RESO®
2017 Fall Conference

GETTING DOWN TO BUSINESS
UTILIZING DATA STANDARDS

Leveraging Predictive Analytics

WHO AM I?

MAPVIDA
LOCAL. ALWAYS.

TransUnion

Kroll

KikScore
Online Trust Score

Little Caesars

COMPETENCIES
(AS FAR AS YOU KNOW)

- Predictive Analytics (we'll get to this phrase)

- Marketing Intelligence

- Product Channels

- Prompt Presentations – to not impact lunch schedule (my strength)

CONNECT?

mauseth@mapvida.com

Facebook.com/Mapvida

info@mapvida.com (if you like MapVida, but don't want to talk with me)

"PREDICTIVE ANALYTICS": ANOTHER BUZZ PHRASE?

Top Data Buzz Phrases
- **Predictive Analytics**
- Artificial Intelligence
- Small Data
- Fast Data
- Dark Data/Moneyball

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Big Reveal:
MapVida is focused on *Predictive Analytics*. I fear the phrase may be close to….

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JUMPING THE SHARK HAS ADVANTAGES – IT'S EVERYWHERE

Customers Who Bought This Item Also Bought

Coleman Palmetto Cool-Weather Sleeping Bag
★★★★☆ 248
$24.99 ✓Prime

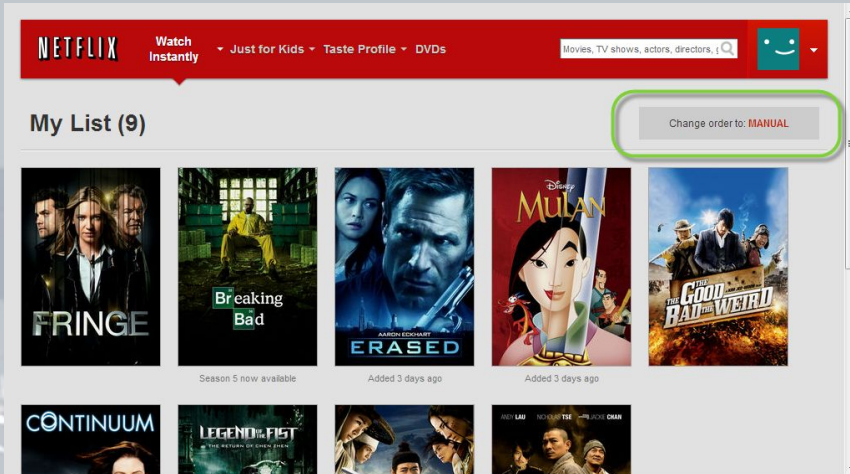Slumberjack Latitude 20 Degree SyntheticSleeping Bag
★★★★☆ 117
$48.95 - $9,993.00

Coleman Brazos 20 Degree Sleeping Bag
★★★★☆ 255
$29.89 - $139.20

HOW YOU SHOP

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HOW YOU SHOP

NETFLIX Watch Instantly ▾ Just for Kids ▾ Taste Profile ▾ DVDs

My List (9)

Change order to: MANUAL

FRINGE   Breaking Bad   ERASED   MULAN   THE GOOD BAD AND THE WEIRD
          Season 5 now available   Added 3 days ago   Added 3 days ago

CONTINUUM   LEGEND OF THE FIST

WHAT YOU WATCH

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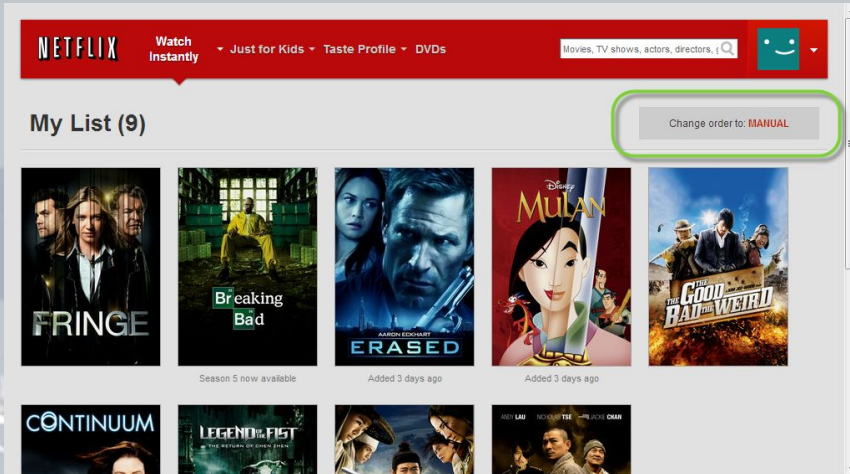Slumberjack Latitude 20 Degree SyntheticSleeping Bag
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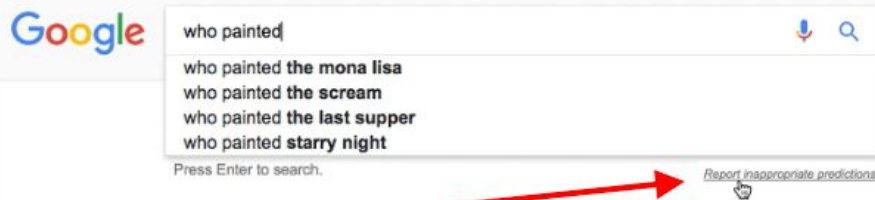$48.95 - $9,993.00

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HOW YOU SHOP

NETFLIX   Watch Instantly ▾ · Just for Kids ▾ · Taste Profile ▾ · DVDs   Movies, TV shows, actors, directors, ... 🔍

My List (9)   Change order to: MANUAL

FRINGE

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ERASED
Added 3 days ago

MULAN
Added 3 days ago

THE GOOD BAD THE WEIRD

CONTINUUM

LEGEND OF THE FIST THE RETURN OF CHEN ZHEN

WHAT YOU WATCH

Google   who painted   🎤 🔍
who painted **the mona lisa**
who painted **the scream**
who painted **the last supper**
who painted **starry night**
Press Enter to search.   Report inappropriate predictions

ASSIST WITH SEARCH

JUMPING THE SHARK HAS ADVANTAGES – IT'S EVERYWHERE

HOW YOU SHOP
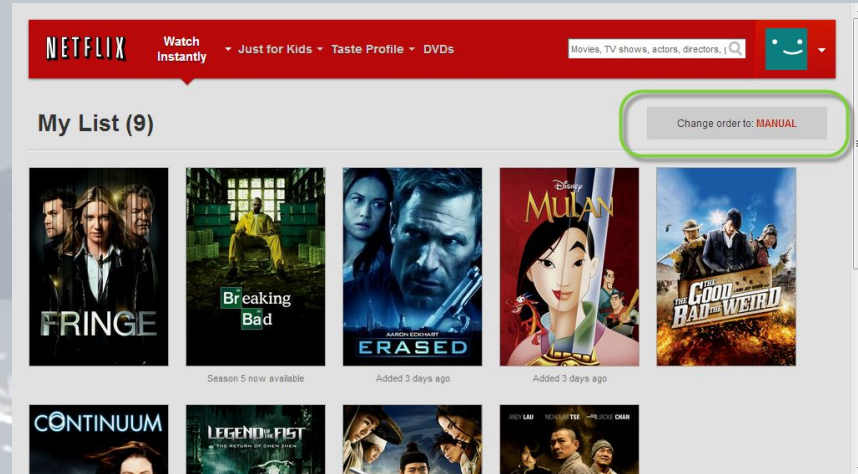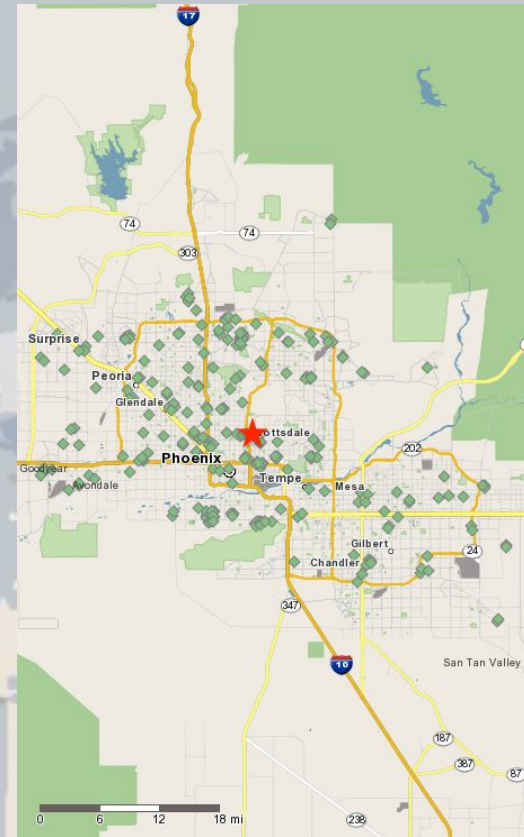
WHAT YOU WATCH
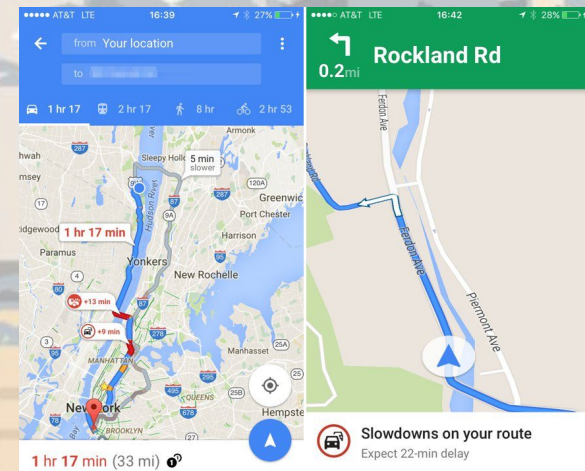
ASSIST WITH SEARCH

ASSIST WITH COMMUTES

HOW CONSUMERS SEARCH
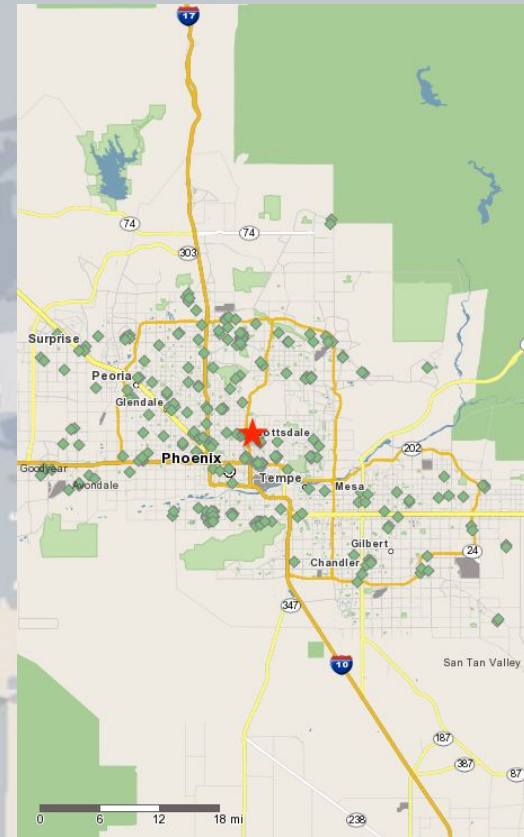
WHAT ABOUT REAL ESTATE?: USES OF PREDICTIVE ANALYTICS

HOW CONSUMERS SEARCH

FINDING HOME
SELLERS/BUYERS

HOW CONSUMERS SEARCH

Properties in Type 5 and 41 are pulling in leases from outside the areas (or those similar); Type 31 generates disproportionate lessee activity compared to available properties (again, we can break this down further if interested); Type 20 seems to be "right on the money"
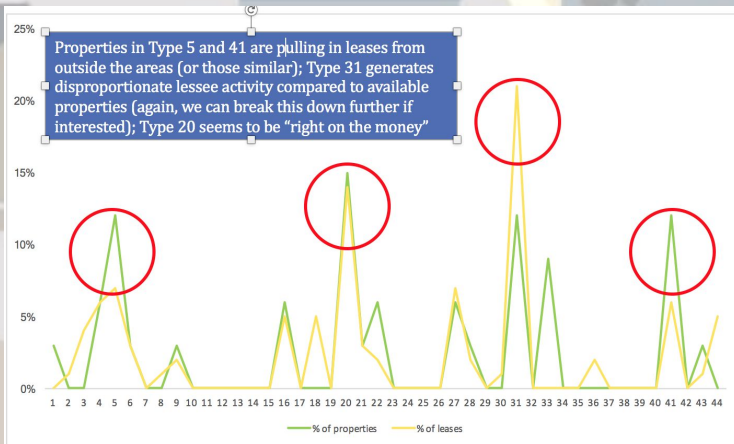
FINDING HOME

SELLERS/BUYERS

FINE-TUNING DUE DILIGENCE

Cluster Solutions against SSE

SSE on
30 random samples

SSE on
actual sample

Bent @14-16 clusters

Cluster Solutions against (SSE – Random SSE)

Flattening @14-18 clusters

Difference with +/- std dev of difference
plot

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Cluster Solution

Cluster Solutions against (SSE – Random SSE)

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Difference with +/- std dev of difference plot
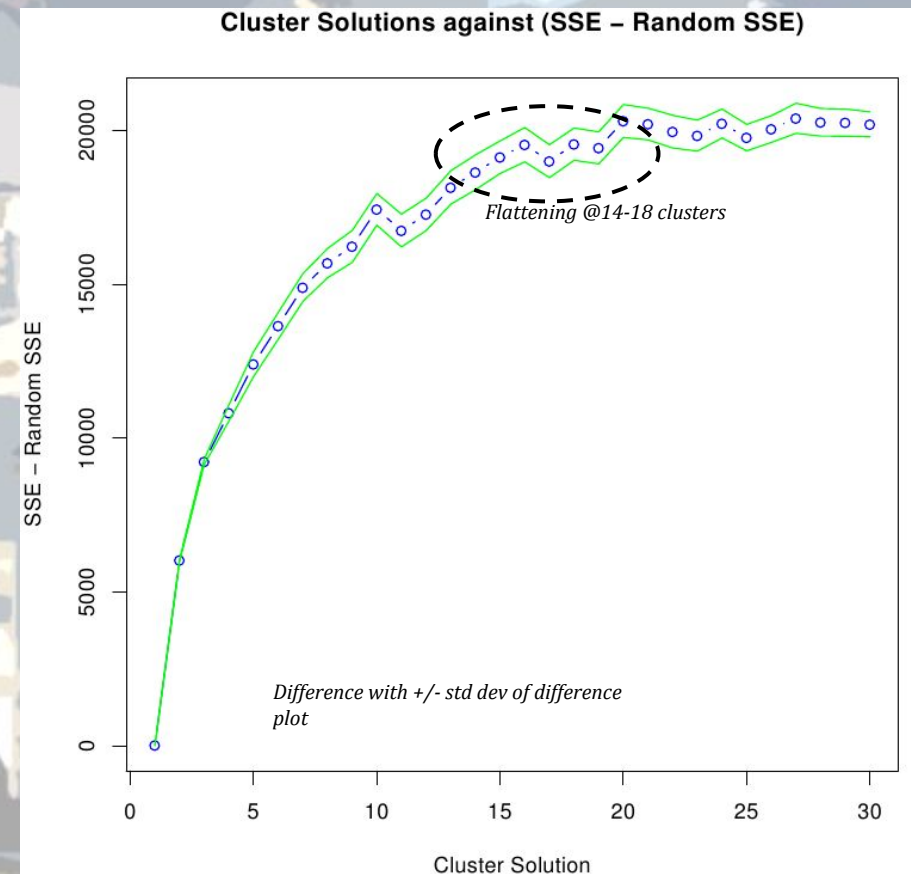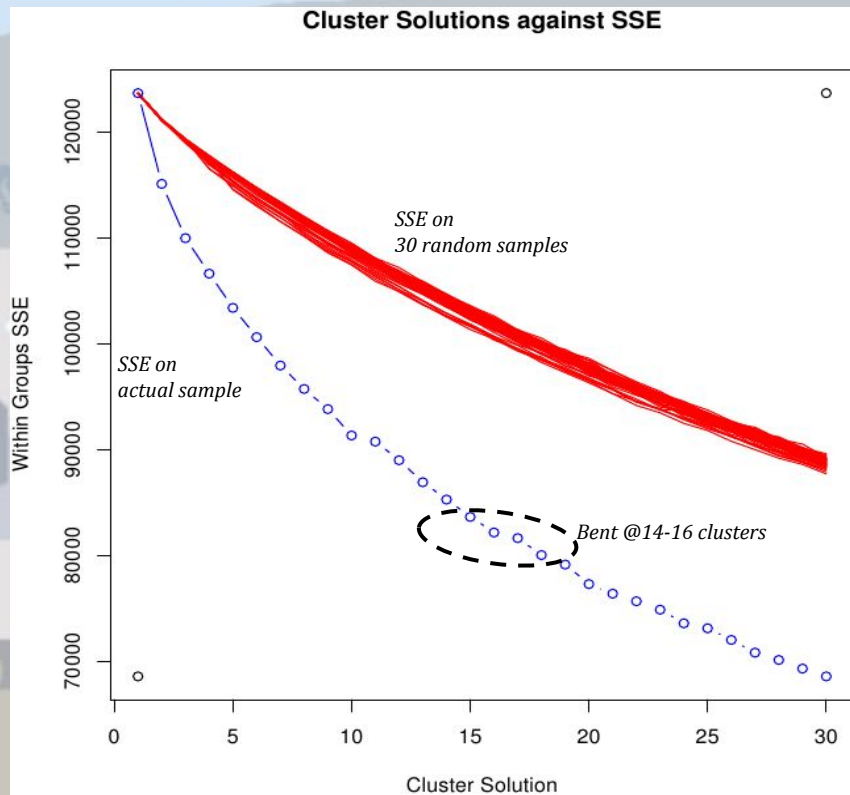
TOO MANY DATA SCIENTISTS IN THIS ROOM
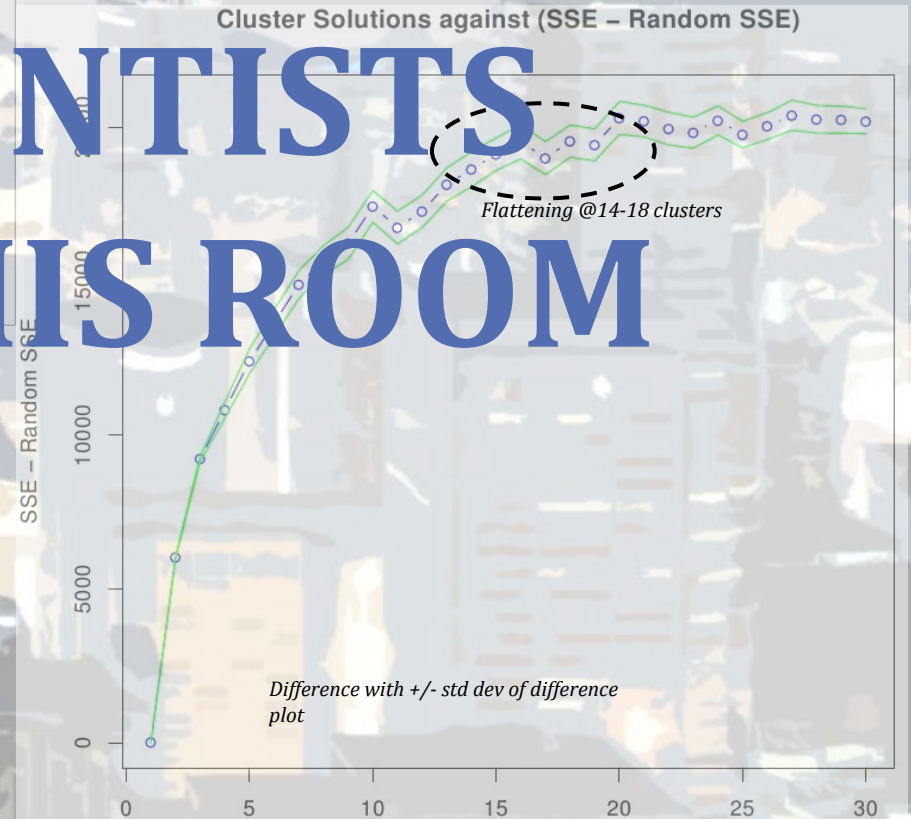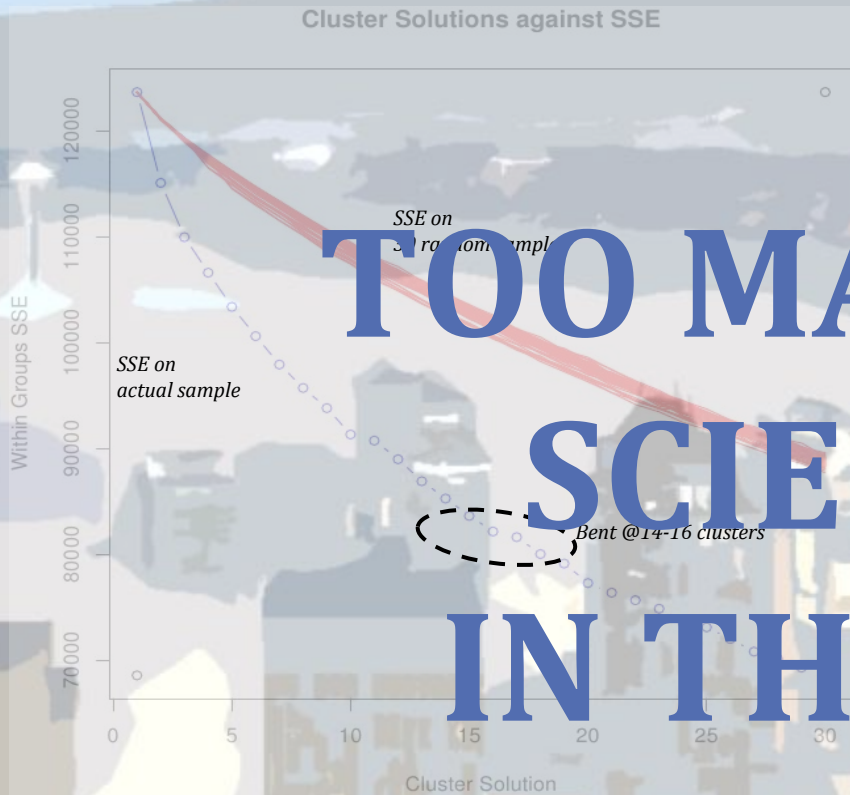
PREDICTIVE ANALYTICS CONCEPTS

BASICS

- What are the outcomes you're looking to predict (this can be harder than you may think)

- Determine the predictive method that works best with your data/approach (consult with your data scientist)

- Validate often and iterate

PREDICTIVE ANALYTICS CONCEPTS

MAPVIDA

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BUSINESS

- Does your business generate data/outcomes (it does, but can you access at scale)

- What are the risks of use (risks of the model not working well, or regulatory risks)

- Implementation and ease of use (this is the biggest obstacle)

WAKE UP

IT'S ABOUT TO GET MORE INTERESTING

REAL ESTATE PREDICTIVE EXAMPLES

MAPVIDA™

THE PROBLEMS

CONSUMER: LOCATIONS AREN'T PUT INTO "CONTEXT"

Renting an Apartment

Buying a Home

Travel and Explore

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BUSINESS: IMPROVE REACH TO AUDIENCES AND LOCATIONS FOR GROWTH

Marketing Intelligence

Site Acquisition
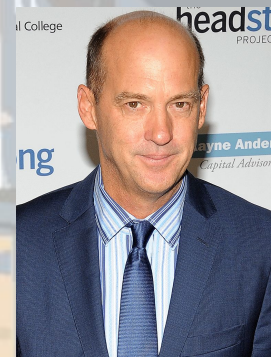
Asset Management

HOW WE ADDRESS THE PROBLEMS

MAPVIDA™

MAPVIDA

PROSPECT TOOLS

PREDICTIVE ANALYTICS

WE FIND "LOOK-ALIKE" NEIGHBORHOODS

MARKETING TOOLS

BUSINESS INTELLIGENCE

WE FIND "LOOK-ALIKE" NEIGHBORHOODS

PROSPECT TOOLS
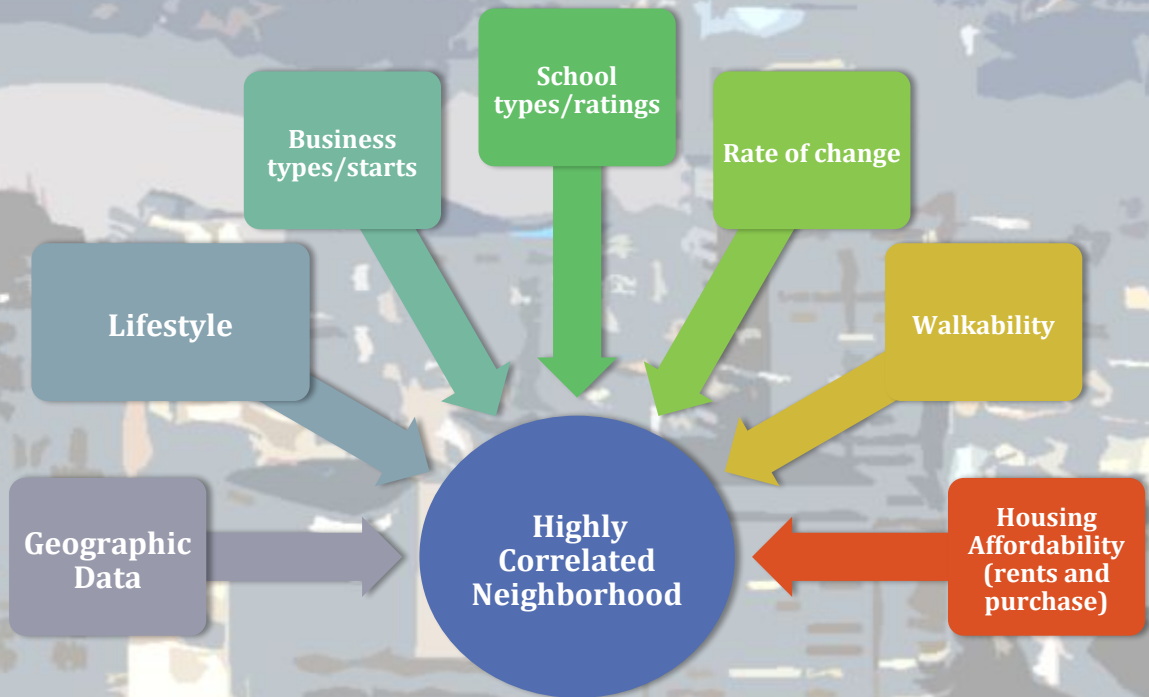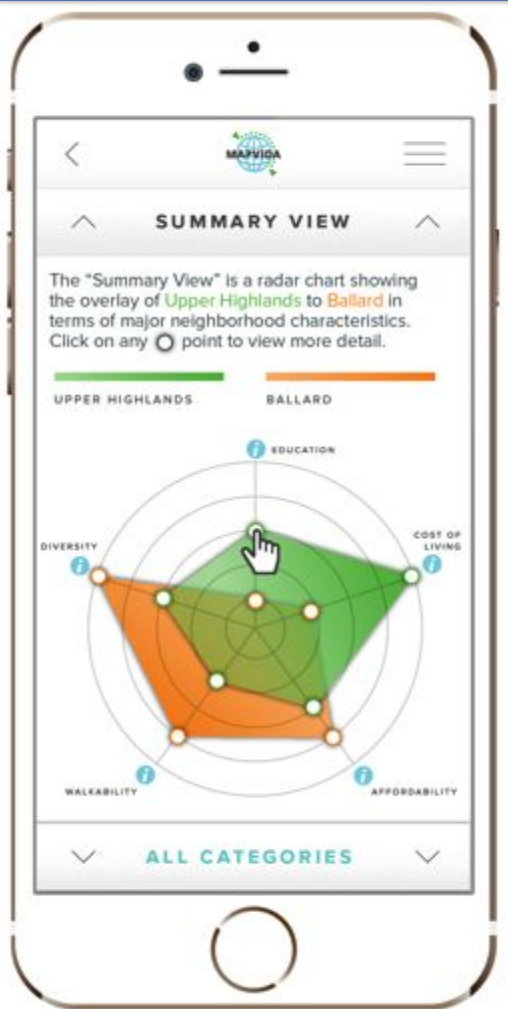
PREDICTIVE ANALYTICS

MARKETING TOOLS
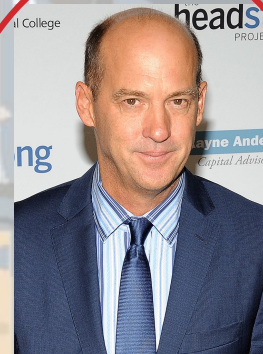
BUSINESS INTELLIGENCE

MAPVIDA

WE CREATED NEIGHBORHOOD CLUSTERS – AND ALLOW CONFIGURATION

MapVida Compares and Contrasts Familiar Neighborhoods
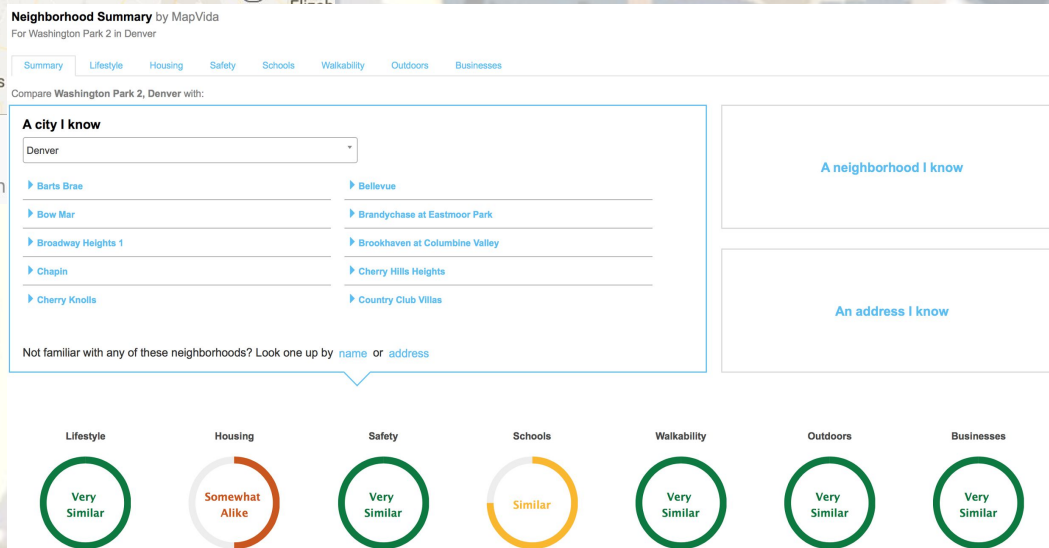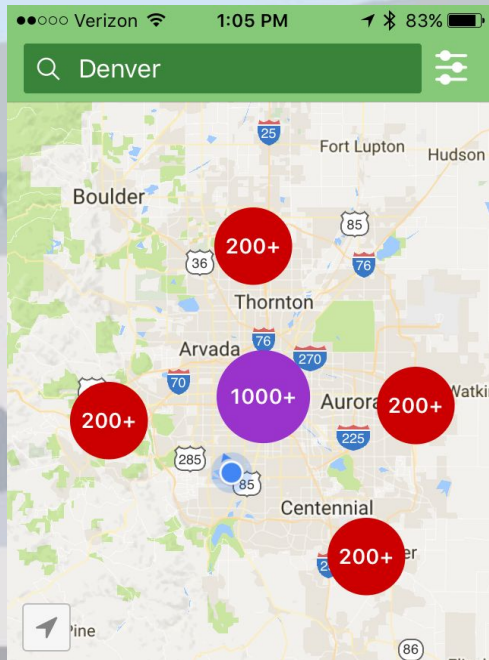

SUMMARY VIEW

The "Summary View" is a radar chart showing the overlay of Upper Highlands to Ballard in terms of major neighborhood characteristics. Click on any ○ point to view more detail.

UPPER HIGHLANDS   BALLARD

MapVida Clusters Millions of Neighborhood Data Points to Find the Familiar

- Business types/starts
- School types/ratings
- Rate of change
- Walkability
- Lifestyle
- Geographic Data
- Highly Correlated Neighborhood
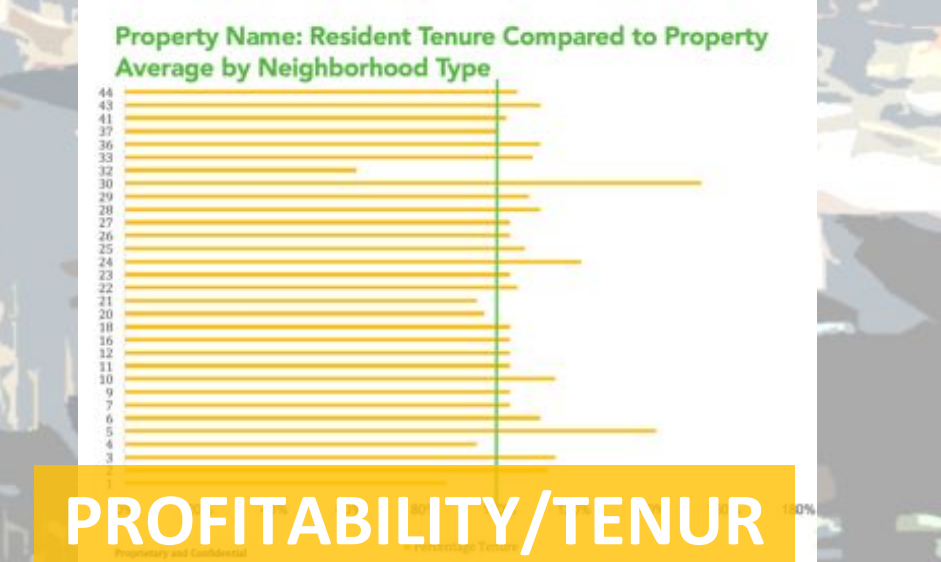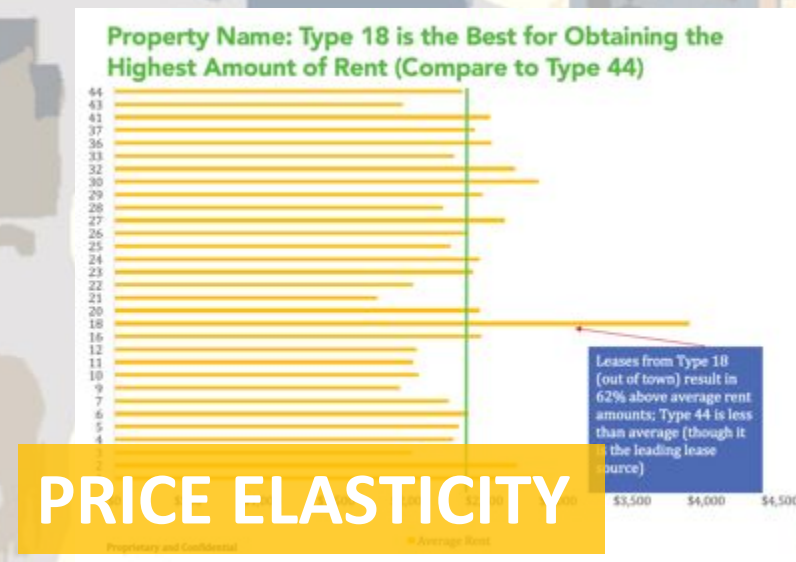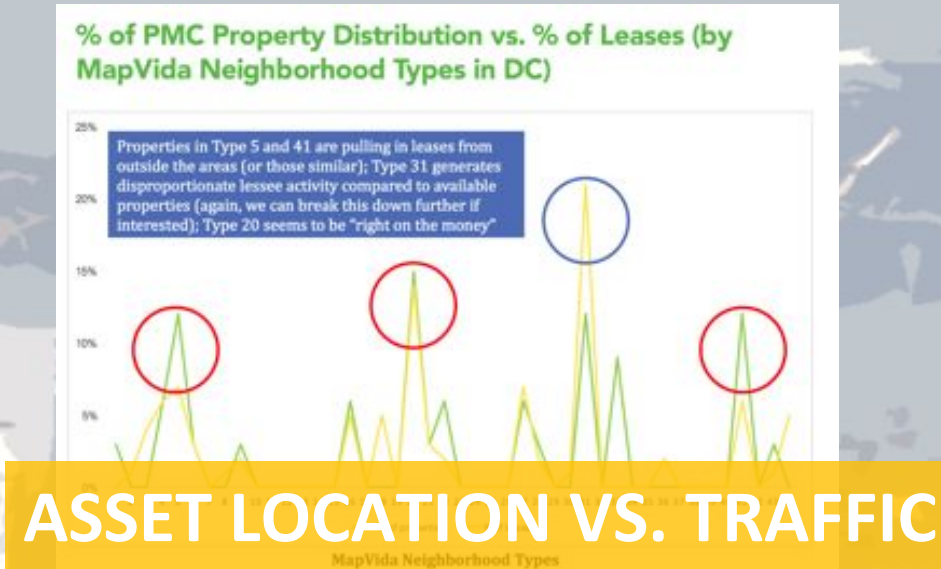- Housing Affordability (rents and purchase)

- Measure 17+ Years Rate of Change (not just a static snapshot of the neighborhood)
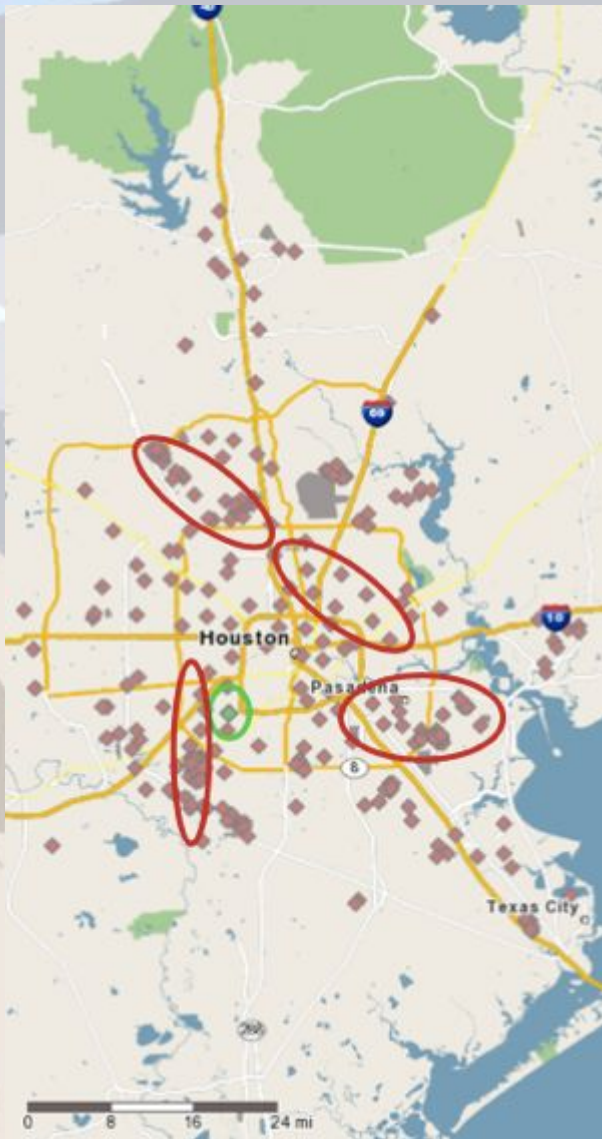- Coverage: Top 150 MSAs in U.S.

CREATED CONSUMER FACING TOOLS – TO HELP NAVIGATE UNKNOWN AREAS VIA DATA AND CONTEXT
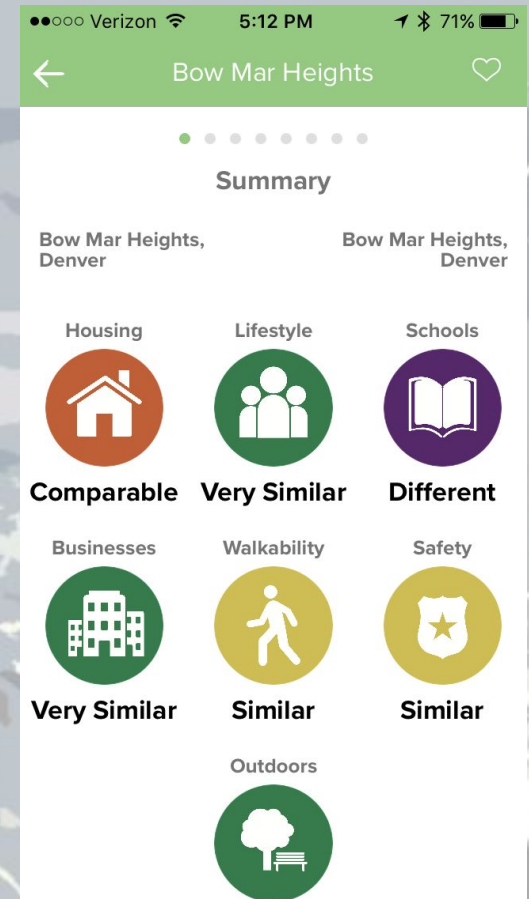
WE STARTED COMPARING OUTCOMES TO CLUSTER DISTRIBUTIONS – TO FIND OVERPERFORMING AREAS

Essex's San Fran traffic greatly varies from San Francisco Population...for example type 20 accounts for 42% of web traffic while those neighborhoods only make up 20% of San Francisco's population

WEB SITE TRAFFIC

% of PMC Property Distribution vs. % of Leases (by MapVida Neighborhood Types in DC)

Properties in Type 5 and 41 are pulling in leases from outside the areas (or those similar); Type 31 generates disproportionate lessee activity compared to available properties (again, we can break this down further if interested); Type 20 seems to be "right on the money"

MapVida Neighborhood Types

ASSET LOCATION VS. TRAFFIC

Property Name: Type 18 is the Best for Obtaining the Highest Amount of Rent (Compare to Type 44)

Leases from Type 18 (out of town) result in 62% above average rent amounts; Type 44 is less than average (though it is the leading lease source)

PRICE ELASTICITY

Property Name: Resident Tenure Compared to Property Average by Neighborhood Type

PROFITABILITY/TENUR

FORTUNATELY FOR US, OUR APPROACH IS WORKING – MARKETING IS MORE EFFECTIVE

57% ↑

Click Through Rate

40% ↓

Cost Per Click

Case study: Company adjusted its advertising to focus on MapVida's suggested neighborhoods

Caveat: Results may vary based on market and previous marketing approach

# WE'VE ALSO BEEN ABLE TO ASSESS DEVELOPMENTS BASED ON PROFITABILITY AND MIGRATION PATTERNS

Lessees coming from type 2 neighborhoods are moving from .5 bedroom units while customer's properties in type 2 neighborhoods have 1.7 bedroom units

To attract applicants looking for 2 bedroom units, could focus their marketing on neighborhood types 11, 19, 25, etc...

Total Value

Hover over a Neighborhood
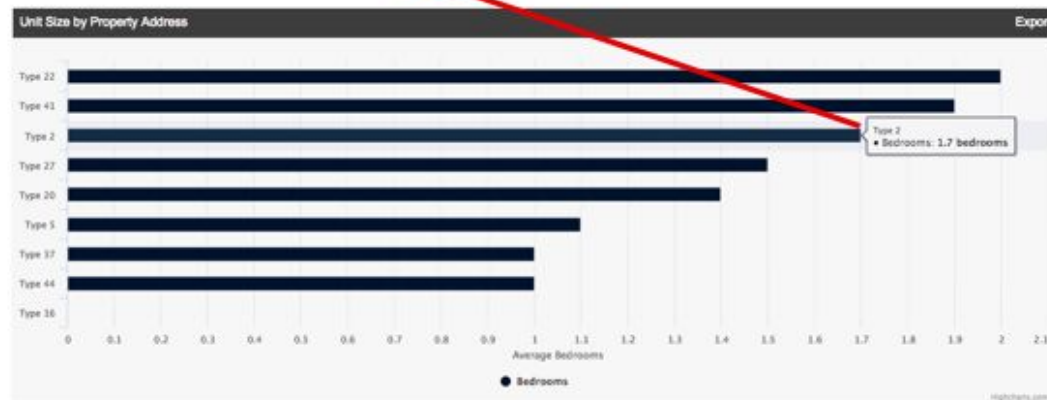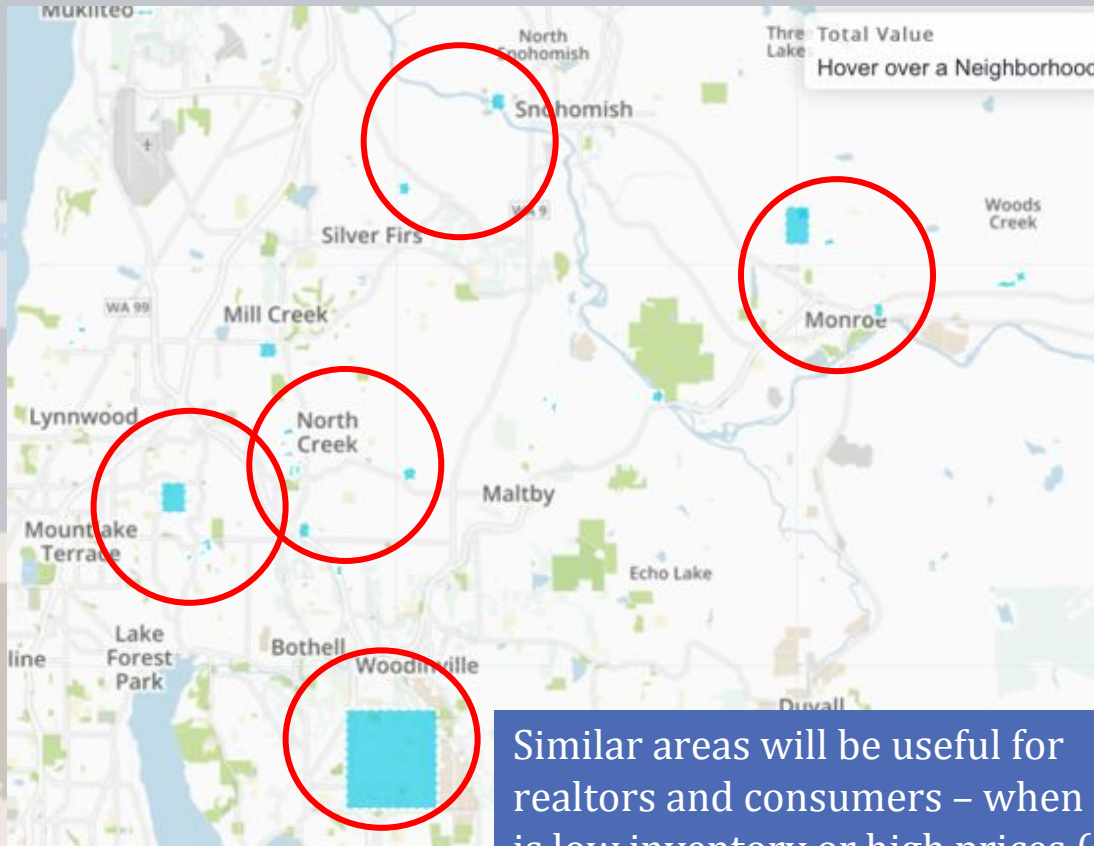
Similar areas will be useful for realtors and consumers – when there is low inventory or high prices (e.g., realtors can offer solutions at all price points)

6

FACTS ABOUT A VERY PROFITABLE NEIGHBORHOOD

HOOD 30

FEWER PLACES TO EAT
90+% fewer restaurant options (per sq. mi.) than Seattle average

SLIGHTLY BETTER INCOMES
Family income 1% lower than Seattle average

MUCH LESS WALKABLE
80-90% fewer gyms, retail, and food options; More solo commuters

AVERAGE SCHOOL QUALITY
Elementary to high schools rate averagely; few private schools

FEWER PUBLIC PARKS
50% fewer public parks than Seattle average

MUCH SAFER
Crime rate is 47% lower than Seattle average

INTUITIVE RESULTS – JUST NEED TO KNOW WHAT YOU LIKE

USABILITY WAS PARAMOUNT FOR OUR APPROACH

INTUITIVE RESULTS – JUST NEED TO KNOW WHAT YOU LIKE

PERFORMANCE MEASURED ON ACCURACY AND EFFICIENCY

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MASS CUSTOMIZATION – APPLY TO CUSTOMER DATA
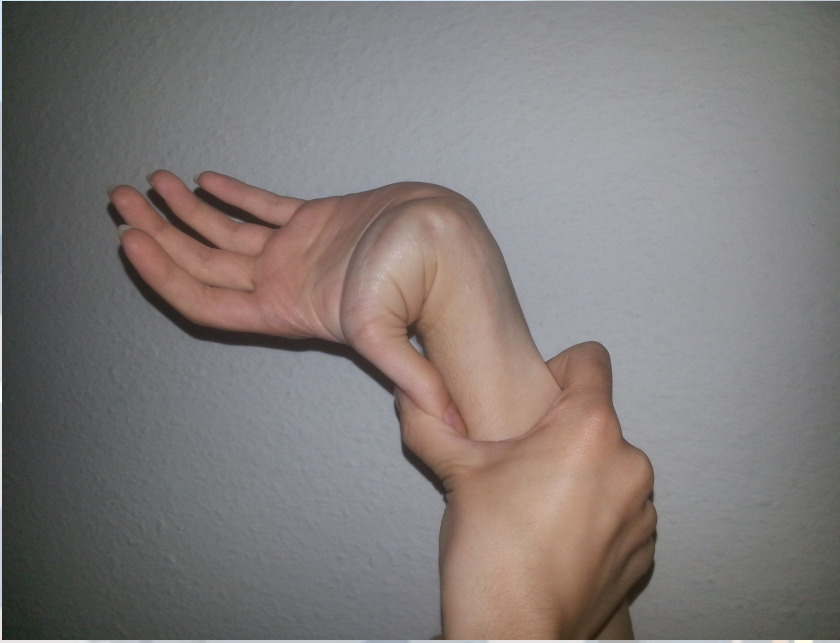
HERE COMES THE PITCH!

MAPVIDA™

PICK YOUR CLICHÉ (THEY'RE TRUE, BUT STILL CLICHÉ'S)

WE'VE DONE A LOT OF HEAVY LIFTING – WITH RESPECT TO NEIGHBORHOOD SIMILARITIES, LOOKALIKE AUDIENCES