

ACG Nashville, TN

May 23-25, 2022

RFAnalytic





Leverage your data!

Tactical vs Strategic



Complaints vs Churn



Building vs Growing



Remove Poor Performing Towers From Your Network

- They consume your radio resources prematurely
- Customers receive a lesser grade of service
- Reduced ability to compete against competitors
- Restrict ability to grow the company
- Negatively affect profitability
- Remove by.....**replace** – with one or more sites – improve capacity



Audit your network

Site Name	Structure Rank	Rent Rank	RF Rank	Strategic	Score
bad_deal_all_around	1	0	1	0	2
	1	0	1	0	2
	1	0	1	0	2
failed_tower_old_timer	1	0	1	1	3
	0	1	2	0	3
	2	0	1	0	3
accounting_favorite	2	0	1	0	3
	1	3	0	0	4
	3	0	1	0	4
must_have_hub	3	0	1	0	4
	2	1	1	0	4
	2	0	1	1	4
wrong_location_favorite	2	0	2	0	4
	2	0	2	0	4
	2	0	3	0	5
this_is_a_keeper	3	2	0	0	5
	2	2	1	0	5
	3	2	2	0	7
this_is_a_keeper	3	2	2	0	7
	2	2	3	0	7
	3	3	3	0	9



Fixed Wireless Network Planning

New Machine Learning methods improve decision making

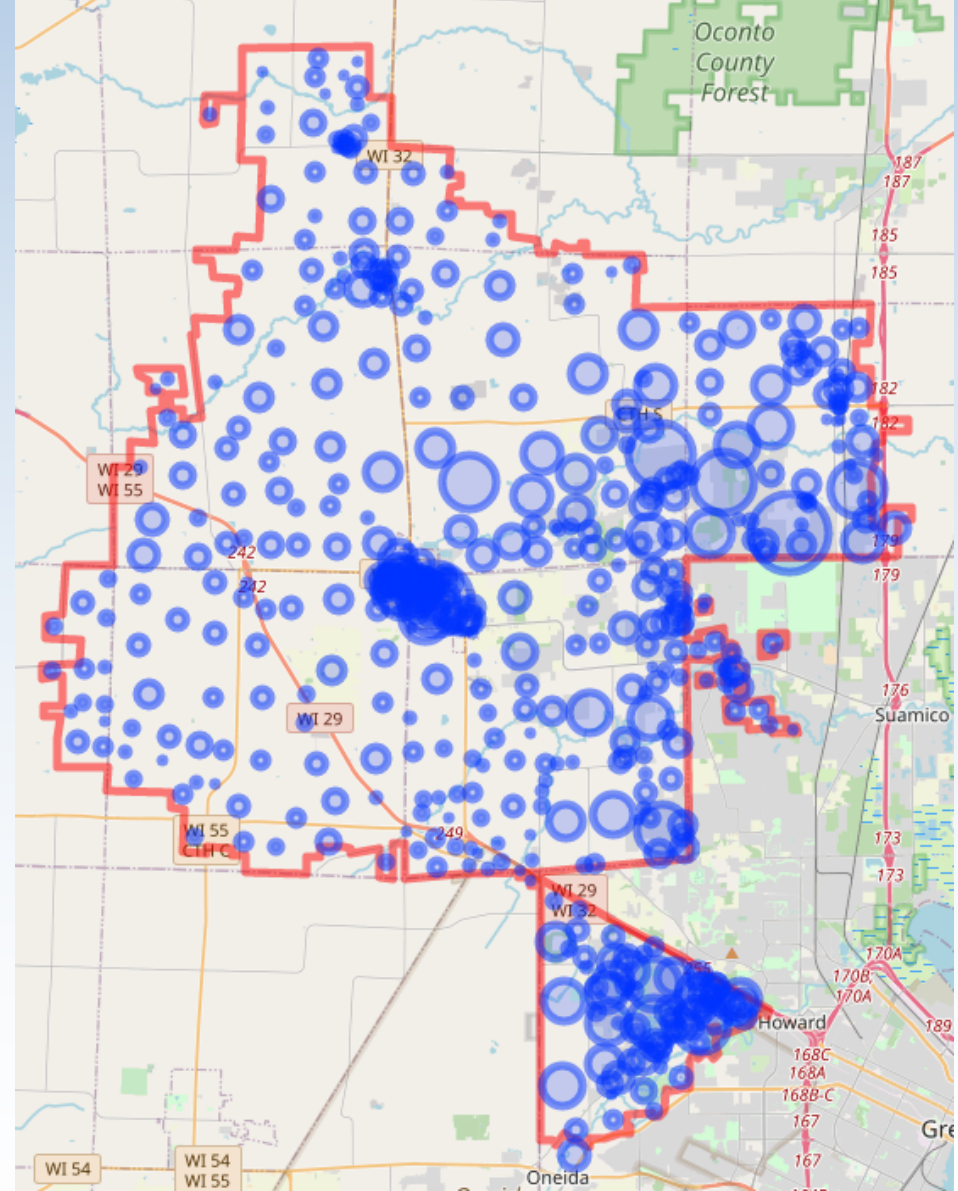
- Data reduced to easy to understand formats
- More appropriate for executive and financial analysis
- Reduced engineering details – for other groups to review
 - No radio coverage plots or spreadsheets
- Faster decision making



The 2020 Census is out!

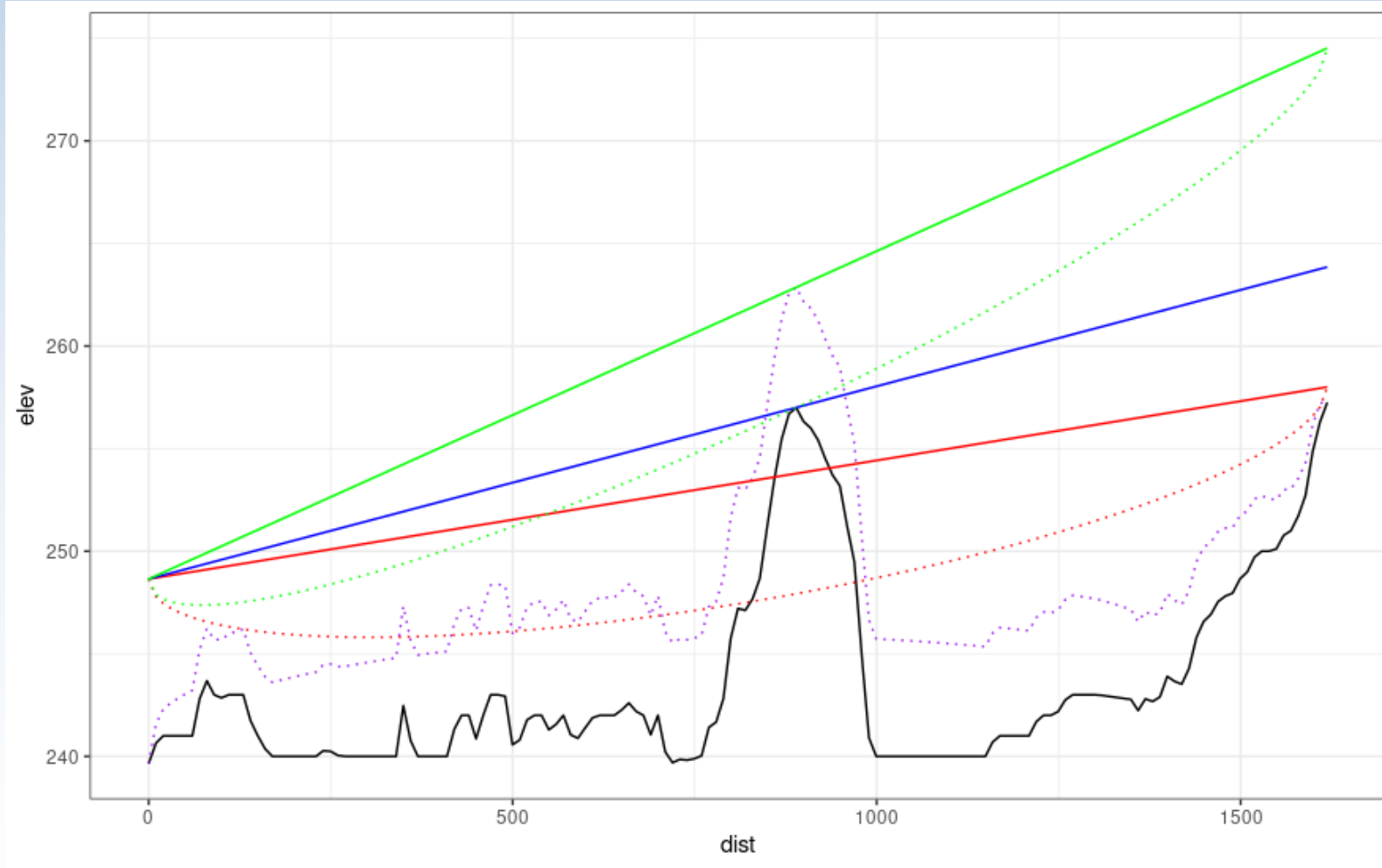
Good data – publicly available – No cost!

Geospatial analysis is a foundation of new radio planning methods

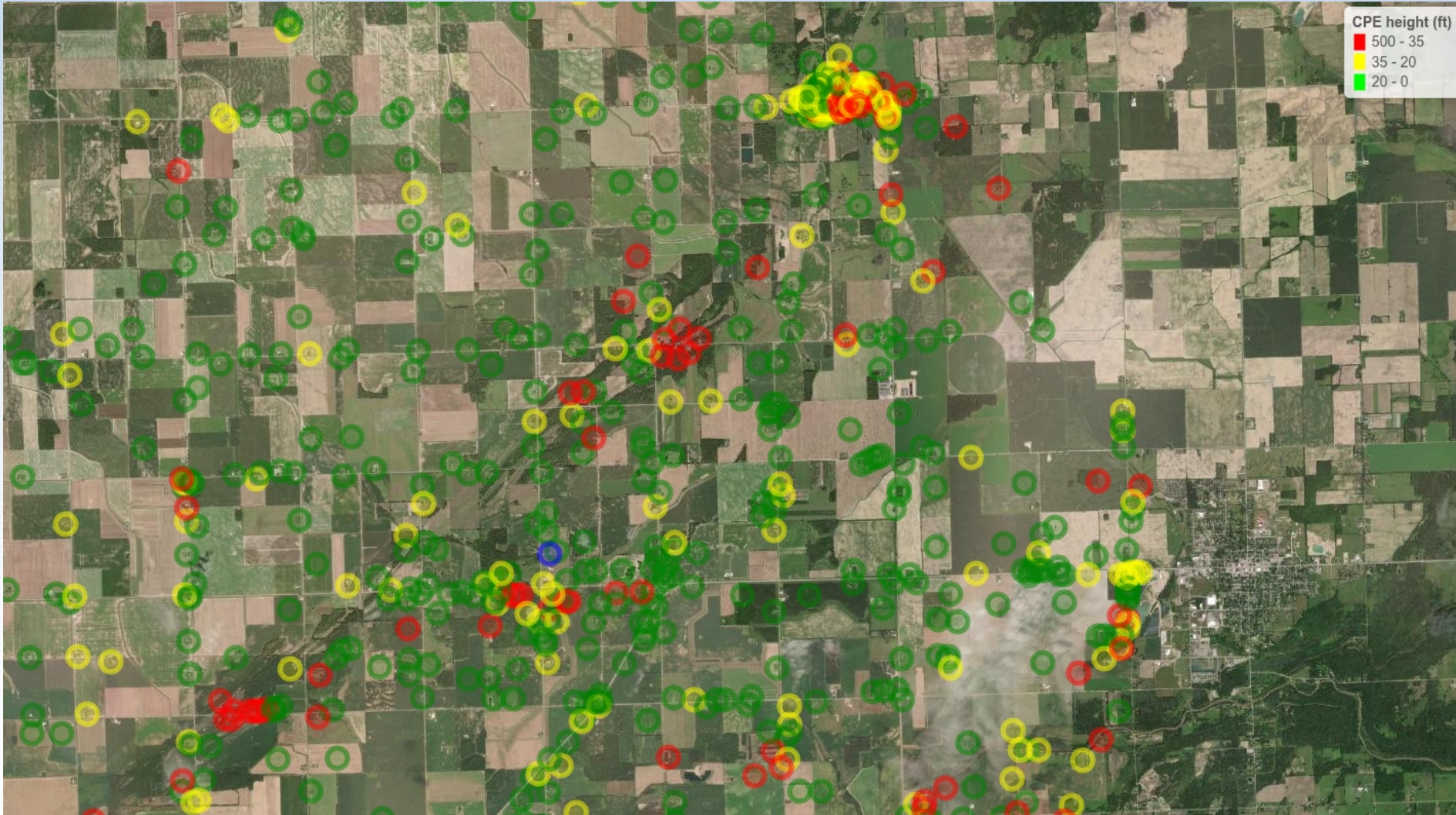


Machine learning determines who is:

- Line of sight
- Marginal
- Obstructed



A picture is worth 1,000 words *(or at least better than 1,000 rows in a spreadsheet)*



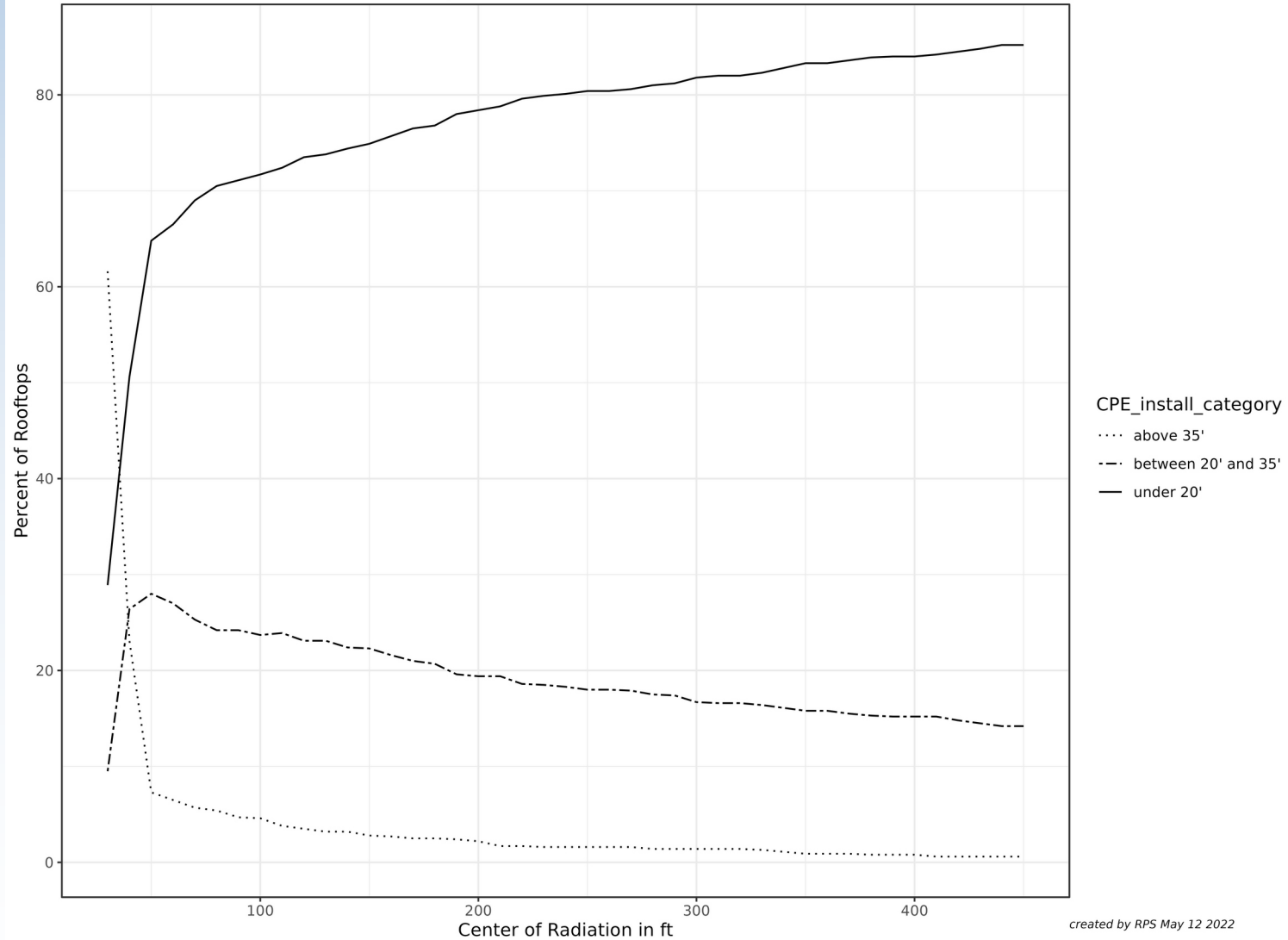
Optimized Tower Height deployments

Data driven decisions

Small cells can make sense in rural markets

discover optimal locations along deployed fiber routes

Center of Radiation Height Impact on Percentage of Rooftops Covered per Install Category
633 roof tops inside of 3 mile radius from tower



Build out deadlines approaching

- 600 MHz – 40% population coverage – soon!
- 3.45 GHz – 4 years from grant
- CBRS – 50% of population in 10 years

Use public source (no cost) Geospatial data

- Count population efficiently – reduce capital costs
- Consider small cells in right of way along existing fiber routes
- Develop a long term plan that fits your organization's needs

Thank you

robert@rfanalytic.com

