his mobility and impacts his engagement within the community.

Coping with the loss of purpose his job provided.

NWD Virginia Easy Access – Ethan’s experience



Virginia Department for Aging and Rehabilitative Services
An official website of the Commonwealth of Virginia [Here's how you know](#) ▾

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SOCIAL HEALTH CONNECTOR

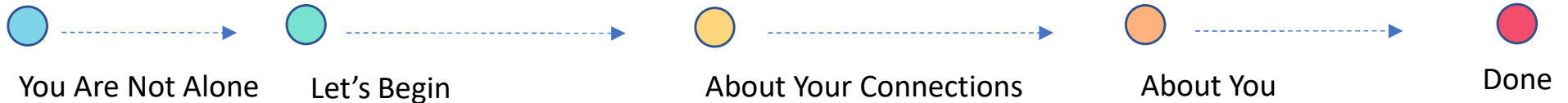
This tool encourages you to consider social connections in your life right now. You'll receive your own Social Connection Plan based on your responses to a short questionnaire.



Lets Go!




Social Health Connector Questionnaire



- I am filling this survey out on behalf of myself / someone else
- What is your ZIP Code



- Tell us some activities you enjoy doing
- Are there things that keep you from doing the things that you enjoy?
- If you answered Yes, what are they?
- What are some new things you would like to start doing
- What are things you would like to stop doing?
- What makes you feel relaxed?

 Responses to Open-Ended Questions Are Met with Trusted Resources and Programs

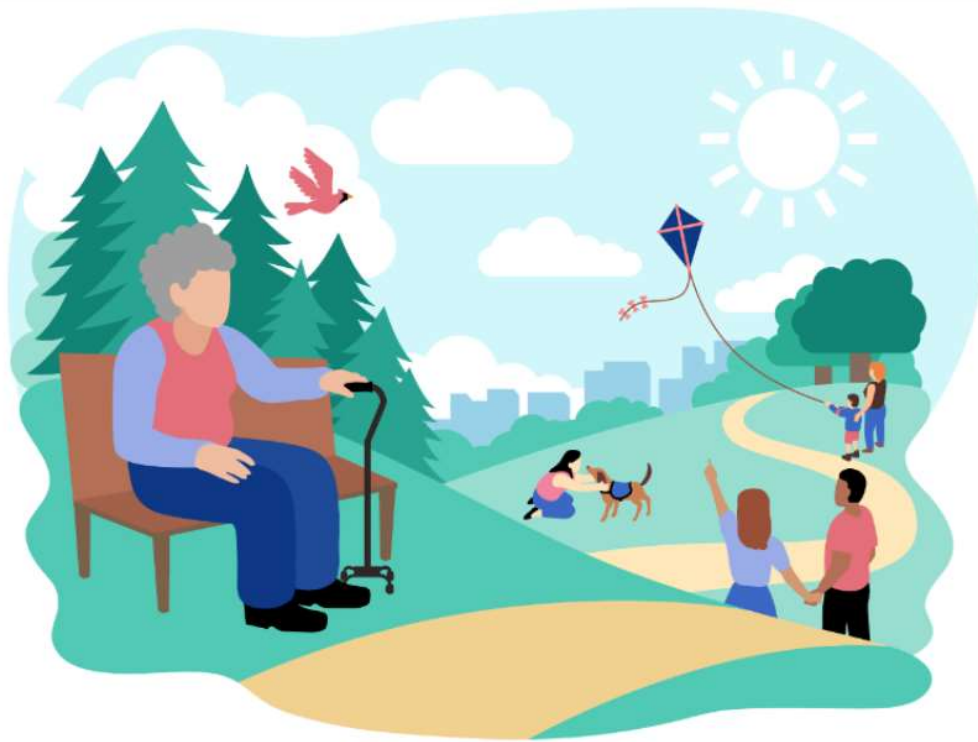
- Do you have someone to call when you need help?
- Think about the people you are closest to. Do you feel supported by them?
- What would make you feel more supported?
- Do any of the following make it harder to socialize with others?
- Do you provide care so someone that needs help with everyday tasks?
- Does anyone live with you?
- When you think about your closest relationships, do you feel safe?
- Have you been impacted by any of these life events in the last year?
- Is there anything else you want to share that relates to your social health?
- Are you currently employed or volunteering outside of your home

- What is your email address?
- Do you want to save your personalized plan in a secure personal profile?
- What is your age?
- Are you a veteran?
- What is your gender?
- What is your race?
- What is your ethnicity?
- Would you like to receive resources and tools from us?



● ● The individual answers a series of questions

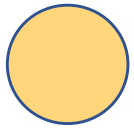
Graphics support the user experience while stepping through the questionnaire. Virginia's Easy Access color palette will be applied, incorporating the warm tones that enhance the user's experience.



©

Questions:

- I am answering on behalf of ...
- What are some activities you enjoy doing?
- Are there things that keep you from doing the things that you enjoy?
- What are some new things you would like to start doing?
- What are things you would like to stop doing?
- What makes you feel relaxed?



About Your Connections



©

Questions:

- Do you have someone to call when you need help?
- Think about the people you are closest to. Do you feel supported by them?
- Do any of the following make it harder to socialize with others?
- Do you provide care to someone that needs help with everyday tasks?
- Does anyone live with you?
- When you think about your closest relationships, do you feel safe?
- Have you been impacted by any of these life events in the last year?
- Are you currently employed or volunteering outside of your home?

MY SOCIAL CONNECTION PLAN

HERE ARE SOME ANSWERS YOU'LL FIND IN THIS PLAN:

1. What is social connection and why does it matter?
2. What are my unique considerations?
3. Where can I find help near me? (Virginia Residents Only)
4. Where can I find further information?

WHAT IS SOCIAL CONNECTION AND WHY DOES IT MATTER?

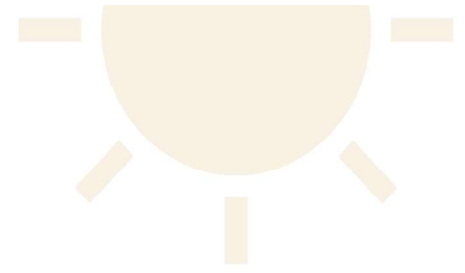
What do you think is the greatest predictor of happiness in life? Is it money? Perfect health? A fabulous appearance? Actually, **researchers have found that the greatest predictor of happiness is the quality of our relationships**. Good relationships help us celebrate good times and get through tough times. They even impact our physical health.

While all of us need at least some high-quality relationships to thrive, social wellbeing does NOT mean you need to have lots of friends or hobbies. Instead, social health is about the quality of the relationships you do have, not the quantity. What do you think YOUR needs are? Let's look at the things in your life that are affecting your social connection.



WHAT ARE MY UNIQUE CONSIDERATIONS?

As with our physical health, many different factors play a role in telling the complete story of your social health. Your responses to the survey can help predict whether you are at risk of social isolation and loneliness.



SUPPORTING WELLBEING

These responses have been shown to decrease your likelihood of social isolation or loneliness. Try to maintain and grow these social safety nets.

- Well done! Completing this survey and reviewing this Plan are positive steps toward your wellbeing.
- You have someone to call when you need help.
- Your employment or volunteering may provide a convenient location and routine to interact with other people.

These responses have been shown to decrease your likelihood of social isolation or loneliness. Try to maintain and grow these social safety nets.



FOR CONSIDERATION

Research has found mixed results on the impact of some of your responses. It will depend on how you experience them.

- While caring for someone who needs help with everyday tasks may provide social time and a sense of purpose, it can also make it harder for you to find time or energy to socialize with others.
- While living alone does not necessarily mean you are lonely, it may lead to isolation if you do not have social connections outside your home.

Research has found mixed results on the impact of some of your responses. It will depend on how you experience them.



HANDLE WITH CARE

You may need additional support to deal with responses that have been shown to increase social isolation and loneliness

- You said that there are things that keep you from doing things you enjoy.
- There is at least one barrier in your life that makes it harder for you to socialize with others.
- In case you feel that you could benefit from additional support, or would like to talk to someone, please consider these help lines: <https://easyaccess.virginia.gov/helplines-hotlines>
- You have experienced a major life event in the last year. Don't forget to ask for help when you need it and refuel with the people you care about!

You may need additional support to deal with responses that have been shown to increase social isolation and loneliness.

WHERE CAN I FIND HELP NEAR ME?

Your responses have highlighted some services that may help you take care of yourself and grow your social connection. If you're 60 or older or disabled, you may start with a call to your nearest No Wrong Door office. They can continue to point you in the right direction for a variety of needs with the most local results.

SERVICES:

Provided by No Wrong Door Virginia and 211



2-1-1

NO WRONG DOOR (100%)

RICHMOND, SENIOR CONNECTIONS, CAPITAL AREA AGENCY ON AGING, THE

📍 24 East Cary Street, Richmond, VA 23219
📞 (804) 343-3000
🌐 <http://www.seniorconnections-va.org>

MOBILITY MANAGEMENT/TRANSPORTATION (100%)

RICHMOND, RIDE CONNECTION, SENIOR CONNECTIONS, CAPITAL AREA AGENCY ON AGING, THE

📍 24 East Cary Street, Richmond, VA 23219
📞 (804) 672-4495
🌐 <http://www.seniorconnections-va.org>

RECREATION/PARKS (100%)

RICHMOND, RICHMOND DEPARTMENT OF PARKS, RECREATION AND COMMUNITY FACILITIES

📍 1209 Admiral Street, Richmond, VA 23220
📞 (804) 646-5733
🌐 <http://www.richmondgov.com/content/Parks/index.aspx>

FALL PREVENTION (60%)

RICHMOND, A MATTER OF BALANCE, SENIOR CONNECTIONS, THE CAPITAL AREA AGENCY ON...

📍 1300 Semmes Avenue, Richmond, VA 23224-
📞 (804) 343-3004
🌐 <http://www.seniorconnections-va.org>

INSURANCE COUNSELING AND ASSISTANCE (60%)

RICHMOND, VIRGINIA INSURANCE COUNSELING AND ASSISTANCE PROGRAM (VICAP), SENIO...

📍 24 East Cary Street, Richmond, VA 23219
📞 (804) 343-3014
🌐 <http://www.seniorconnections-va.org>

LIBRARY (100%)

RICHMOND, BELMONT LIBRARY, RICHMOND PUBLIC LIBRARY

📍 3100 Ellwood Avenue, Richmond, VA 23221
📞 (804) 646-1139
🌐 <http://rvalibrary.org/>

ASSISTIVE TECHNOLOGY CONSULTATION (100%)

VIRGINIA ASSISTIVE TECHNOLOGY SYSTEM

📍 2001 May will St, Suite 202 Richmond, VA 23230
📞 (804) 662-9990
🌐 <http://vats.com>

TRANSPORTATION RELATED RESOURCES (100%)

RICHMOND, RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY (RMTA)

📍 919 East Main Street Suite 600, Richmond, VA 23219
📞 (804) 523-3300
🌐 <http://www.rmaonline.org>

INFORMATION AND REFERRAL (54%)

RICHMOND, SENIOR CONNECTIONS, CAPITAL AREA AGENCY ON AGING, THE

📍 24 East Cary Street, Richmond, VA 23219
📞 (804) 343-3000
🌐 <http://www.seniorconnections-va.org>

LIBRARY (100%)

RICHMOND, BELMONT LIBRARY, RICHMOND PUBLIC LIBRARY

📍 3100 Ellwood Avenue, Richmond, VA 23221
📞 (804) 646-1139
🌐 <http://rvalibrary.org/>



Address



Phone #



Website



WHERE CAN I FIND FURTHER INFORMATION?

Read on for more tips and tools to improve your social wellbeing. Plus, learn about the research and data behind the survey.



FURTHER READING:

[Stay socially connected with tips from Virginia Easy Access](#)

[Find a confidential helpline or hotline to meet your needs](#)

[Stay engaged with Commit to Connect resources](#)

[Learn to use technology to enjoy the things you want to do](#)

[Join a group or find an event at Meetup.com](#)

[Find community and companionship for anyone over 50 with Stitch.net](#)

[Preserve and share your unique journey at StoryCorps](#)

[Explore Person-Centered Options Counseling for Long-Term Care](#)



Funding for this initiative was made possible by contract no. HHSP2332015000881 from ACL. The views expressed do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Save

My Profile

My Links | My Plans

Social Health Plan Fri 05/12/2023 Myself
Social Health Plan Tue 18/9/2023 Client

FOR MORE INFORMATION:

Hold your phone camera over this image for a few seconds and tap the notification that appears. You will be taken to Virginia Easy Access for FAQ, contact information, and sharing options.





Behind the scene: Design Elements Coding and structure

Service Recommendations Service employs artificial intelligence concepts and algorithms to offer tailored services to citizens based on relevancy and location

Survey Responses

Different Questions Are Evaluated:

Freeform:

Are there things that keep you from doing the things you enjoy?

I need hearing aids.

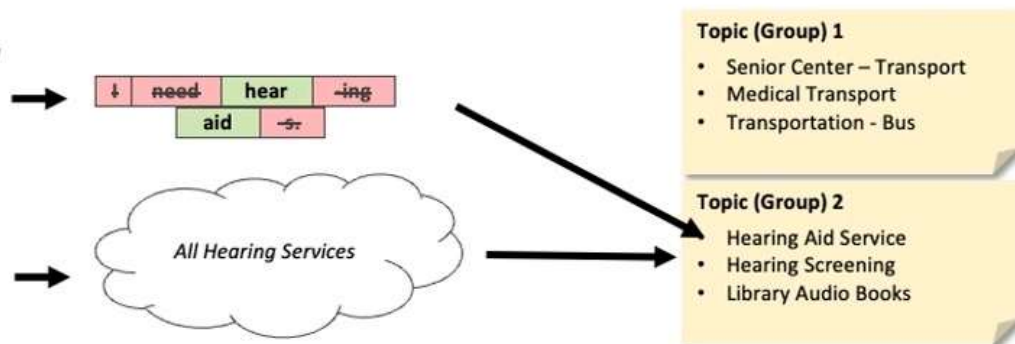
Multiple Choice:

Do any of the following make it harder to socialize with others?

- A. Hearing
- B. Vision

AI Service Prediction Algorithm

Keyword Extractions, Multi-choice Statistics, and Similar "Topics" Are Used to Compare Services to Surveys



Recommend Services

Services Are Ranked by Relevancy and Proximity to Citizen

		Relevancy	Proximity
1	Hearing Aid Service	Green	Green
2	Hearing Screening 1	Yellow	Green
3	Hearing Screening 2	Yellow	Yellow
4	Library Audio Books	Red	Yellow
...	...	Red	Red

Artificial Intelligence can recommend services to citizens based on survey responses

TOPIC MODELING

The *Latent Dirichlet Allocation (LDA)* groups similar services together for better comparison to survey responses.

KEYWORD EXTRACTION

Stanford Lemmatizer, Stemmer, and POS Tagger can breakdown freeform responses into the important keywords for comparison.

STATISTICAL MODELING

Advanced statistical algorithms are used to link both freeform and multi-choice responses to appropriate services.

TUNED VARIABLES

Scoring adjustments are made according to question, location, service types, and other variables to tune-in the results.

RANKED SCORING

Statistical ranking based on service relevancy and citizen's proximity to service location.

With the various testing phases and subsequent adjustments, the model's intelligence and as a result predictions generated were improved from that of a mere toddler to a well-informed young adult.

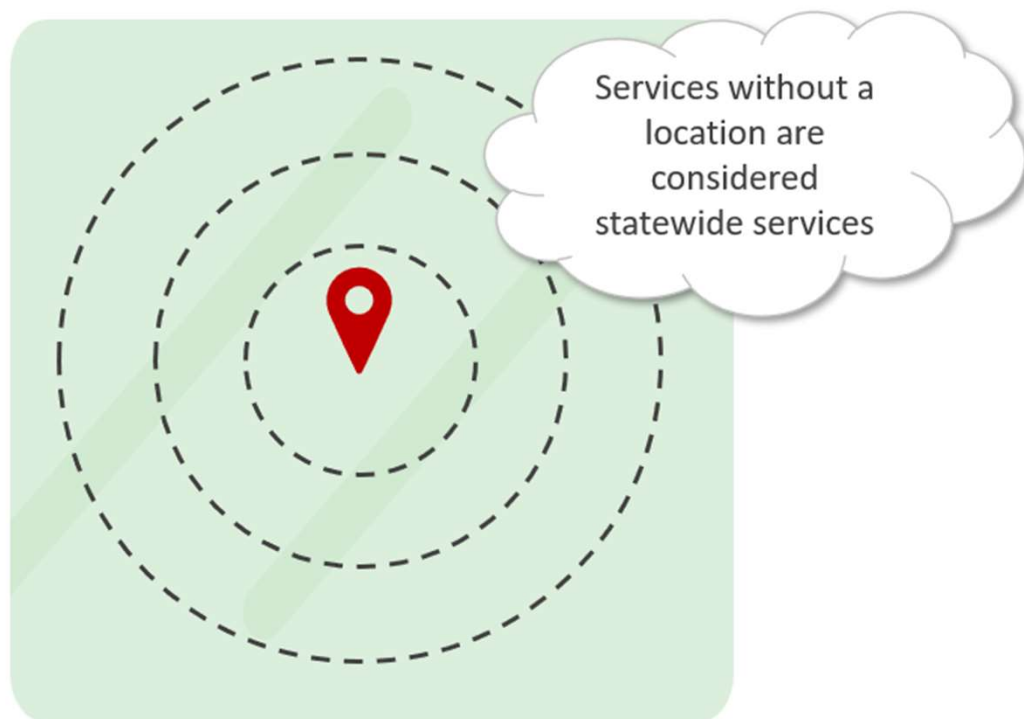


Behind the scene: Testing Cycle 1

Service data improvement: During this phase UWWW/211 team assisted with improving service data quality and Fine tuning of localization methods assisted in bubbling services closer in proximity to the surveyor to the top of the list

Locality Scoring Adjustments

Confidence scores are linearly reduced based on distance mile increments to give balance to the closest yet most appropriate service recommendations



Radius	Confidence Adjustment
5 Miles	1
10 Miles	0.9
20 Miles	0.8
30 Miles	0.7
...	...
100+ Miles	0
No Service Location	0.80

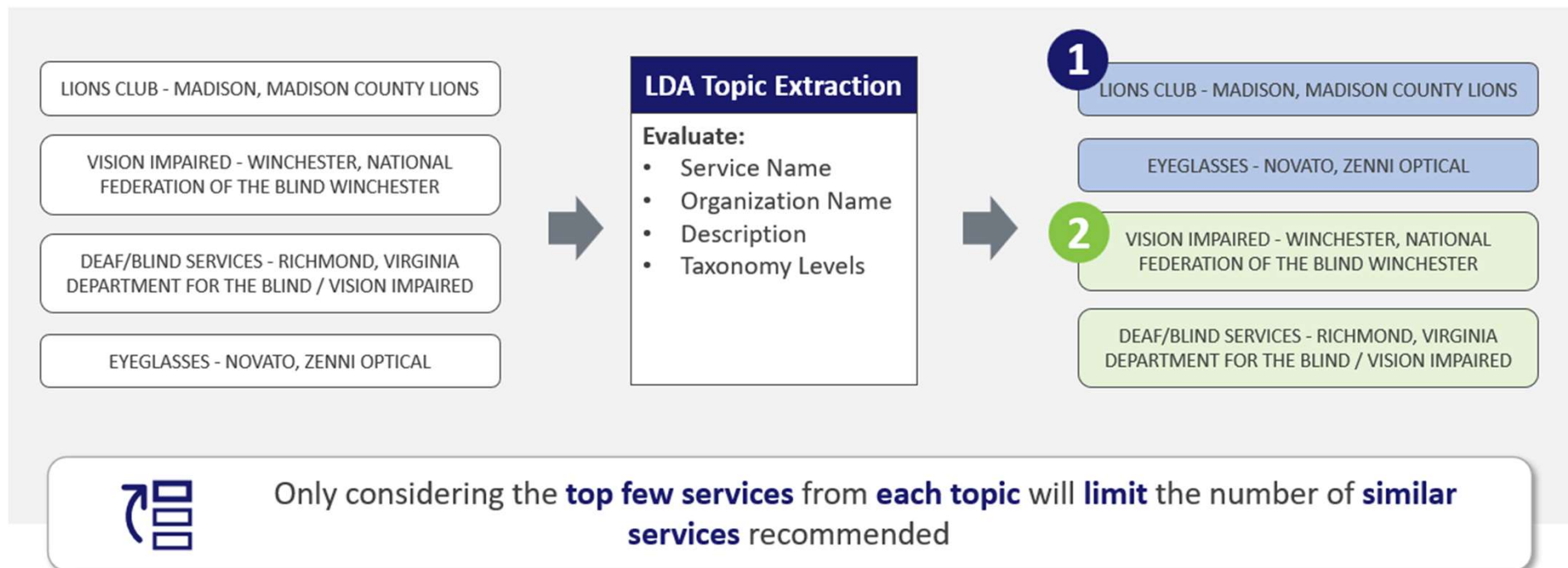


Behind the scene: Testing Cycle 2

211 API improvements : API efficiencies were found and thereafter promptly facilitated by the UWWW/211 team.

Topic Extraction

Using the available details of a service, the Latent Dirichlet Allocation algorithm can find common associations between different services and group them





Behind the scene: Testing Cycle 3

Refining word association governance and introduction of confidence level for suggestions: With the volume of test surveys taken some oddities in work associations were discovered and then rectified.

Service Scoring Adjustments

Some service confidence scores was adjusted to account for unintended keyword matches, unexpected or loose hierarchy organization, and generalizations

What are some activities you enjoy doing?

I love spending time by the bay.

Keyword	Service Example
bay	HOME DELIVERED MEALS - URBANNA, BAY AGING
bay	CONSERVATION - VIRGINIA BEACH, BACK BAY NATIONAL WILDLIFE REFUGE

RULES

IF Keyword = "bay" & Service contains "Urbanna" then Confidence Adjustment = 0

Confidence adjustments of 0 only remove the keyword and service combination. Other keywords can still predict the service.



Behind the scene: Confidence Percentage

A calculated confidence percentage was also introduced to the plan for the surveyor to view to help boost their trust in the recommendation process.

SERVICES:

Provided by No Wrong Door Virginia and 211



SUPPORT GROUP-DISABILITY/HEALTH (100%)

CHESTER NJ, TALKING ABOUT CLINICAL TRIALS, CANCER HOPE NETWORK

📍 2 North Road Suite A, Chester, NJ 07930

📞 (908) 879-4039

🌐 <http://www.cancerhopenetwork.org>

DISABILITY-BLACK LUNG (100%)

WASHINGTON, DC, USDL DIVISION OF COAL MINE WORKERS COMPENSATION

📍 200 Constitution Avenue, Nw Suite C3520-dcmwc, Washington, DC 20210-

📞 (202) 693-0046

🌐 <http://www.dol.gov>

Different keywords are identified using taxonomy, description and name of the services listed within 211 databases. Different weights are assigned to these words per service based on where in these properties and how frequently they are found.

- Keywords are also found using choices made and freeform responses given on a survey.
- The confidence score is generated as a product of all keywords found matching on a certain service and found in the survey responses.
- Additionally, a multiplier is used to reduce the relevance of a recommended service based on its distance from the surveyor.



Lessons Learned

- Recommendations or answers generated by a service or only as good as the underlying data. It is very important to have consistent and complete information provided under each of the data points; assistive services in this case.
- As there are always variety of individuals taking surveys; providing that variety life experiences and perspectives during UAT testing is very important
- It truly takes time to achieve precision and perfection in an endeavor like this to revise and fine tune a solution like the one build under Social Health Connector survey



Feedback Processing

In a machine learning or Artificially intelligent process it is very important for there to be a “feedback loop” that helps the model to learn from an expert user's opinion on how well the model did.

We are looking analyze these survey feedbacks from Virginians to assist in building this piece of the process to truly unleash the beast!



Future Plans

- Creating a broadscale marketing & outreach campaign to reach as many Virginians as possible – individuals who can benefit from such a tool and who can provide feedback to grow and enhance the tool.
- Identify gaps in the community resources and services, as well as expose the resources and services that are highly utilized.
- Considering the creation of a plugin/widget to utilize on partner agency sites, including state agencies and localities.



Potential white board session:

1. How do you see your state agency utilize the tool?
2. How do you see using the Social Health Connector in your personal capacity?
3. Would you want this as a “widget” on your agency’s website?
4. Do you have internal resource databases that could potentially tie into this?



Thank You!

