

SIGNET JEWELERS – Use of Analytics and Visualization to Drive Business Decisions – Post Covid-19 Shutdown

Enterprise Analytics

June 11, 2020

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ERNEST JONES
LOVE & LIFE

H.SAMUEL
THE JEWELLER

 JAMES ALLEN®

JARED®

KAY
JEWELERS

PERCING
Pagoda

PEOPLES
CANADA'S #1 DIAMOND STORE

ZALES
THE DIAMOND STORE®

SIGNET
JEWELERS

Speaker Introduction

Speaker Bio: Gary grew up in northeast Ohio where he currently lives with his wife and kids. He has always had a passion for data, specifically geospatial data, which led him to pursue his BA and MS in Geography from the University of Akron. In 1996 he began his career as a Geographer for the U.S. Census Bureau in Detroit, working on the TIGER files for Census 2000. After the Census he returned to Ohio to work at Signet Jewelers in the field of geospatial analytics. He has held various roles within Marketing and Real Estate and currently leads a team of enthusiastic analysts in a newly created Enterprise Analytics department, which relies heavily on Alteryx and Tableau. He is also an Alteryx ACE and an Alteryx Visionary.



Gary Gruccio
Director Enterprise and
Market Analytics,
Alteryx ACE

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Introduction

- Signet Jewelers closed all North American stores on March 23, 2020
- While this was done all at once, reopening needed to be strategic and phased due to various levels of market readiness.
- We want to make sure our customers and store employees feel safe and are set up for success especially in the face of:
 - High Unemployment
 - Covid19
 - Lack of Retail Traffic
- How to forecast the rest of the year is a bit of a challenge since this is an unprecedented event – no historical context to draw from
- How to ensure that our repair customers are taken care of as stores open

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Signet Path to Brilliance

1

CUSTOMER FIRST

- Deepen consumer understanding and leverage data analytics to uncover actionable insights
- Lead consumer-inspired innovation across product, assortment, engagement and communications
- More targeted and efficient marketing and promotion strategies

2

OMNICHANNEL

- Seamlessly integrated customer experience across stores and online platforms
- Breakthrough jewelry visualization to digitize shopping experience
- Industry-leading digital marketing, education, and customer service

3

CULTURE OF AGILITY AND EFFICIENCY

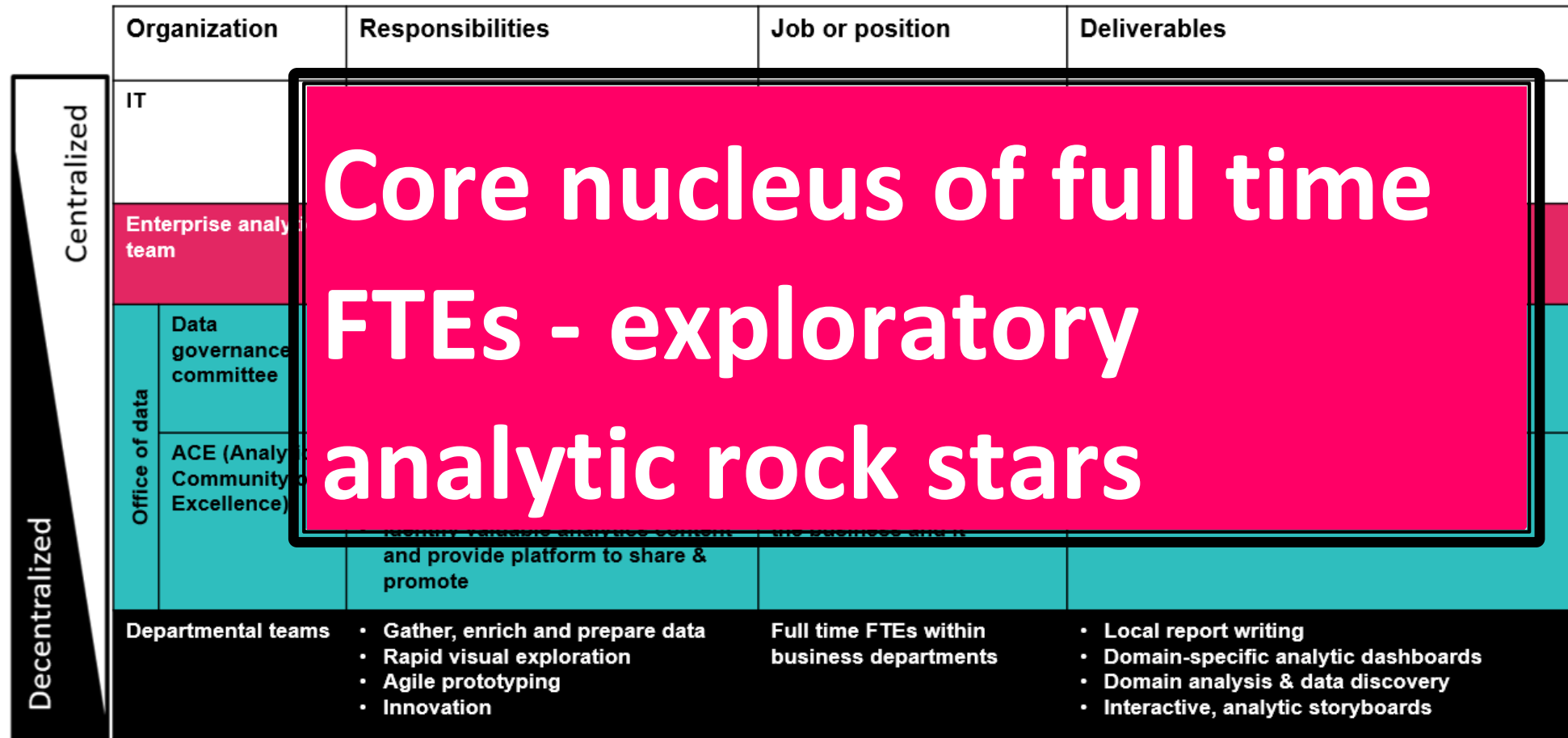
- Innovative and entrepreneurial mindset; leadership at every level
- Faster, data-driven decision-making and execution
- Drive further productivity and cost savings to deliver operating margin expansion
- Unleash the full talent of our diverse team

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Enterprise Analytics Department

		Organization	Responsibilities	Job or position	Deliverables
Centralized		IT	<ul style="list-style-type: none"> Data consistency & normalization Data access Infrastructure management 	Full time FTEs within the IT department (data/reporting developers & end-user support)	<ul style="list-style-type: none"> Curated enterprise data Self-service analytics platform Enterprise reports and dashboards
		Enterprise analytics team	<ul style="list-style-type: none"> Self-service cultural champions Data literacy standards Expertise in self-service tools 	Core nucleus of full time FTEs- exploratory analytic rock stars	<ul style="list-style-type: none"> Enterprise analytic models Data preparation best practices Visualization best practices
	Office of data	Data governance committee	<ul style="list-style-type: none"> Validation of enterprise data Defines jurisdiction of local team solutions and prototypes Certification of dept. Solutions 	Includes participants who report into business and technology functions, but also work directly with data	<ul style="list-style-type: none"> Global data definitions Global standards for data quality Global process for analyzing data
		ACE (Analytic Community of Excellence)	<ul style="list-style-type: none"> Two-way collaboration between centralized and decentralized teams Identify valuable analytics content and provide platform to share & promote 	Shared business & IT: part time "roles" filled by data/process owners from the business and it	<ul style="list-style-type: none"> Shared best practices Data asset reuse Training and skills readiness
	Decentralized		Departmental teams	<ul style="list-style-type: none"> Gather, enrich and prepare data Rapid visual exploration Agile prototyping Innovation 	Full time FTEs within business departments

Enterprise Analytics Department



The market readiness ranking uses the following data sources to evaluate the situation at a hyper local level

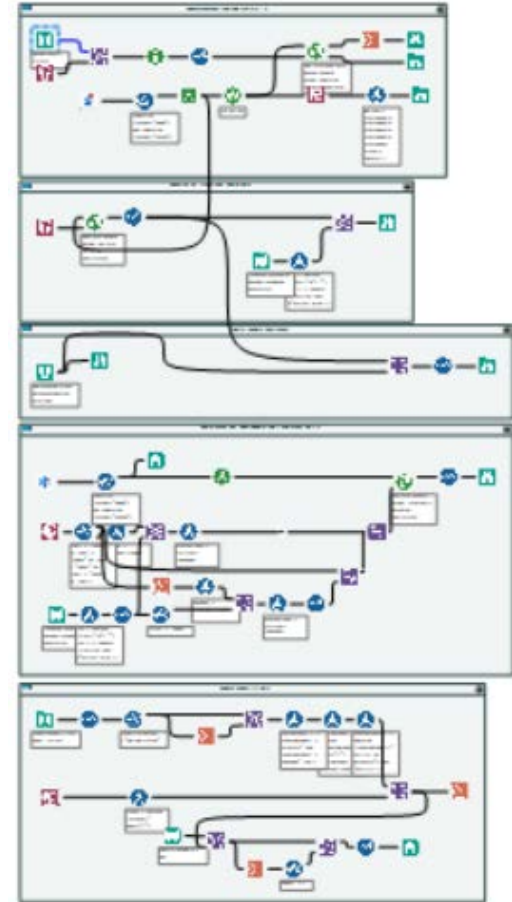
- Sources
 - Mobility data
 - Unemployment data
 - Covid-19 data
 - Demographics
 - Social Media Sentiment
 - Internal sales data

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Bringing together the data – very disparate sources

- ESRI shapefiles, csv files
- County-level data, Census Block Group
- County Names, FIPS codes
- Different Vintages and cadences

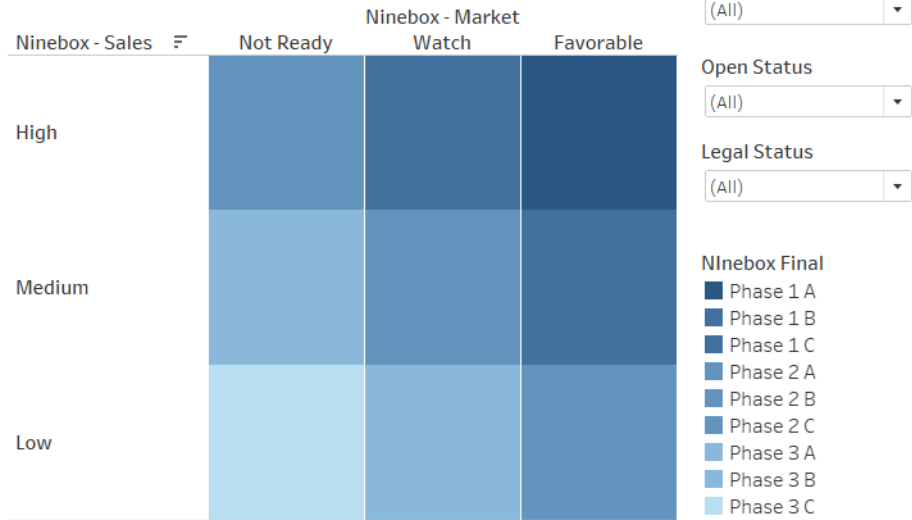
Demo - Overview



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Creating a Rank and Nine-Box

Where should we reopen today?



Favorability: (All)

Open Status: (All)

Legal Status: (All)

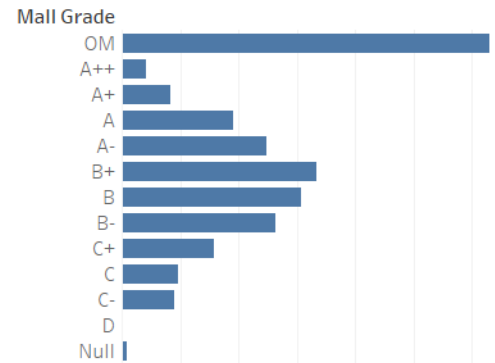
NInebox Final

- Phase 1 A
- Phase 1 B
- Phase 1 C
- Phase 2 A
- Phase 2 B
- Phase 2 C
- Phase 3 A
- Phase 3 B
- Phase 3 C

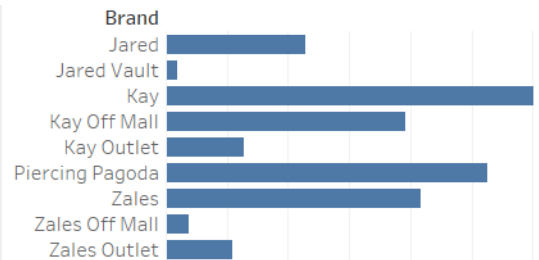
Breakout: Kay and Zales together

Total U.S. Store Count

What is the distribution by Real Estate location (Mall Grade and Off-Mall)?



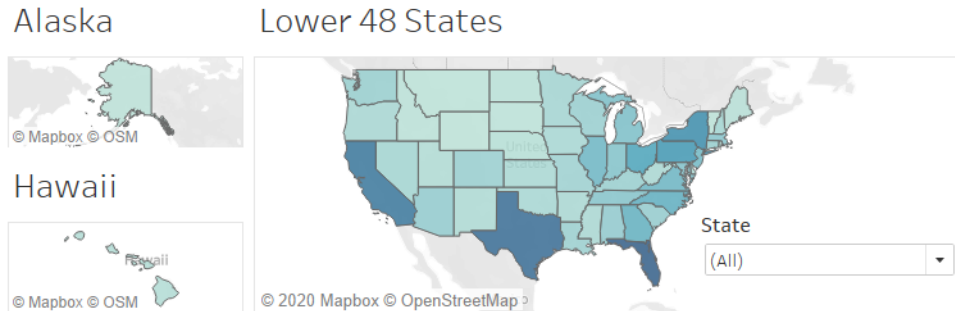
What is the store count by brand?



Where should we reopen today?



- Created Tableau dashboard to visualize store counts by various
 - Open status
 - Legal signoff
 - Favorability
 - State
 - Type of Mall/Location
 - Brand
- Ultimately went with green-yellow-red

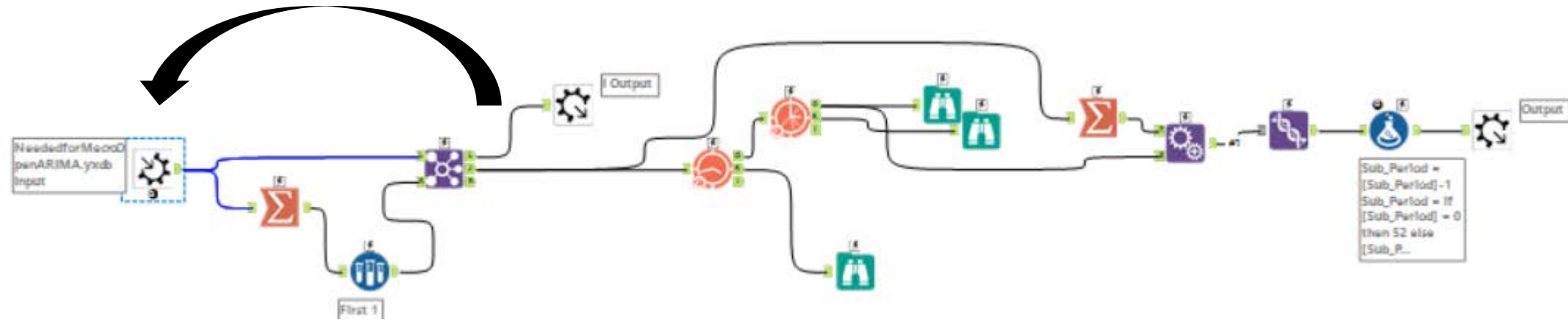


Forecasting – Predictive Approach and ARIMA

- Predictive
 - Current trends post-opening
 - Variety of tools
 - Stepwise regression
 - Decision Tree
 - Random Forest Model
 - Boosted Model
 - Neural Network
 - Spline
- Time Series
 - Pre-Shutdown view
 - Weekly view
 - Allows for more granular analysis
 - How will I perform in week X? or holiday period X?
 - Staging or timing of reopen

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Forecasting approach



It's Iterative!

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Design and Service Centers – Up and Running

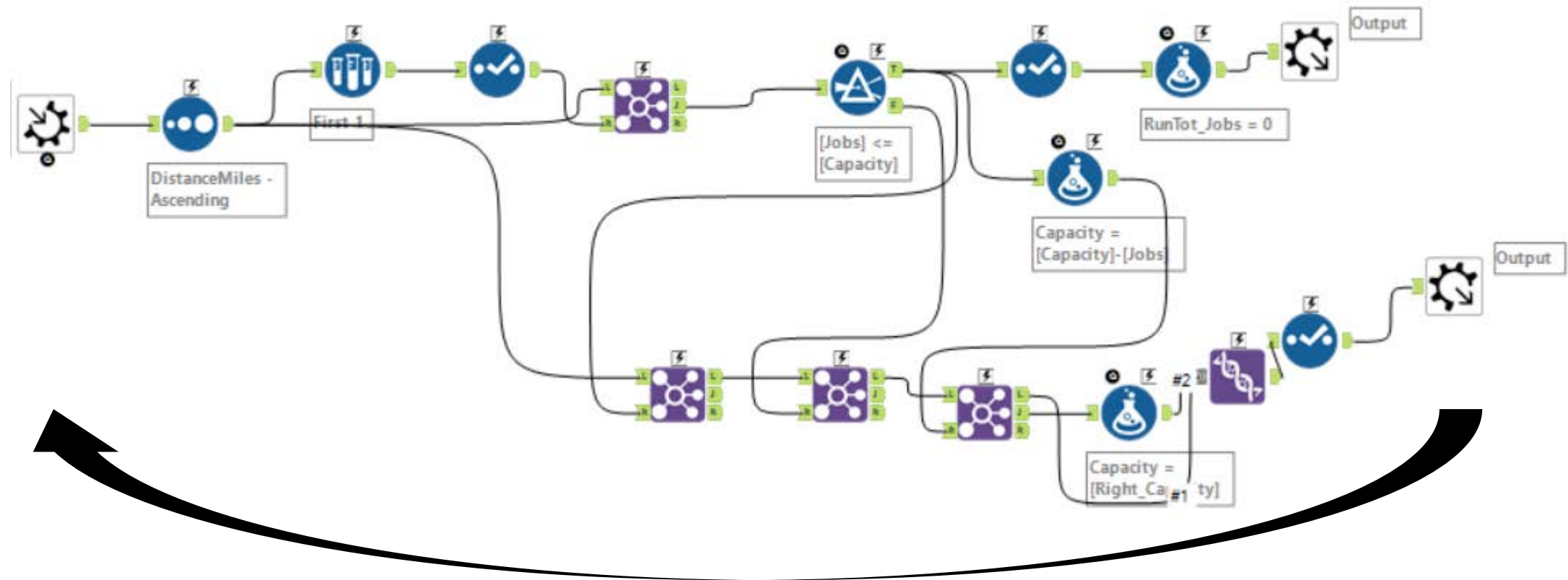
Nearest



Nearest without going over



Again it is Iterative!



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Q & A

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