

Catchment Area Data Opportunities using ArcGIS Business Analyst

Use cases from an NCI-Designated Comprehensive Cancer Center

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Outline



- Use Cases for Cancer Centers
 - Use Case 1: Catchment Area Expansion
 - Use Case 2: Community Partner Landscape Analysis
- Summary: Uses of Business Analyst
- Benefits and Limitations

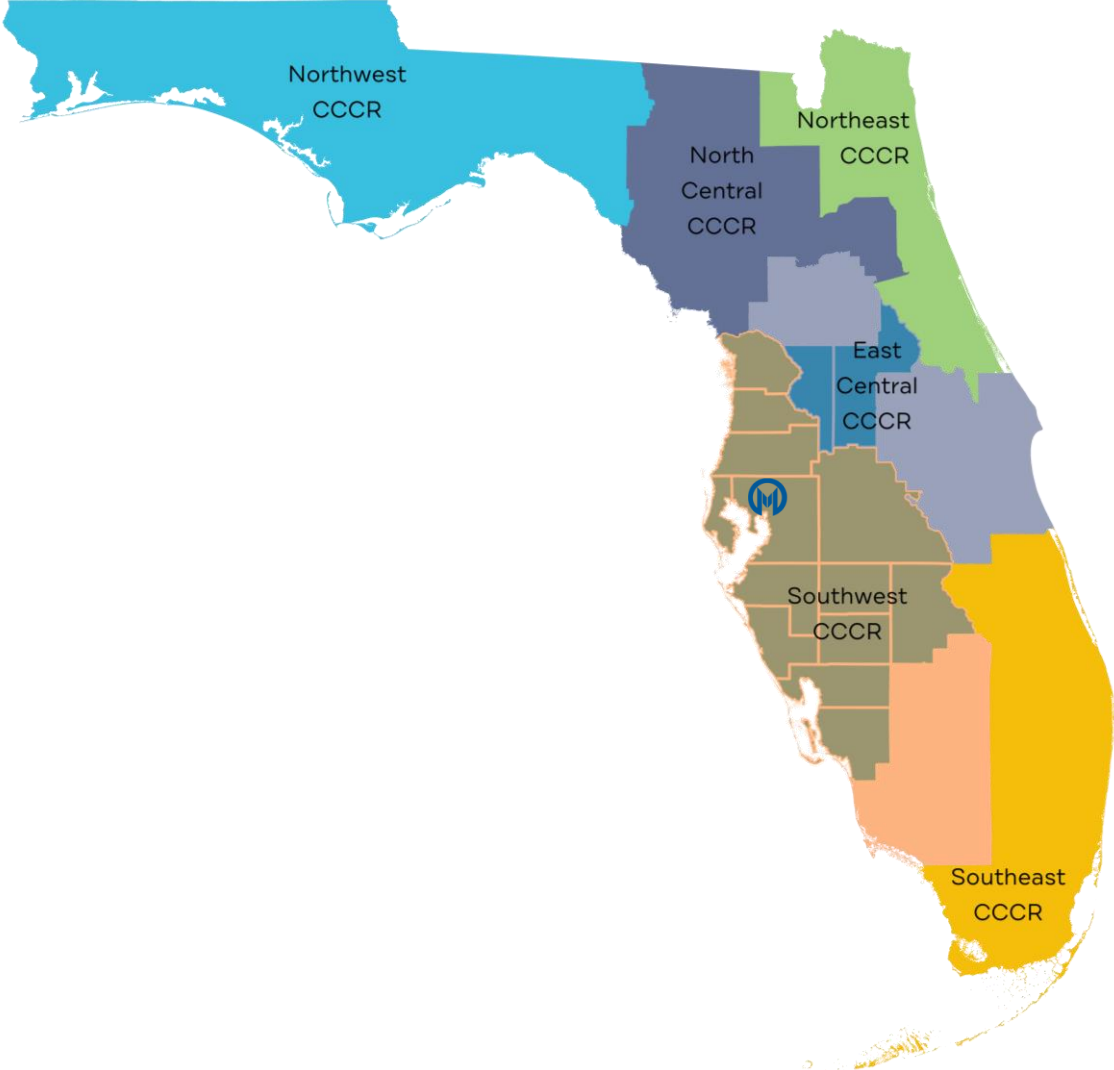


Use Case 1: Catchment Area Expansion

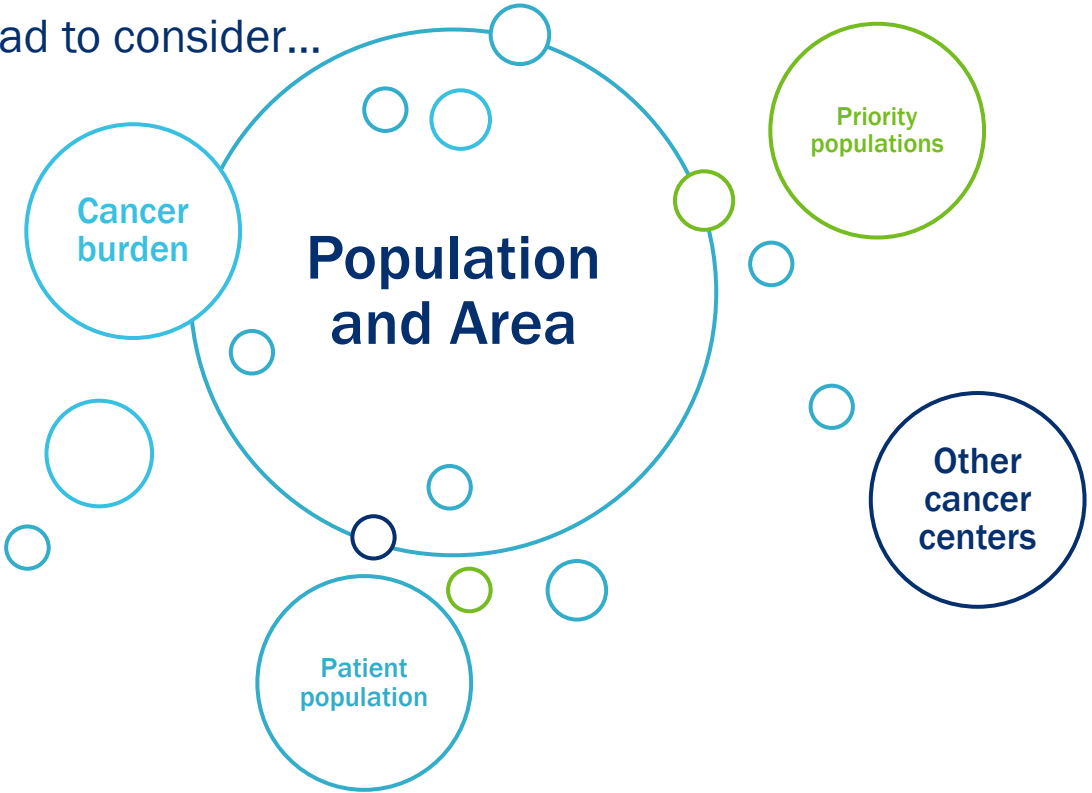


Catchment Area Expansion

Scenario: 2021 Moffitt expanding its catchment area to cover more area in central and southern Florida



Had to consider...

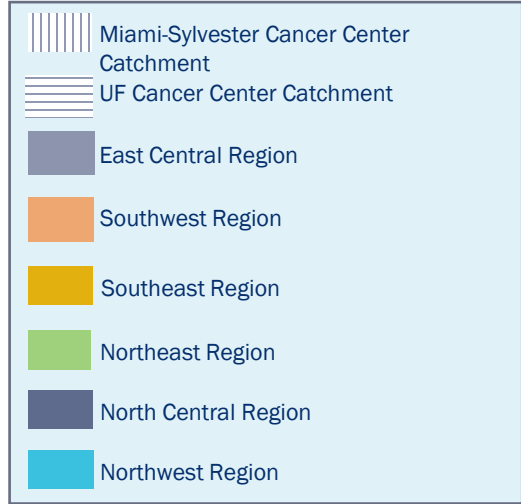
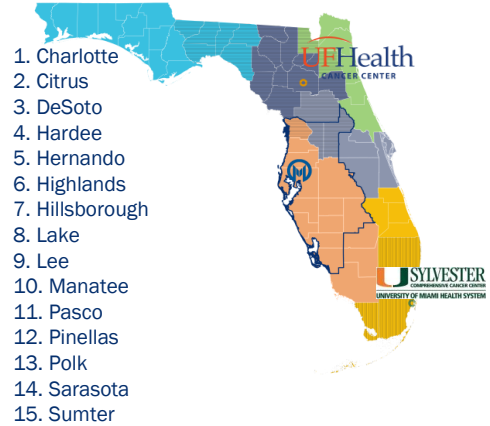


Catchment Area Expansion

Catchment Area Scenarios



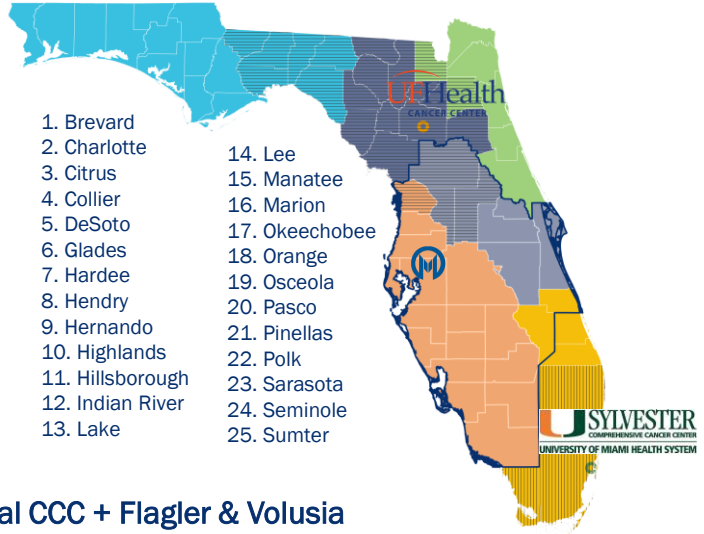
Moffitt's 2021 Catchment Area



Scenario 2: Southwest CCC+ East Central CCC + Indian River & Okeechobee

Includes

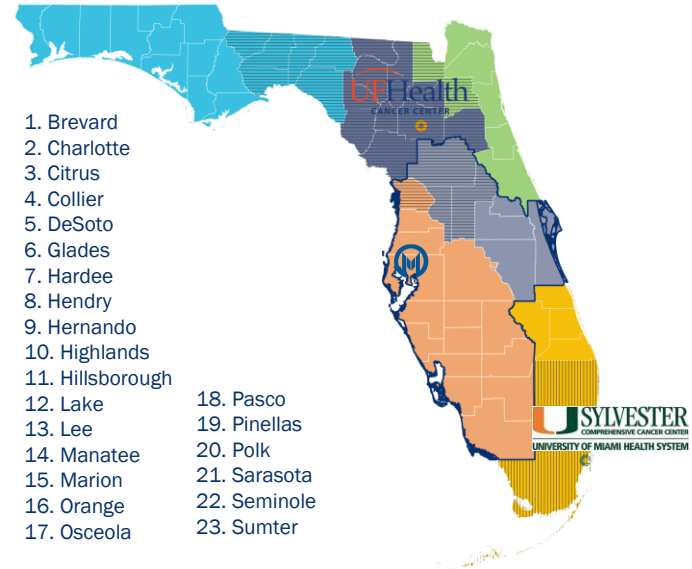
- ✓ Southwest, East Central and part of Southeast Cancer Control Collaboratives
- ✓ **10** new counties
- ✓ **4** UF Catchment counties (Sumter, Marion, Lake, Citrus)



Scenario 1: Southwest + East Central Cancer Control Collaboratives (CCC) Only

Includes

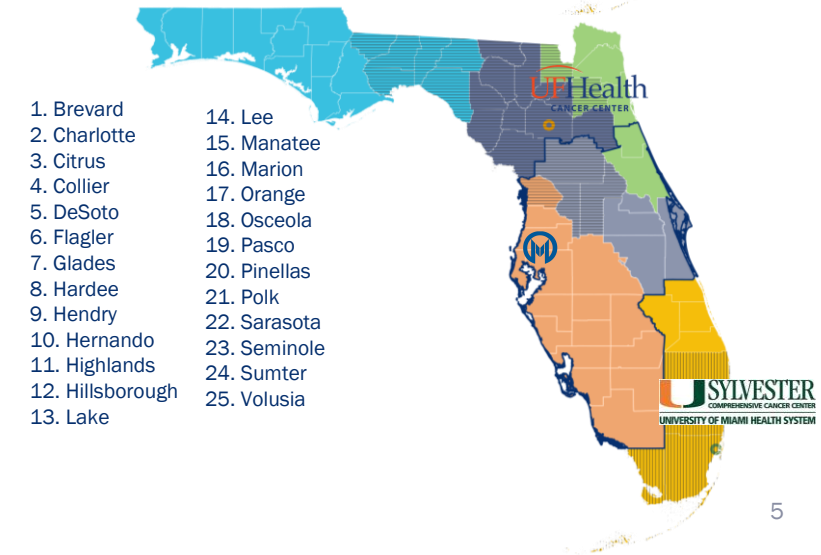
- ✓ Southwest and East Central Cancer Control Collaboratives
- ✓ **8** new counties
- ✓ **4** UF Catchment counties (Sumter, Marion, Lake, Citrus)



Scenario 3: Southwest CCC+ East Central CCC + Flagler & Volusia

Includes

- ✓ Southwest, East Central and part of Northeast Cancer Control Collaboratives
- ✓ **10** new counties
- ✓ Advent Health catchment area
- ✓ **4** UF Catchment counties (Sumter, Marion, Lake, Citrus)



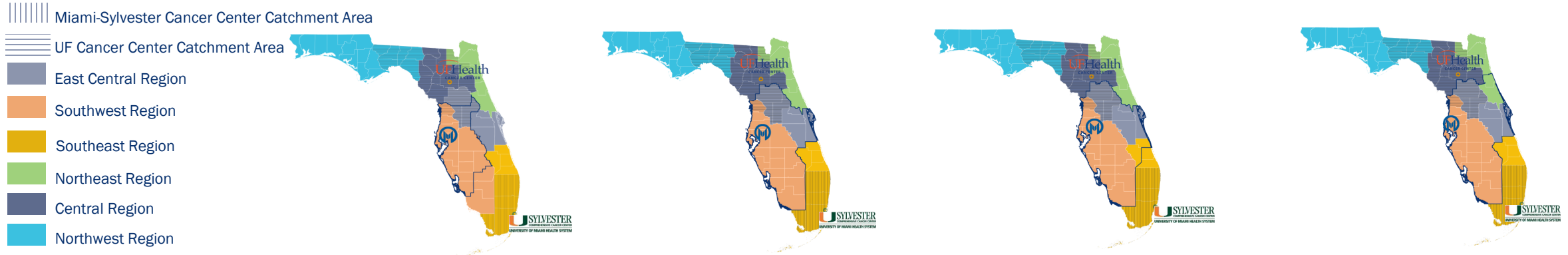
Catchment Area Expansion



[DEMO]
Define Areas
Comparison Report

Catchment Area Expansion

Change in Vulnerable Population by Scenario



Characteristic	2021 Catchment Area	Scenario 1: SWCCC + ECCCC	Scenario 2: SWCCC + ECCCC + IR + OKC	Scenario 3: SWCCC + ECCCC + FLG + VOL
Pop 18-64 Speak Spanish	9.79%	↑ 11.81%	↑ 11.74%	↑ 11.48%
Hispanic Population	20.35%	↑ 23.61%	↑ 23.46%	↑ 23.09%
White Non-Hispanic Population	80.63%	↓ 77.54%	↓ 77.71%	↓ 77.89%
Black/African American Population	11.15%	↑ 12.61%	↑ 12.55%	↑ 12.51%
American Indian/Alaska Native Population	0.39%	↑ 0.41%	↑ 0.41%	↑ 0.41%
Senior Population (Age 65+)	26.14%	↓ 23.84%	↓ 23.96%	↓ 24.03%
Pop 65+ in HHs: have No Computer	2.83%	↓ 2.57%	↓ 2.60%	↓ 2.60%
HHs with No Internet Access	12.56%	↓ 12.08%	↓ 12.20%	↓ 12.32%
Persons living with HIV	0.4%	0.4%	0.4%	0.4%

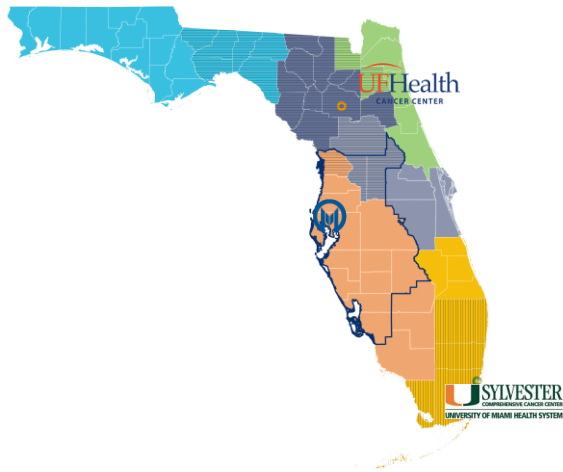
*Analytical First Contact Date Between 1/1/2020 - 12/31/2020. Unique Patient Count.

Data Sources: ESRI 2021, American Community Survey 2015-2019, 2021, Data Axel 2021; FLHealth Charts

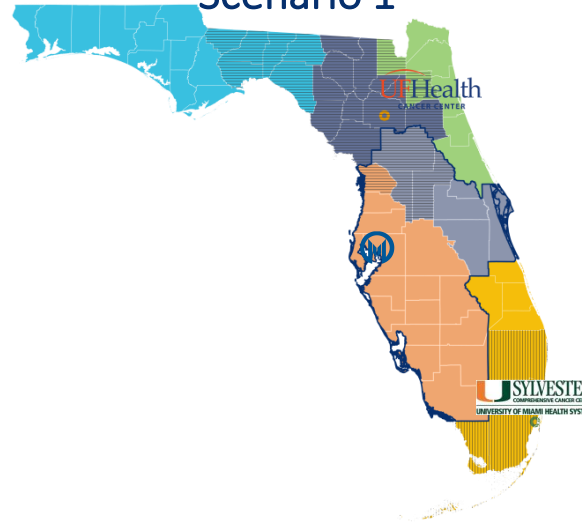


Catchment Area Expansion

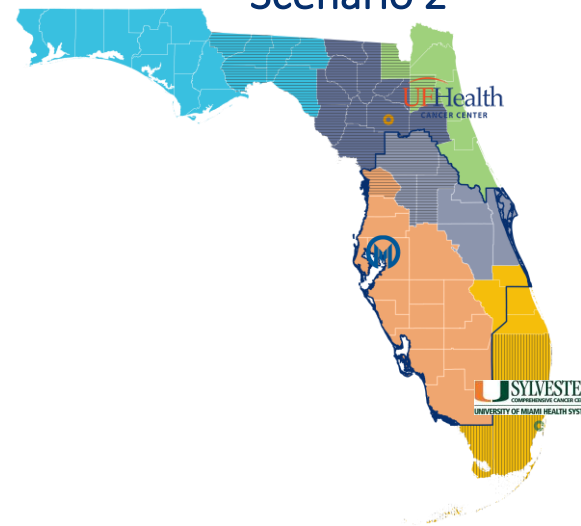
2021 Catchment Area



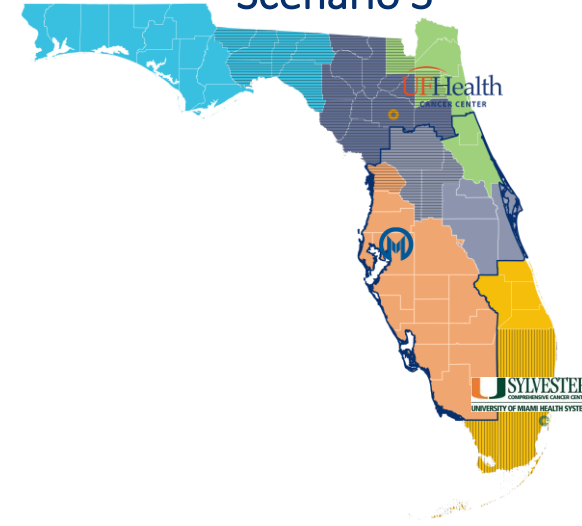
Scenario 1



Scenario 2



Scenario 3



AT RISK POPULATION



679,676

Households With Disability



1,732,135

Population 65+



140,726

Households Without Vehicle

POVERTY AND LANGUAGE



12%

Households Below the Poverty Level



298,663

Households Below the Poverty Level



15,839

Pop 65+ Speak Spanish & No English

AT RISK POPULATION



1,001,777

Households With Disability



2,471,132

Population 65+



205,824

Households Without Vehicle

POVERTY AND LANGUAGE



12%

Households Below the Poverty Level



457,141

Households Below the Poverty Level



29,104

Pop 65+ Speak Spanish & No English

AT RISK POPULATION



1,022,207

Households With Disability



2,533,267

Population 65+



209,285

Households Without Vehicle

POVERTY AND LANGUAGE



12%

Households Below the Poverty Level



465,977

Households Below the Poverty Level



29,767

Pop 65+ Speak Spanish & No English

AT RISK POPULATION



1,081,341

Households With Disability



2,656,195

Population 65+



220,288

Households Without Vehicle

POVERTY AND LANGUAGE



12%

Households Below the Poverty Level



491,094

Households Below the Poverty Level



29,548

Pop 65+ Speak Spanish & No English



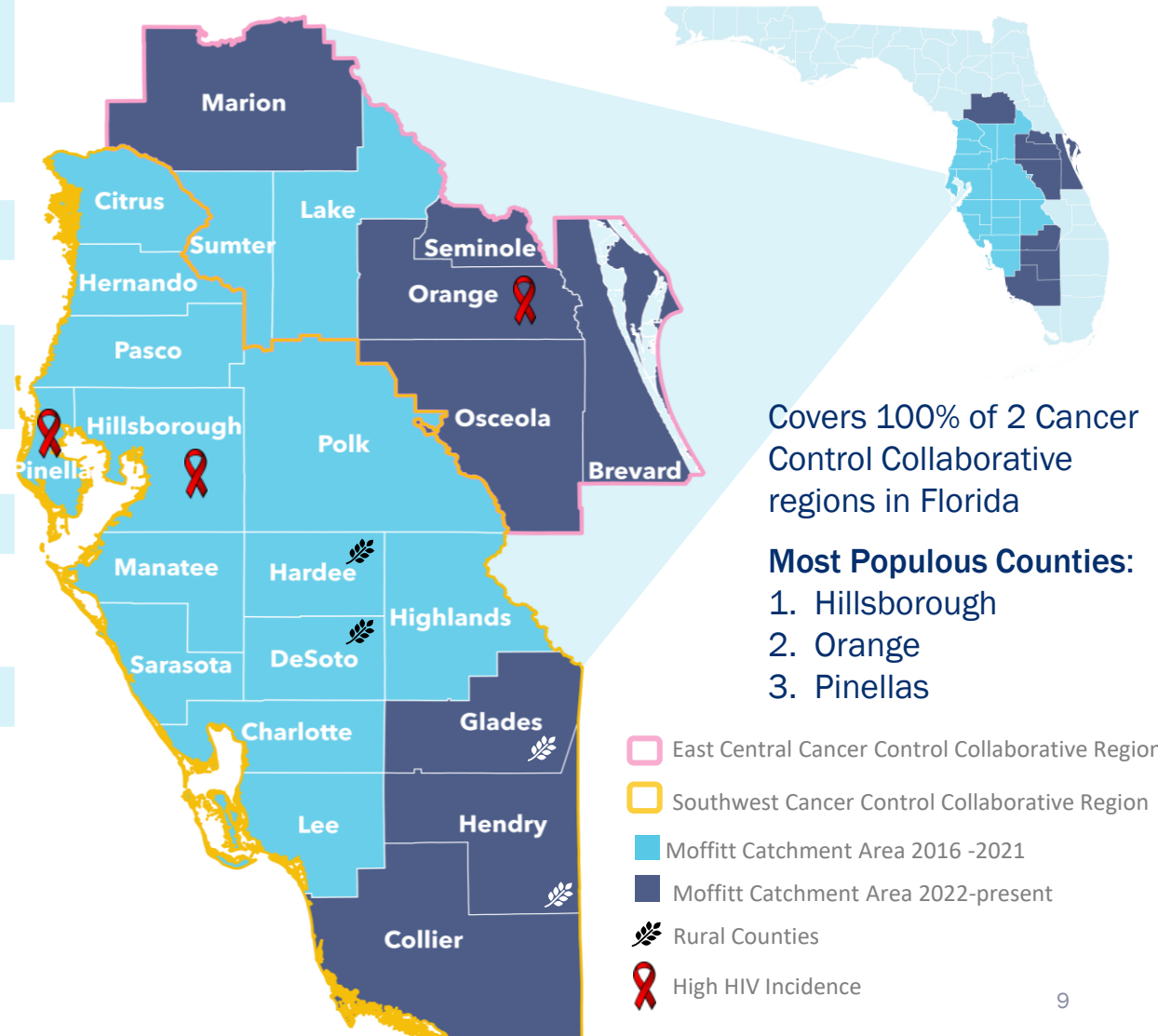
Catchment Area Expansion

Group	Catchment Area	Florida	United States
Overall Population ¹	10,209,232	21,538,187	331,449,281
Black Population ¹	12.1%	16.1%	12.7%
Hispanic Population ¹	21.4%	25.6%	18.0%
Seniors (≥age 65) ¹	22.1%	20.2%	15.8%
Uninsured ¹	16.0%	12.7%	8.7%
Rural Residents ¹	8.3%	8.8%	19.3%
Same Sex Couple Households ²	0.4%	0.5%	0.4%
HIV Counties* ³	13.04%	25.84%	26.20%

Persistent Poverty
% of census tracts with persistent poverty

Group	Catchment Area	Florida	United States
Persistent Poverty	24.54%	25.84%	26.20%

*Priority counties for the *Ending the HIV Epidemic (EHE) in the US Initiative*
CDC Analysis: 50% of new HIV diagnoses between 2016-2017 occurred in these counties, plus Washington D.C, and San Juan, Puerto Rico



1. U.S. Census Bureau, ACS Demographic and Housing Estimates, 2020 5-Year Survey
 2. U.S. Census Bureau, ACS Demographic and Housing Estimates, 2021, 5-year survey
 3. CDC, *Ending the HIV Epidemic in the U.S. (EHE)*, 2019, <https://www.cdc.gov/endhiv/diagnoses-2016-2017.html>



Use Case 2: Community Partner Landscape Analysis

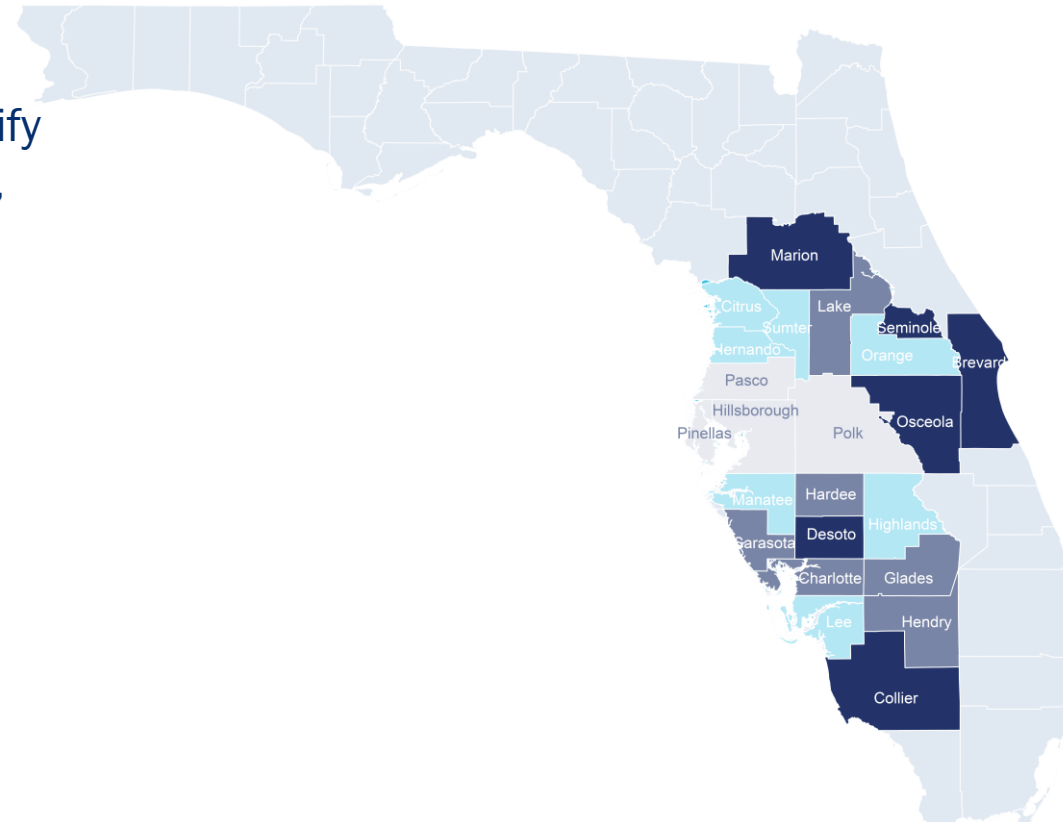


Community Partner Landscape Analysis

An initiative of COEE - Support for Community Organization Research Engagement (SCORE)

Scenario: Moffitt wanting to expand community partnerships throughout the catchment area, identify partners in counties we do not have much reach in, identify potential new partners

- Libraries
- Educational Support
- Physician Offices
- Dentist Offices
- HMO Medical Centers
- Outpatient Care Centers (FQHCs)
- General Medical and Surgical Hospitals
- Individual and Family Counseling
- Community Food Services
- Temporary Shelters
- Fitness and Recreational Sports Centers
- Religious Organizations
- Civil and Social Organizations



CATCHMENT AREA
Brevard County, FL
Collier County, FL
DeSoto County, FL
Marion County, FL
Osceola County, FL
Seminole County, FL
Charlotte County, FL
Glades County, FL
Hardee County, FL
Hendry County, FL
Lake County, FL
Sarasota County, FL
Citrus County, FL
Hernando County, FL
Highlands County, FL
Lee County, FL
Orange County, FL
Sumter County, FL
Hillsborough County, FL
Manatee County, FL
Pasco County, FL
Pinellas County, FL
Polk County, FL

PRIORITIZATION KEY
Priority 1 (High): No COEE-SCORE Partners
Priority 2 (Mod-High): 5 or Fewer COEE-SCORE Partners
Priority 3 (Moderate): 6-19 COEE-SCORE Partners
Priority 4 (Low): 20+ COEE-SCORE Partners

Community Partner Landscape Analysis



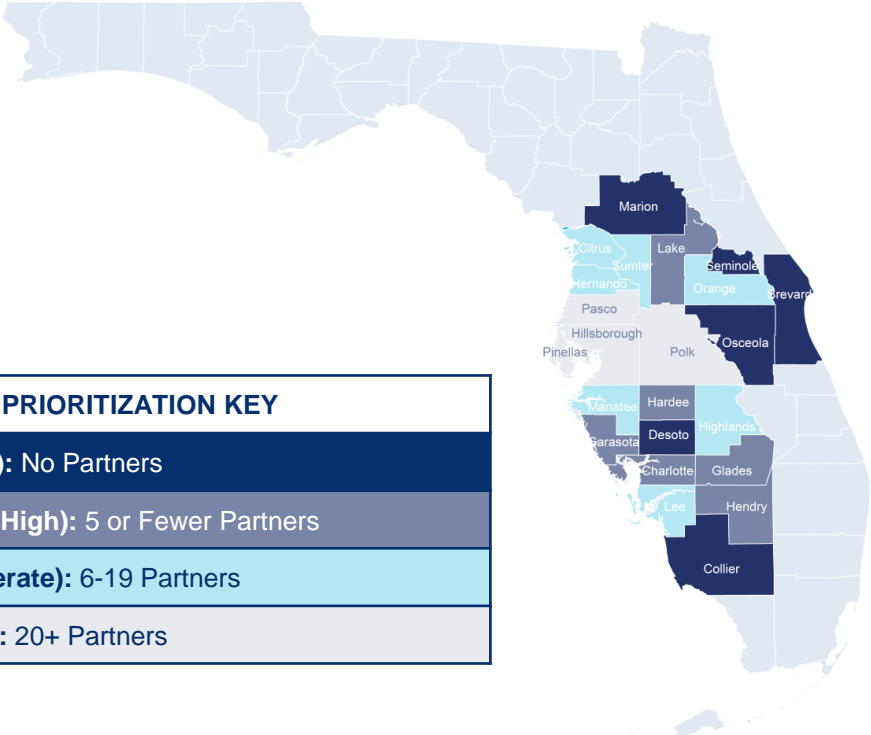
[DEMO]
Points of Interest Search

Community Partner Landscape Analysis



Number of Community Organizations Identified: 5,377

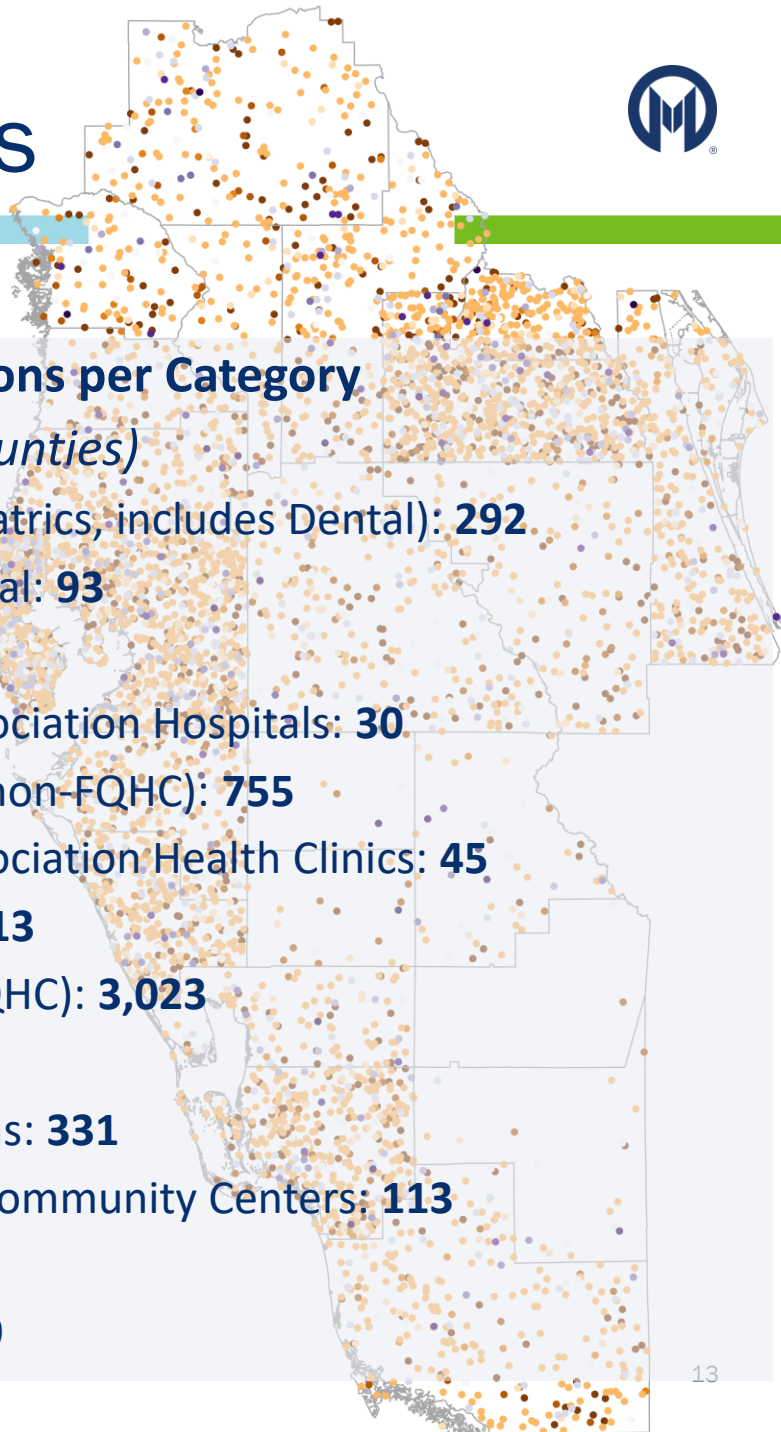
- Priority 1 Counties: **1,166**
- Priority 2 Counties: **659**
- Priority 3 Counties: **1,410**
- Priority 4 Counties: **2,142**



Number of Organizations per Category

(all catchment area counties)

- FQHCs (excludes Pediatrics, includes Dental): **292**
 - FQHCs with Dental: **93**
- Hospital Systems: **147**
 - Rural Health Association Hospitals: **30**
- Primary Care Clinics (non-FQHC): **755**
 - Rural Health Association Health Clinics: **45**
- Imaging/Radiology: **313**
- Dental Clinics (non-FQHC): **3,023**
- Public Libraries: **244**
- Religious Organizations: **331**
- Recreation Centers/ Community Centers: **113**
- Food Banks: **73**
- Homeless Services: **59**





Summary

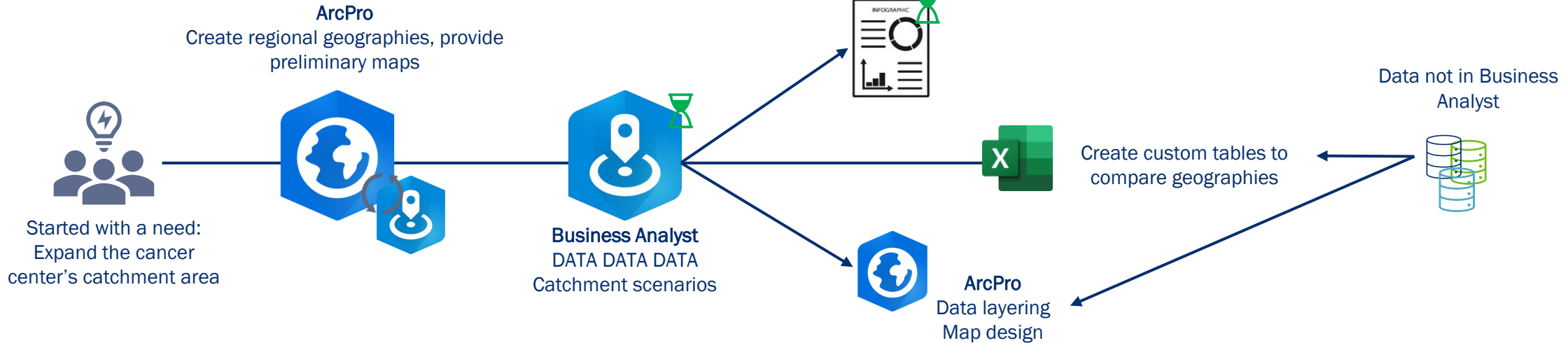
Uses of ArcGIS Business Analyst

Summary

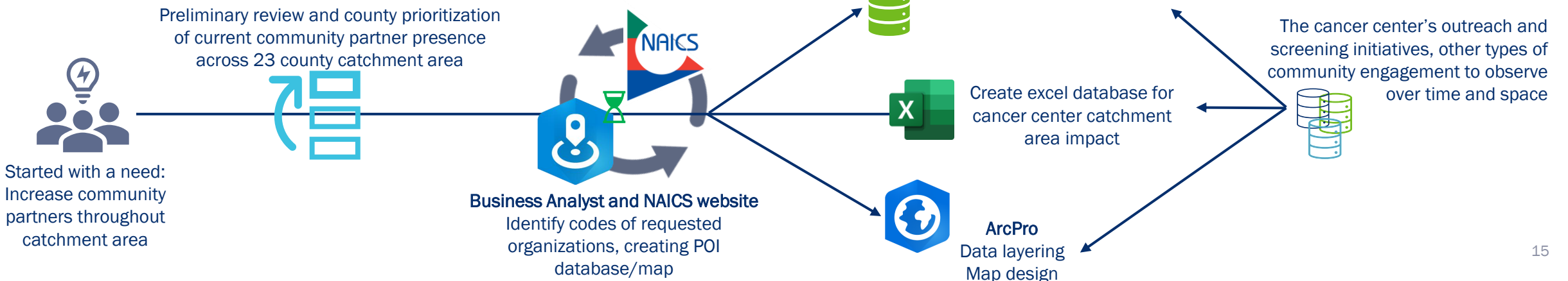


 = significant time saver

Expanding the catchment area



Community Partner Landscape Analysis





Benefits and Limitations

Benefits



Time saver



Low code / No code option



Integrates with other ArcGIS platforms, exports to excel file



Point and click access to thousands of geographically referenced data

Limitations



Cost consideration: cost of the extension + cost of geoprocessing credits (\$120 for 1,000 credits)



Learning curve to use the program



Thank you.