

Getting started with People Analytics

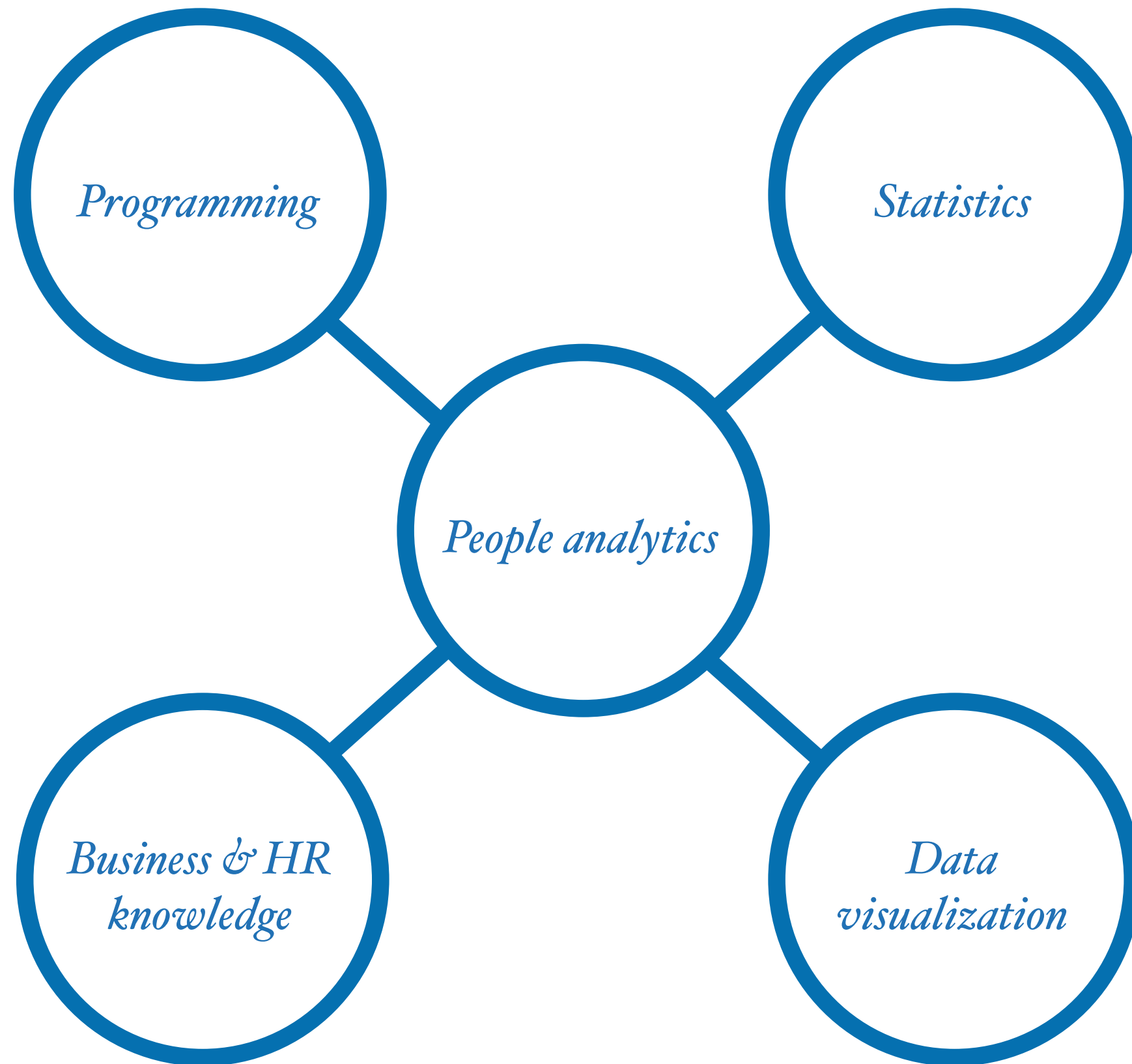
Help might be closer than you think

“I was looking for something like baseball,
where there's a lot of data and the
competition was pretty low.”

Nate Silver, Guardian interview

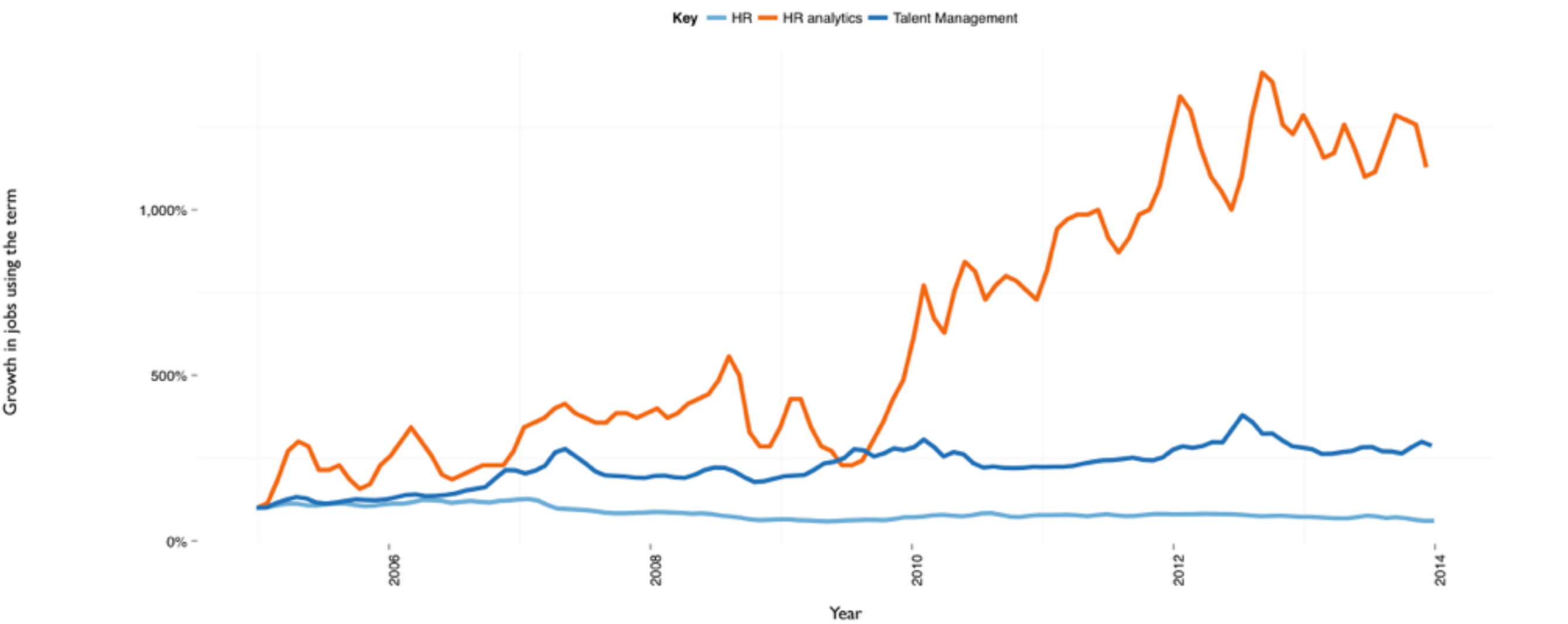
GETTING THE RESOURCES

What people analyst teams need

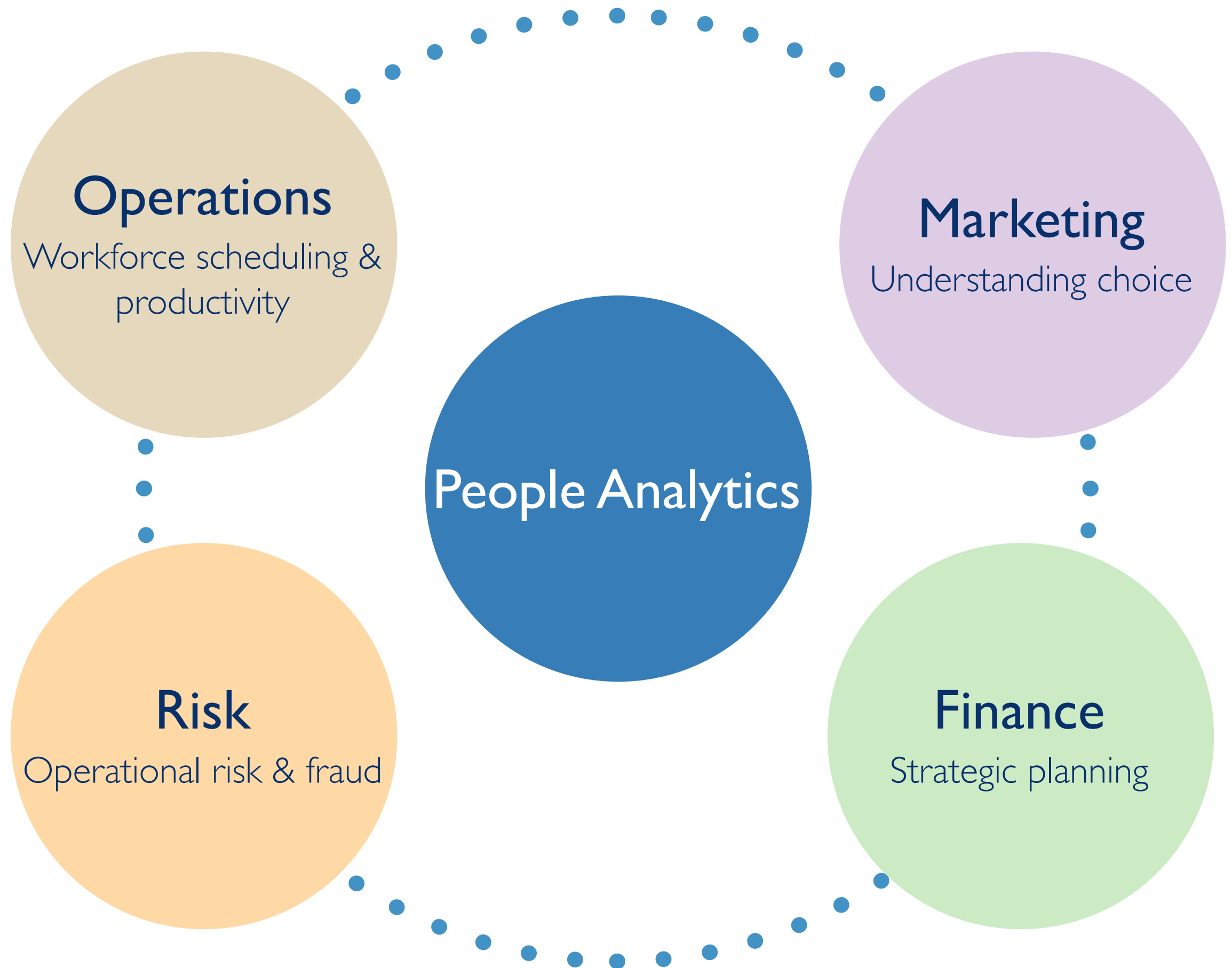


Growth in the jobs advertised for HR analytics

Occurrence of the following terms in job advertisements. Values were originally percentage of total jobs and were changed to index values based Jan 2005



Data: Indeed.com job trends, captured 31/10/14. Data visualisation by OrganizationView



OPERATIONS

Understand HR processes

Graduate recruitment status report

Set client-gr..

11

Non-client ta..

26

Performance against targets



Last week's activities

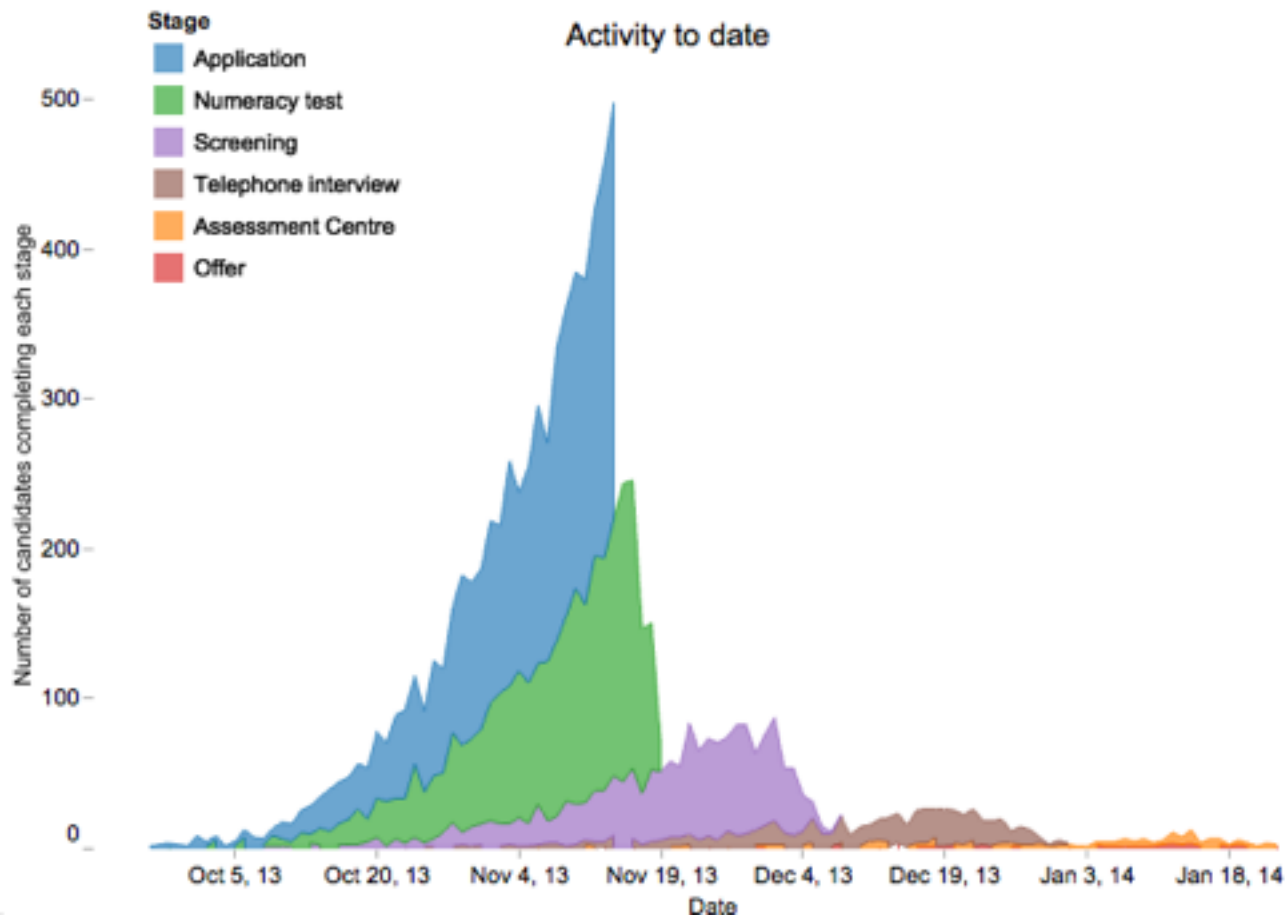


Offers made in last week

programme	first_name	surname	university
HR	Heather	MANN	Sheffield
Marketing	Felix	MADDEN	Warwick
	Mindy	MORRIS	Sheffield
Operations	Trudy	FARRELL	Aston
Product	Renee	ACEVEDO	Imperial



Activity to date



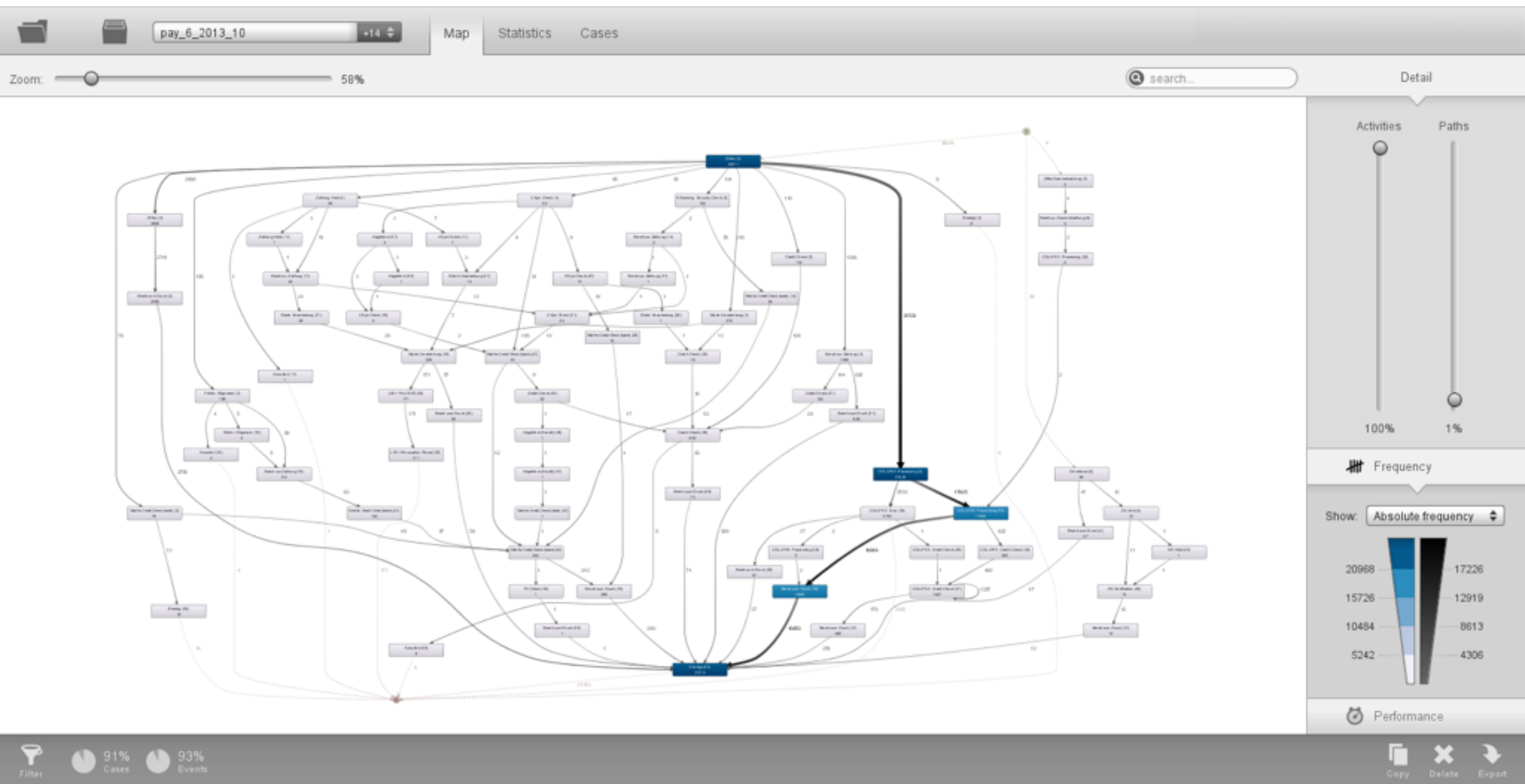
Planned activities in next week



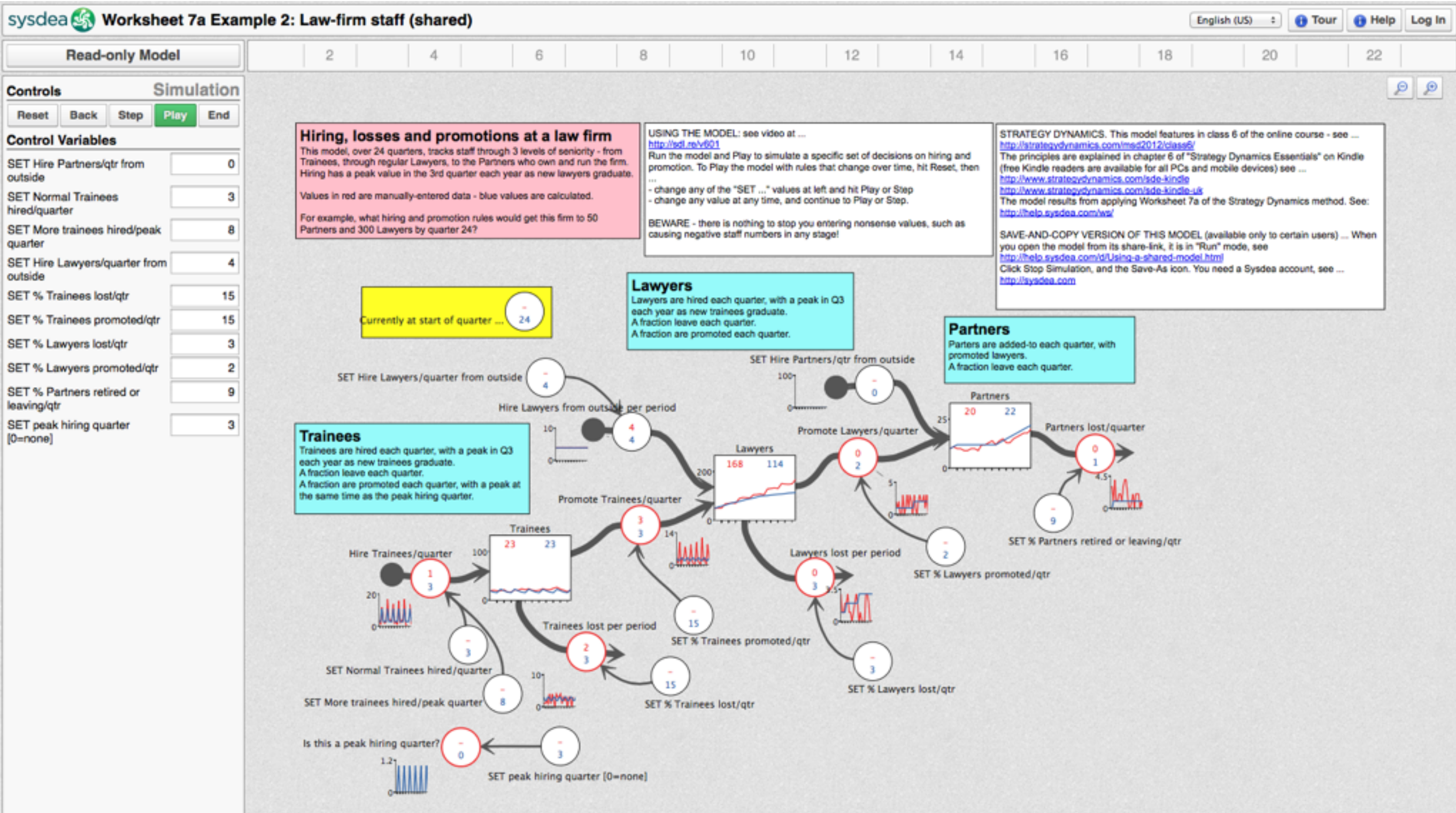
Total activity in numbers

Application	3,700
Numeracy test	2,921
Screening	1,545
Telephone interview	570
Assessment Centre	139
Offer	54

Automated process discovery from log files



Dynamic simulation modelling

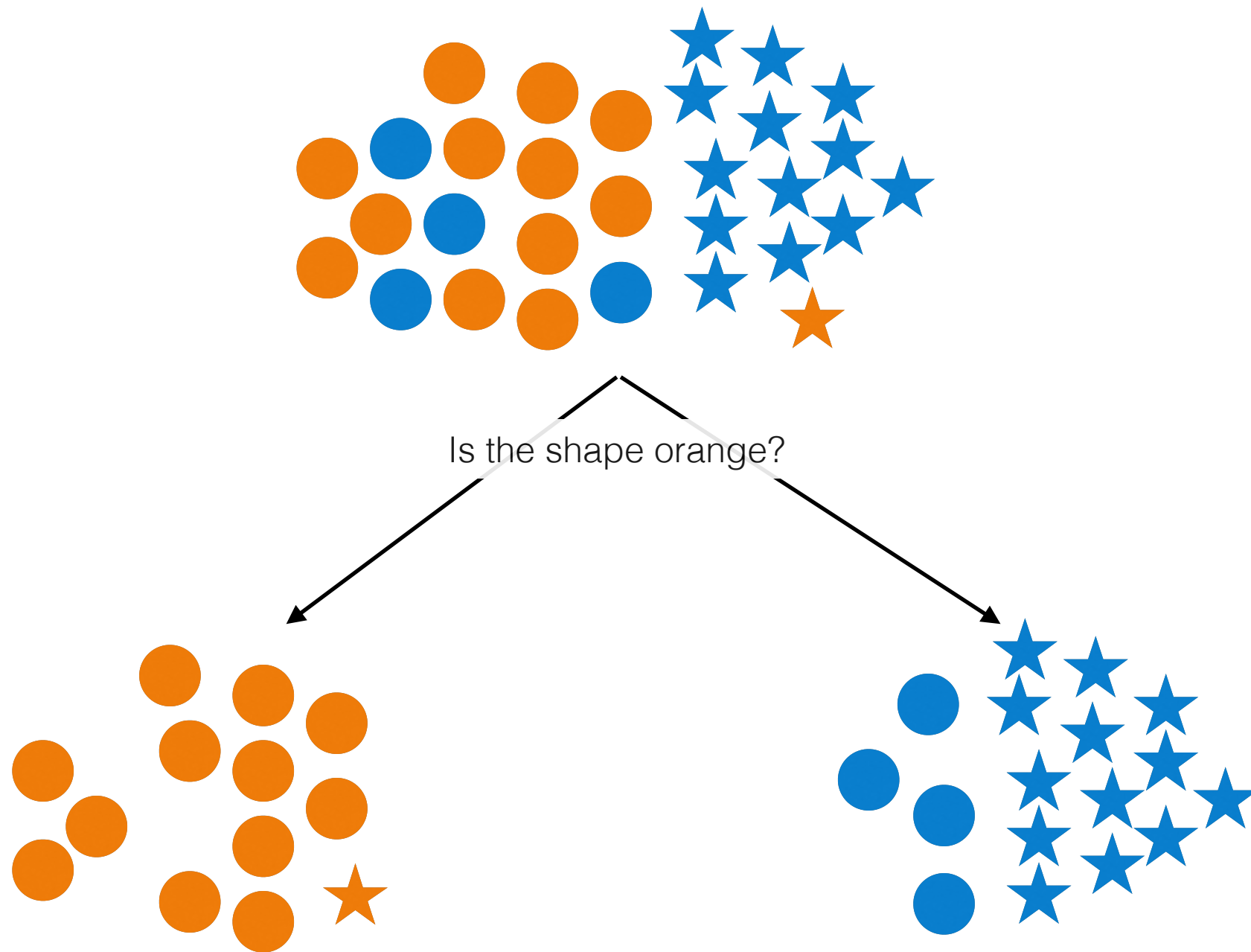


RISK

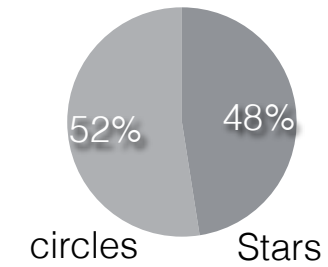
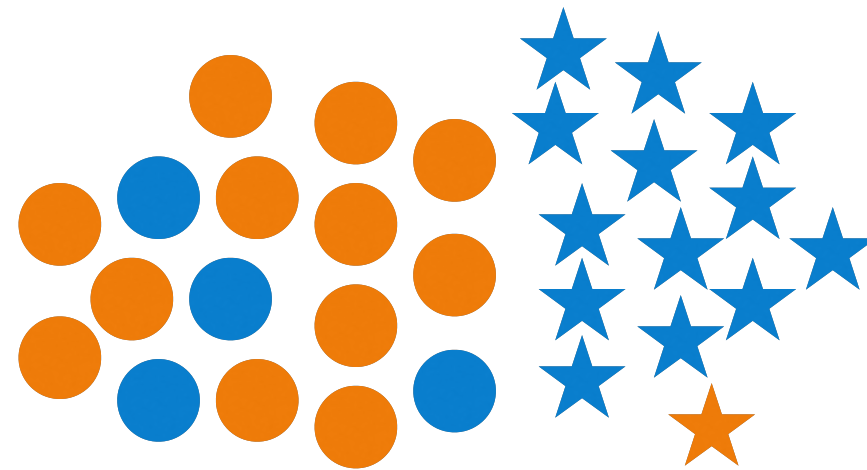
Churn - a major concern for telecoms firms



Objective - to predict shape

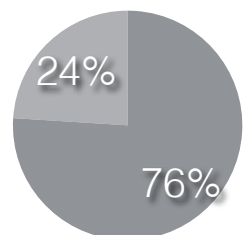
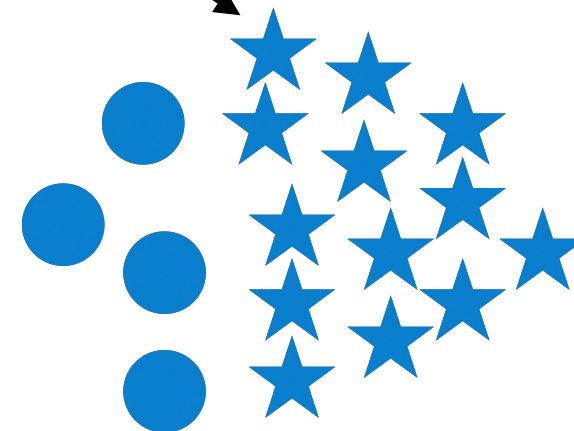
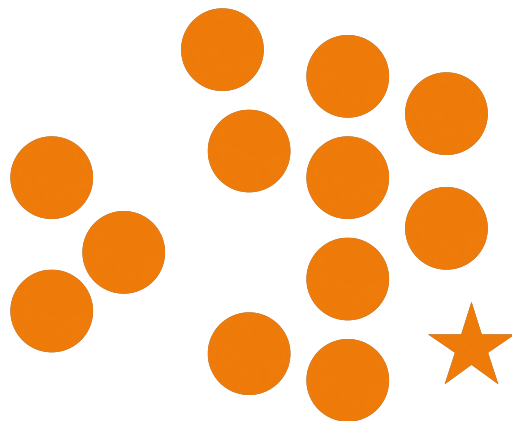
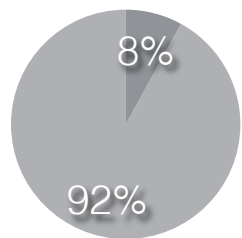


Objective - to predict shape

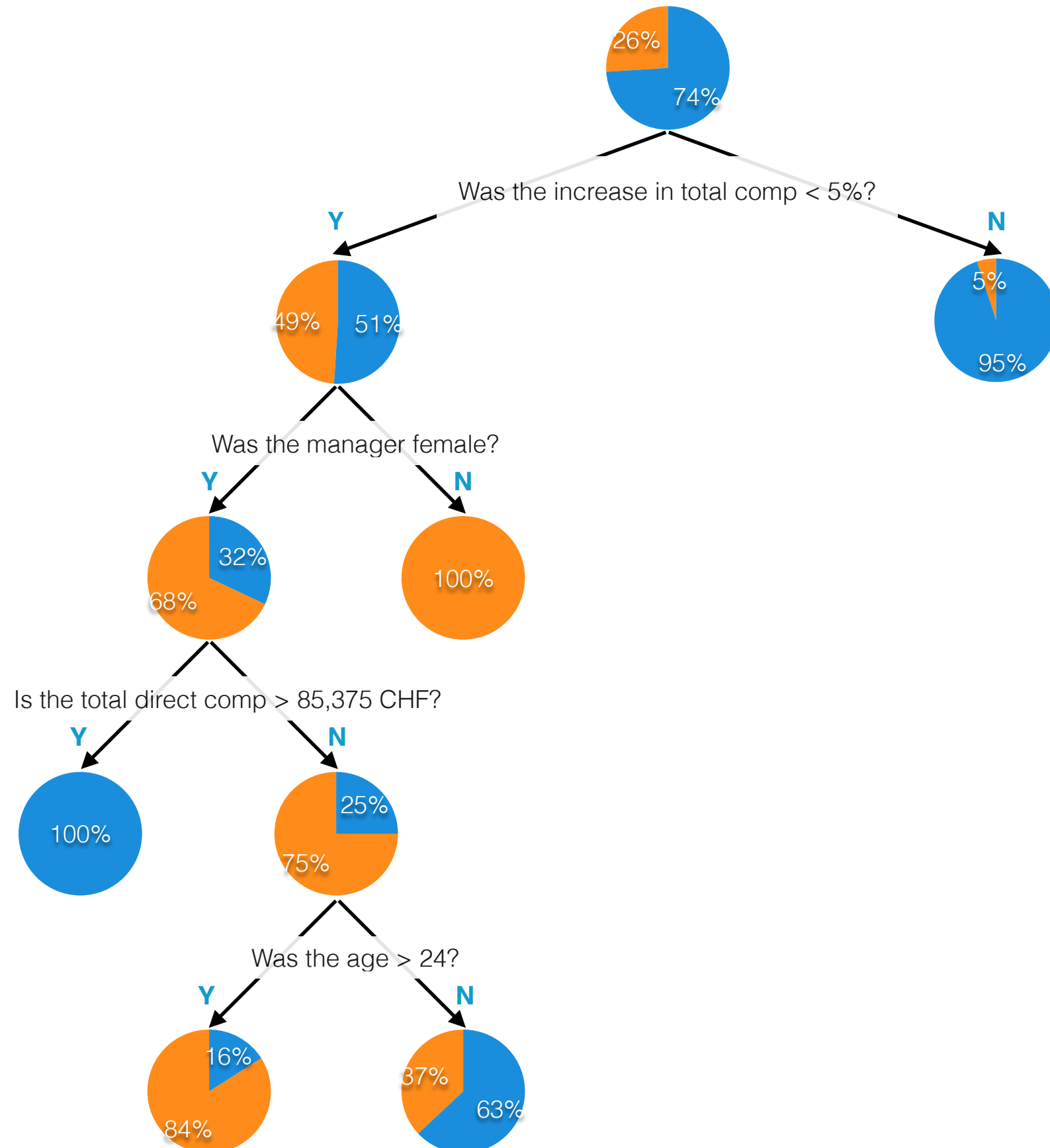


Pie represents the base split

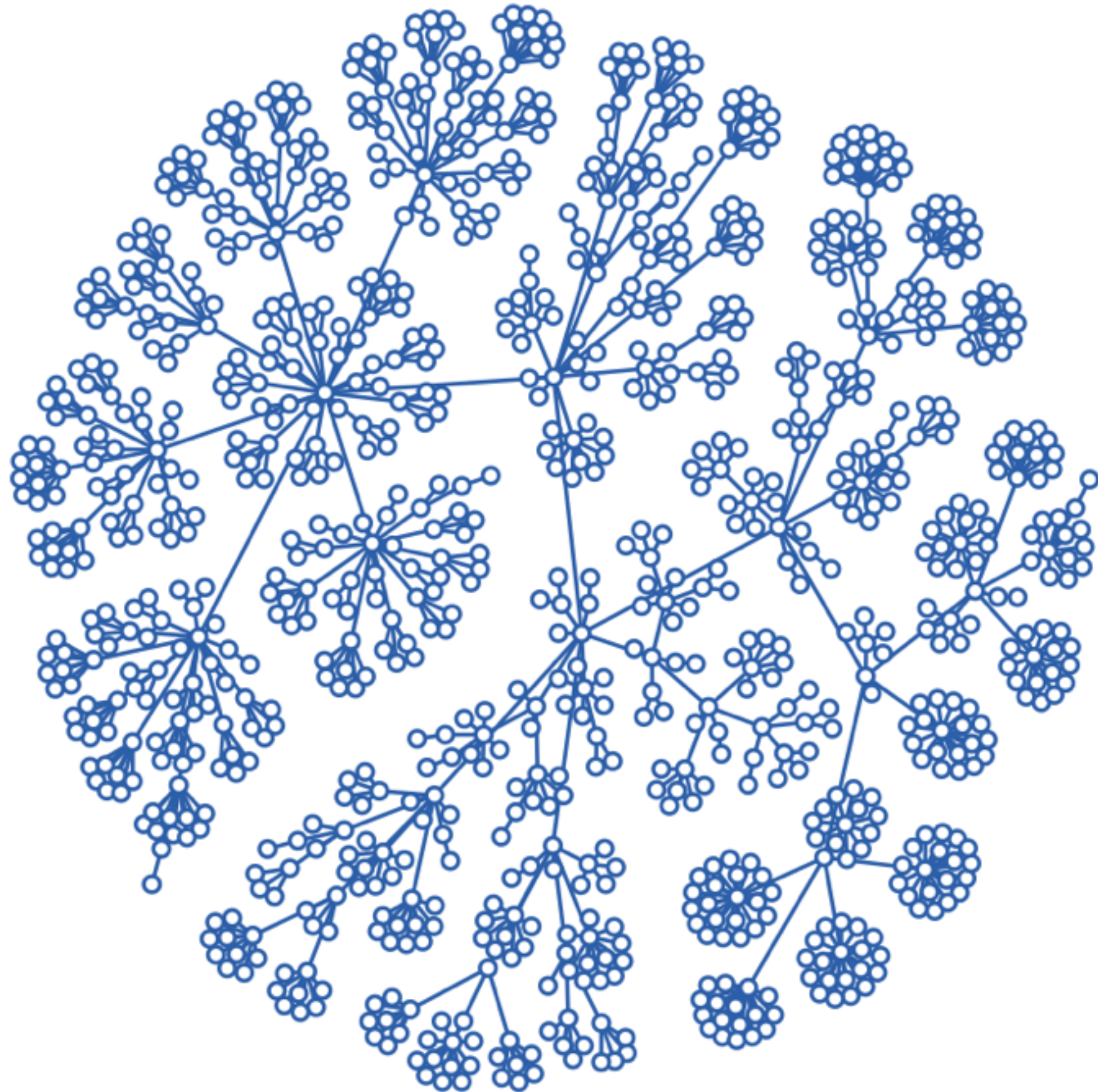
Is the shape orange?



An example decision tree for attrition



Contagion is an issue with employee attrition



MARKETING

HARVARD BUSINESS SCHOOL PRESS

Introducing NPS—How leading firms transform
ordinary customers into *promoters*

THE ULTIMATE QUESTION

Driving Good Profits
and True Growth

FRED REICHHELD

Bestselling author of *THE LOYALTY EFFECT*

BAIN & COMPANY

Workometry

Embracing open text questions

Everyone is leaving and getting much higher pay, but we are told we are paid at market rate. I think your data is wrong

I haven't had a career discussion in years

Management only communicates that it wants us to change

I don't see any change from last year

The new intranet is a huge improvement

Our coffee machine has been broken for ages. We have to walk 5 minutes to get a drink.

Text analytics & feedback

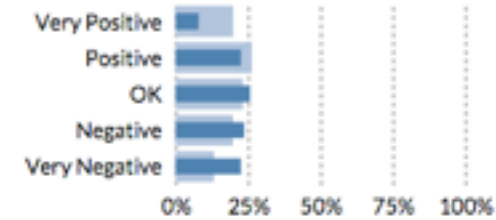
Comment Explorer

Selection: concept = Target

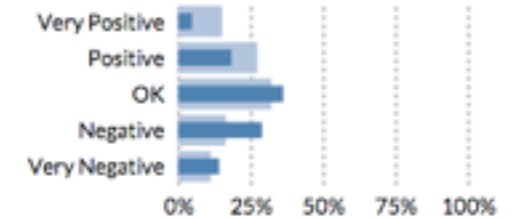
wants_to_leave reporting_function



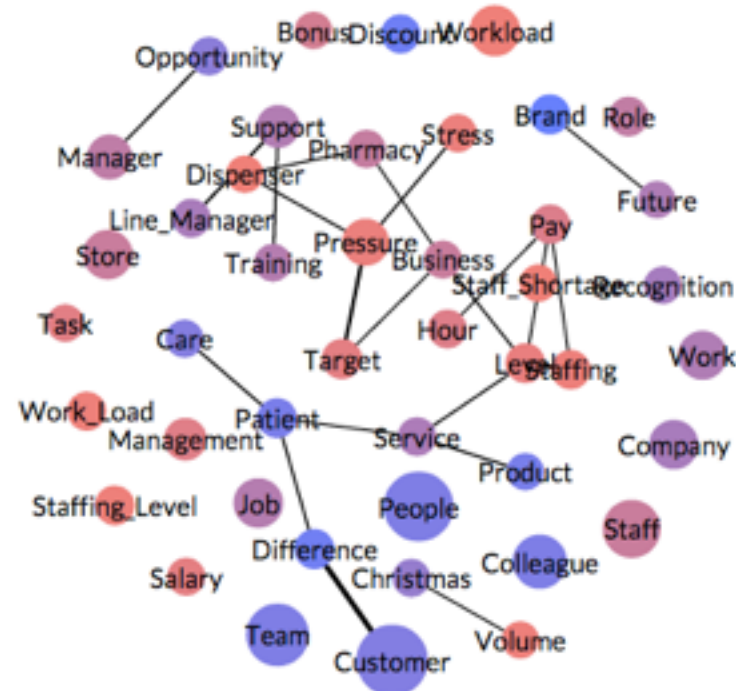
wants_to_leave



general_feeling



Comment Concept Graph



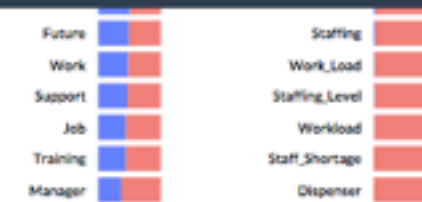
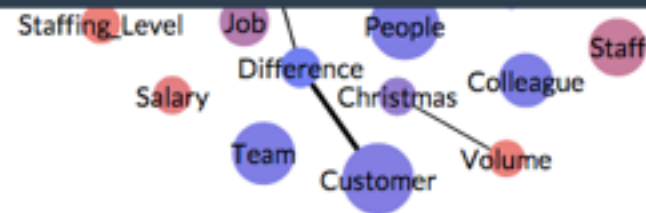
Concept Sentiment



Text analytics & feedback

Comment Explorer

Selection: concept = Target



Contexts

overload: **Workload** **Target** **Training** **Business** **Pharmacy** **Service** **Work_Load** **Company** **Pressure** **Customer**

problems/issues: **Staffing** **Work_Load** **Level** **Task** **Target** **Store** **Service** **Patient** **Pressure** **Management** **Support** **Staff** **Manager** **People**
Work **Company** **Job** **Customer** **Team**

proud of/enjoying: **Brand** **Job** **Role** **Work** **Company** **Customer** **Opportunity** **Product** **Recognition** **People** **Care** **Line_Manager**
Discount **Patient** **Manager** **Support** **Team** **Colleague** **Store**

shortage/lack: **Dispenser** **Staff** **Workload** **Work_Load** **Pressure** **Training** **Stress** **Bonus** **Hour** **Christmas** **Work**
Salary **Support** **Management** **Manager** **Staffing** **Recognition** **Target** **Business** **Care** **Pharmacy** **Line_Manager** **Opportunity**
Store **Level** **Staffing_Level** **Company** **Job** **Team** **People** **Customer**

stressful/frustrating: **Stress** **Work_Load** **Pharmacy** **Workload** **Staffing** **Staffing_Level** **Pressure** **Staff_Shortage** **Store** **Staff** **Target**
Work **Line_Manager** **Management** **Hour** **Pay** **Level** **Job** **Manager** **Colleague** **Team** **People** **Customer**

one_thing

Stores South

above
expectation



Managers are not concerned with looking after staff; only about hitting targets. Not through a lack of skill on their part; but because of the pressure on them by the company; who don't seem to get that if they

whats_good

Stores North

strongly
above
expectation



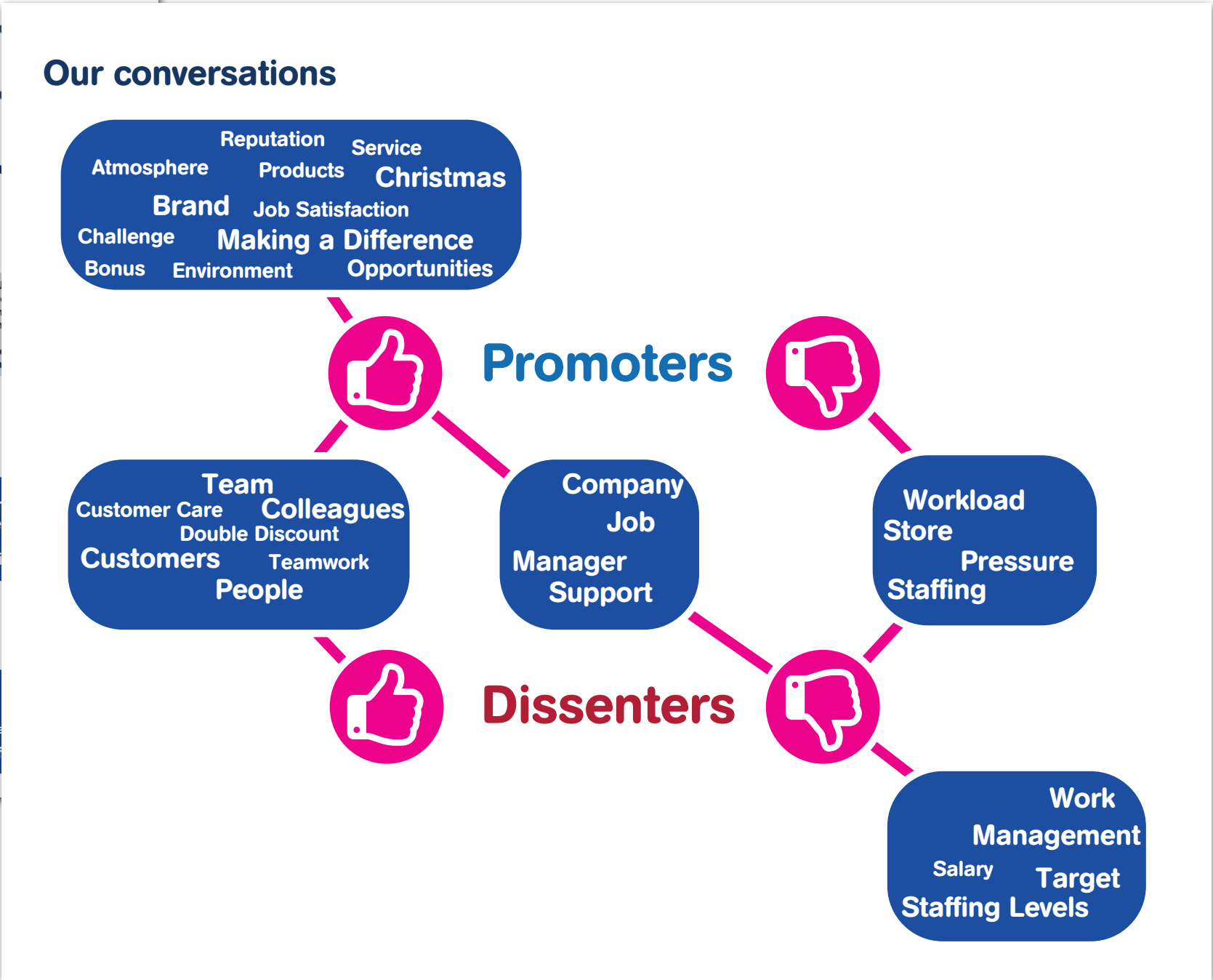
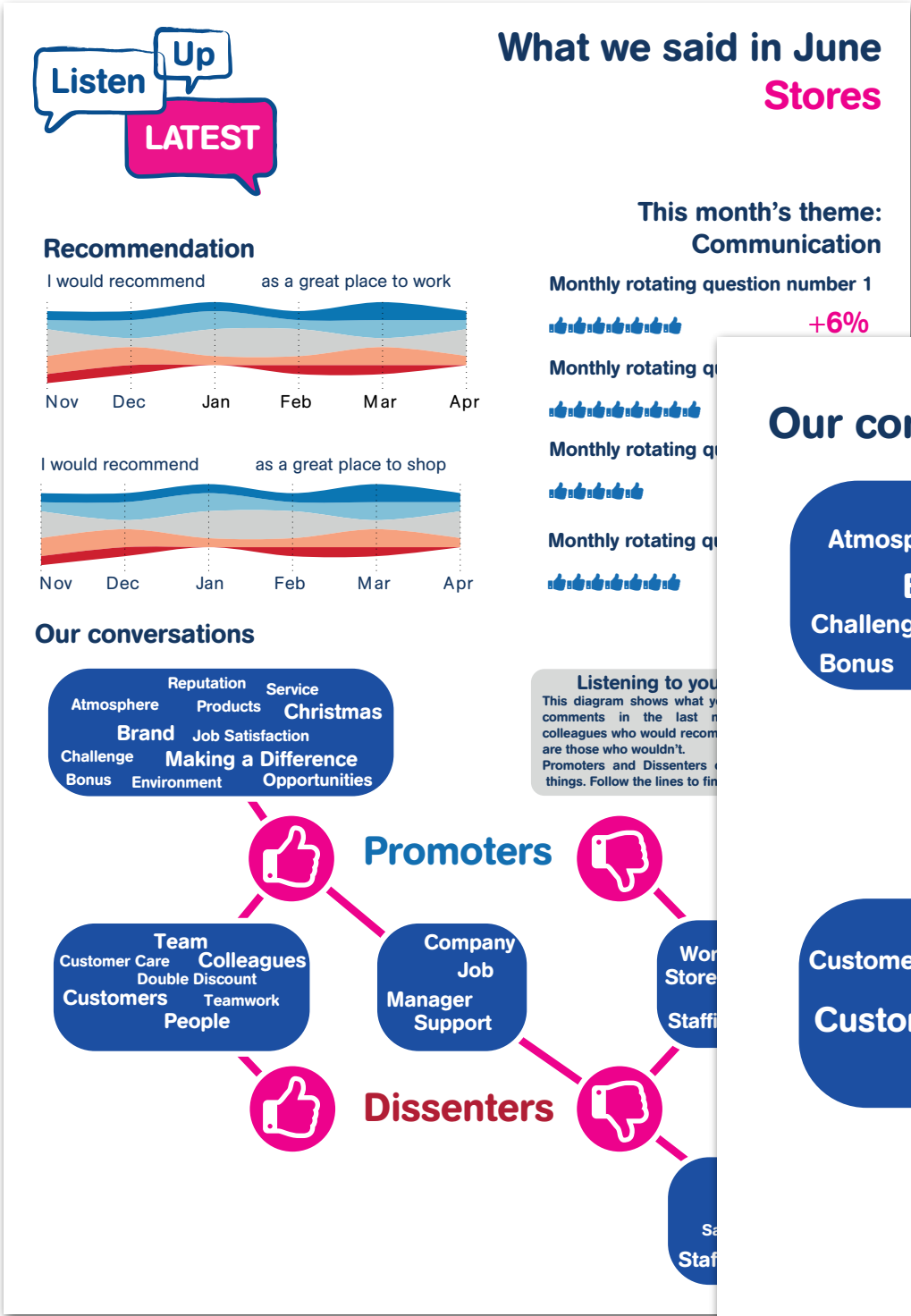
Internet Retail



Stores South



Text analytics & feedback

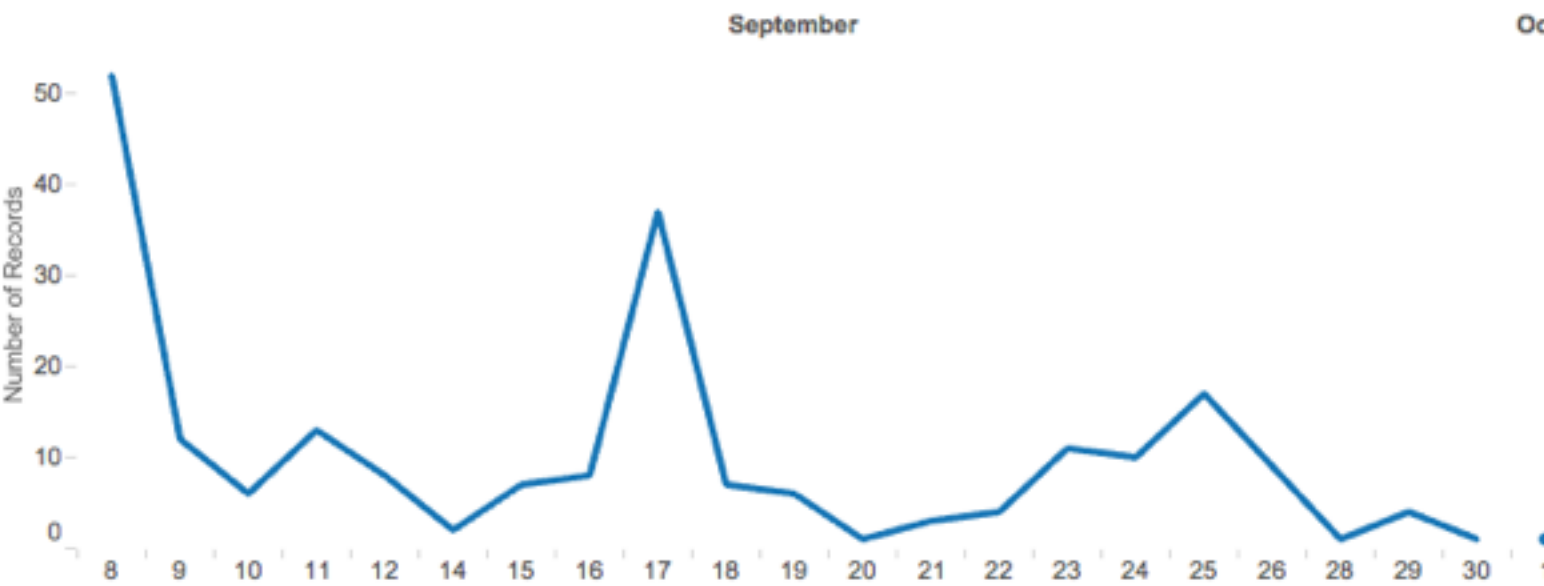


Monitoring data in real time

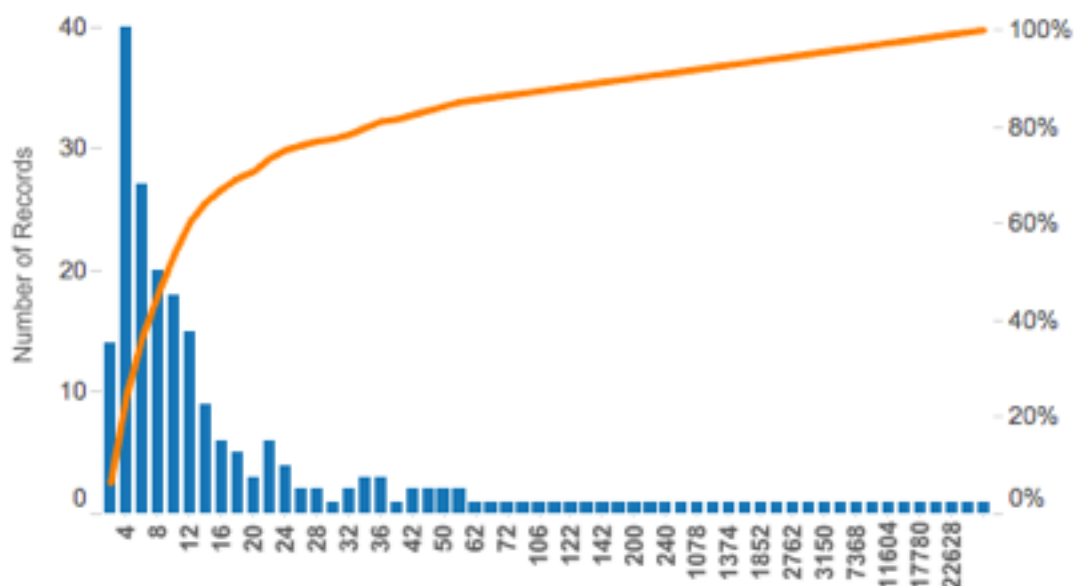
Responses overview

Total response to date 220 Response rate 87%

Daily response rate
Application numbers per day

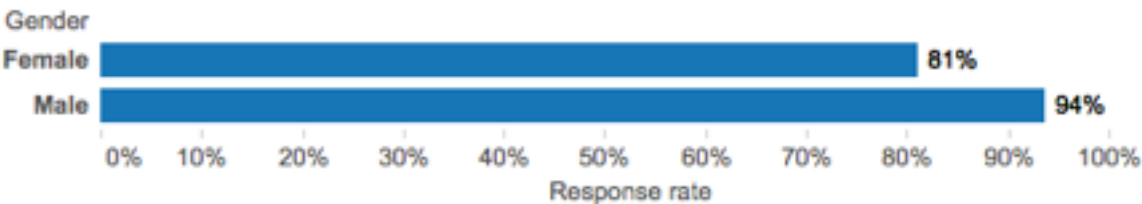


How long it takes to complete (minutes)
Distribution and running total

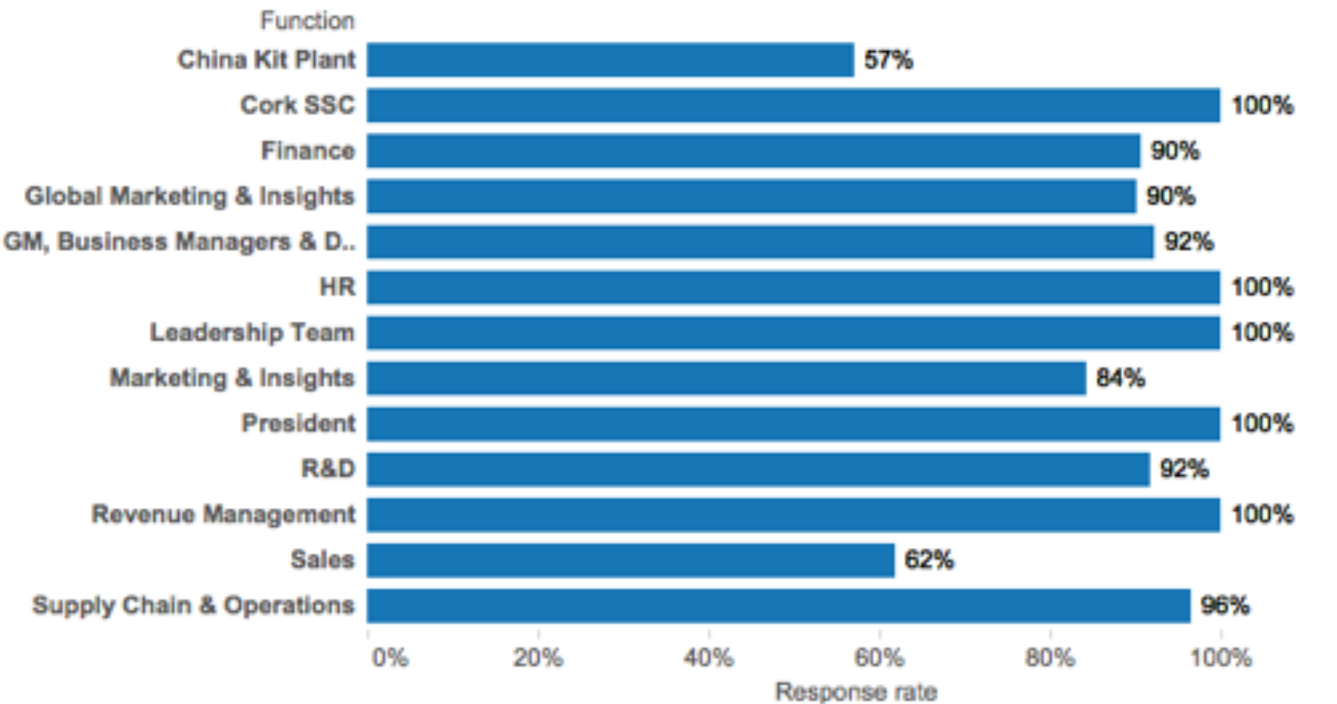


Response rates by groups

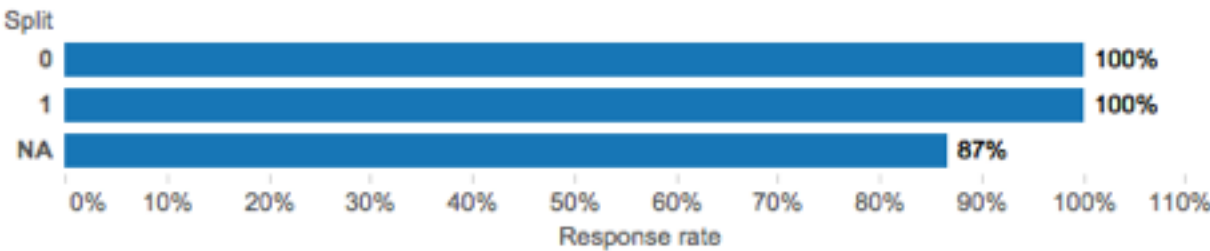
Gender



Function



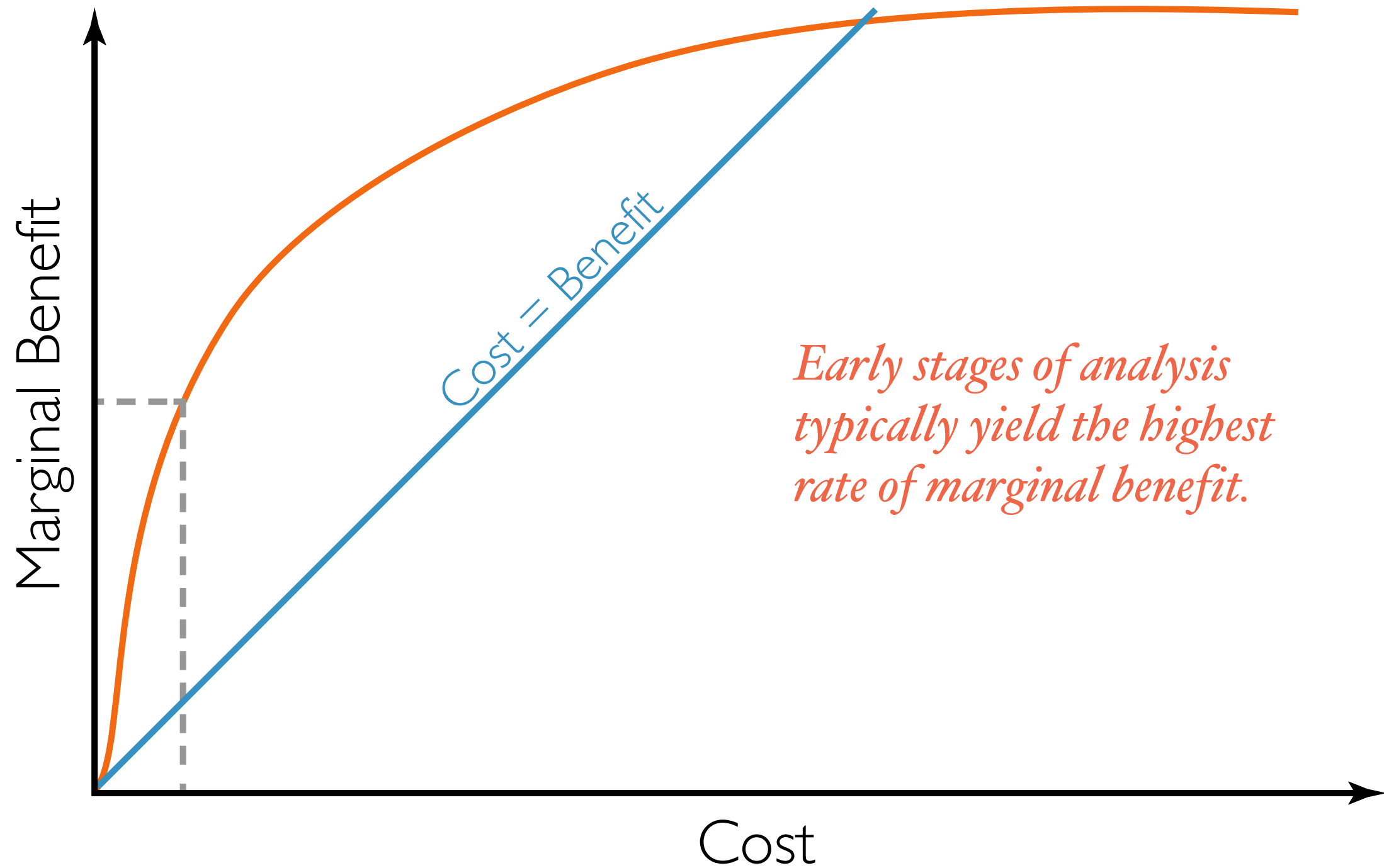
Reporting groups



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@andrewmarritt

ADDITIONAL SLIDES

Realising value



Data Scientist

Job ID	281649	Location	US-WA-Seattle
Posted Date	3/2/2015	Company	Amazon Corporate LLC
Position Category	Business Intelligence		

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Job Description

“If you’ve never considered applying your talent in data sciences to the field of HR, you should: HR Analytics is a rapidly growing area of research and application where you can really make your mark.”

- Interact with executive project sponsors across multiple businesses to understand the business outcomes important for success; operationalize those outcomes in ways that can be measured and ultimately predicted.
- Drive the collection of new data and the refinement of existing data sources.
- Interpret data and communicate complex findings to leaders in HR and across business.
- Write research papers for internal audiences.

Basic Qualifications

- 8+ years of industry experience
- Master’s degree in Industrial - Organizational Psychology, Behavioral Economics, Statistics, or related field
- Strong statistical skills (HLM, regression, ANOVA, IRT methods, Structural Equation Modeling, etc)
- Strong technical skills and proficient in programs such as SPSS, R, Excel, Access
- You document your approach for reference and reproducibility in the future
- Self-starter with the ability to work independently
- Great organizational skills and attention to detail; you are able to prioritize multiple tasks simultaneously without sacrificing the ability to dive deep
- Ability to communicate complex quantitative analysis in a clear, precise, and actionable manner
- Impeccable customer service focus with a demonstrated desire to exceed expectations; a team player with a solid work ethic

Preferred Qualifications

- PhD strongly preferred in Industrial - Organizational Psychology, Statistics, Behavioral Economics, Statistics, or related field
- Experience with RedShift and/or Hadoop; preferably with design and deployment
- Previous work experience in applying statistics to HR and business outcomes

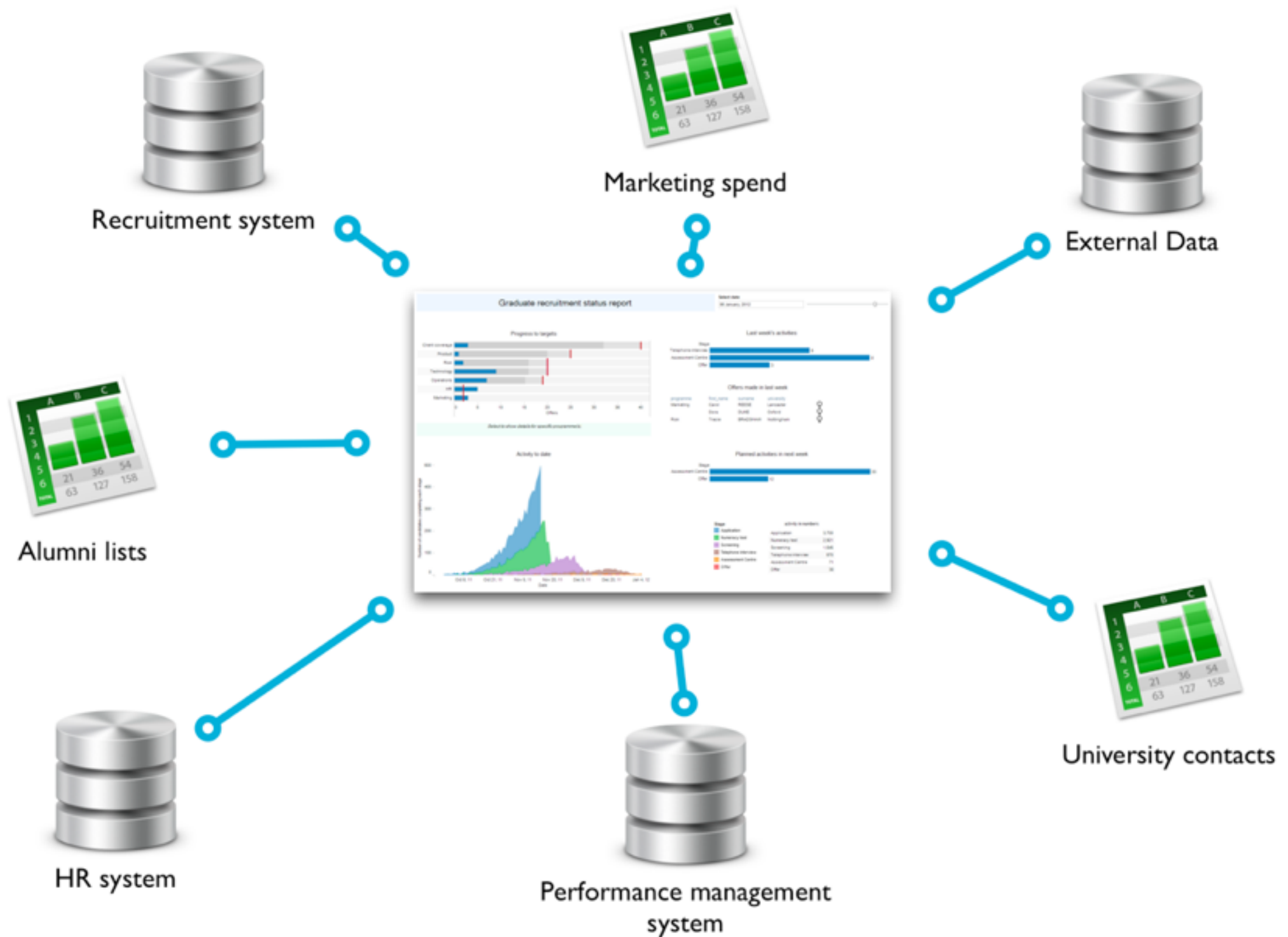
“Issues for employee engagement surveys”

1. Not frequent enough
2. Single scoring leads to issue distortion
3. Aggregation reduces meaning
4. Does not capture the specifics
(context seldom captured)
5. Lengthy or poor response planning
6. Managers are busy & have no incentive to
implement any actions
7. Lot of resources & monitoring
8. Surveys get old
9. Causality not clear

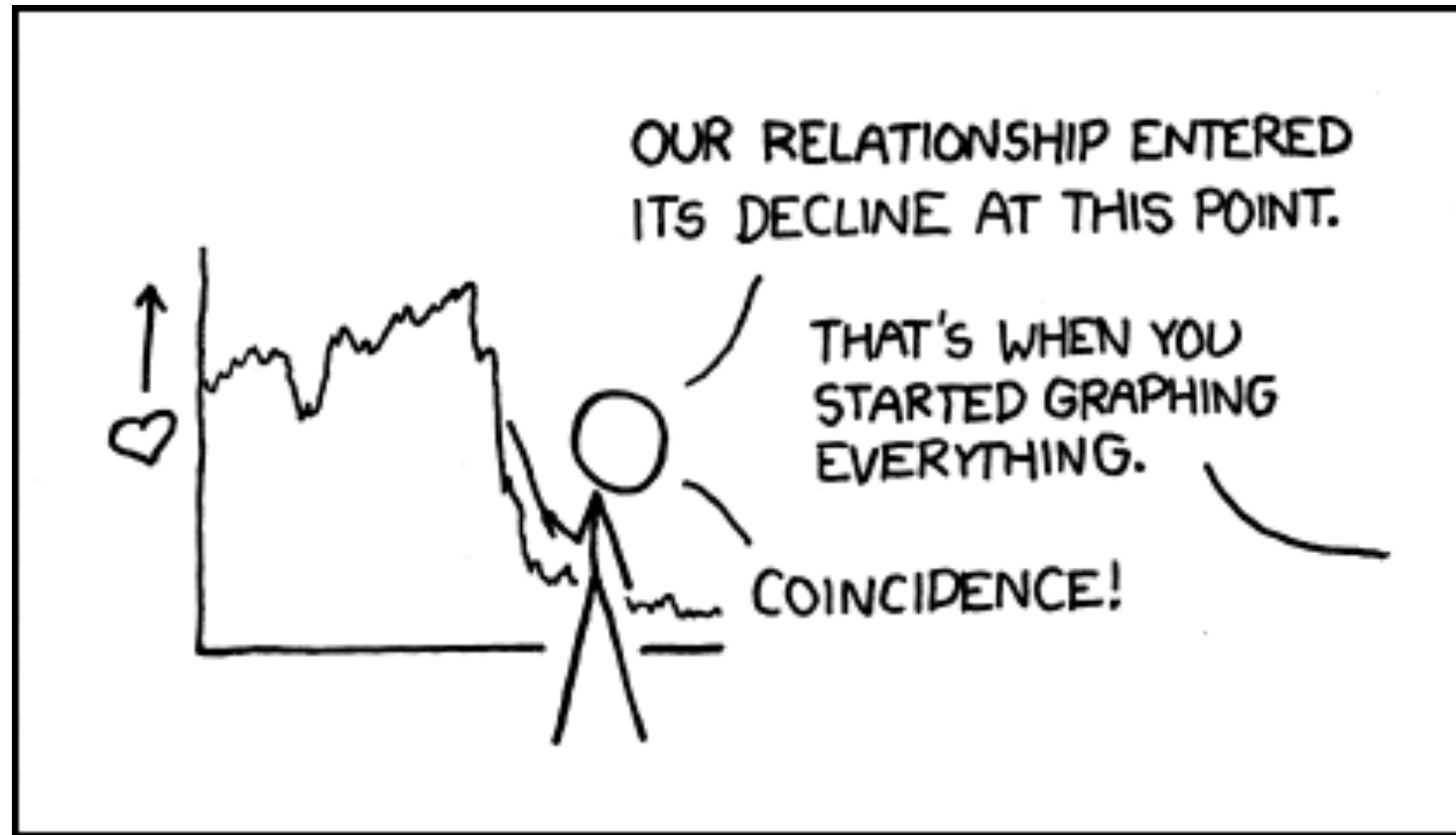
Always start here



Data comes from multiple systems

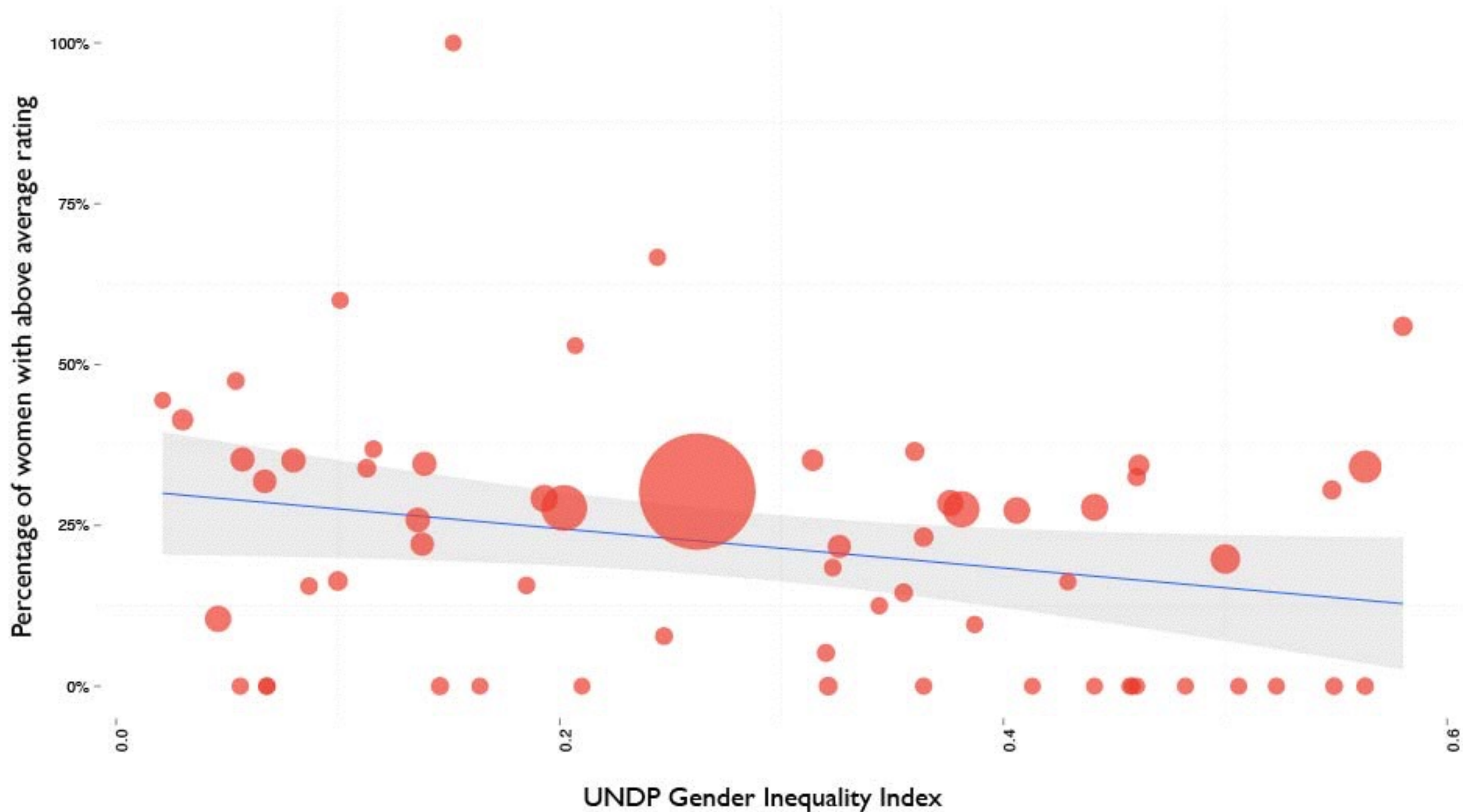


Data visualisation



Are performance ratings influenced by a country's attitude to gender equality?

Female ratings in a typical global employer. Bubbles show countries, scaled to reflect employee population



Visual Information-Seeking Mantra:
overview first, zoom and filter, then details
on demand.

Ben Schneiderman

Data visualisation to help people understand and explore

