

# People Analytics

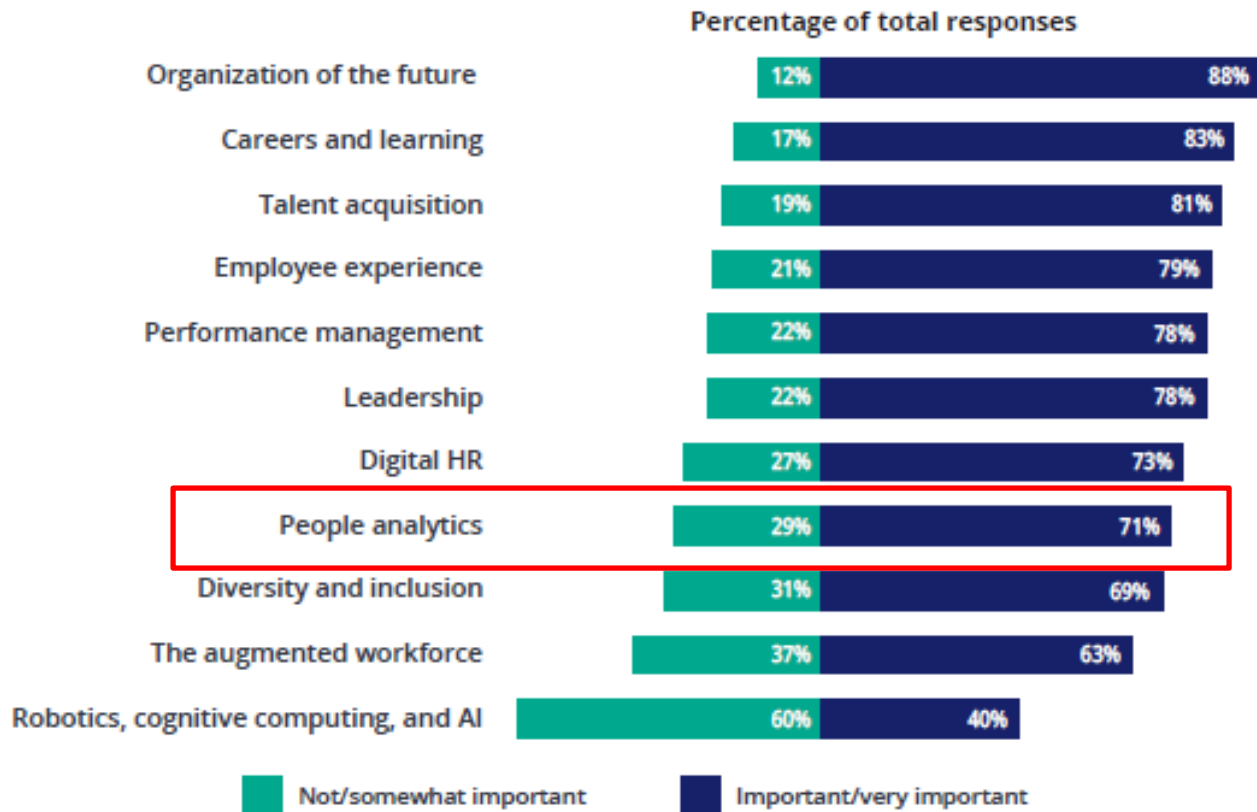
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Globe and Mail HR Department

Jennifer Nguyen

# People Analytics

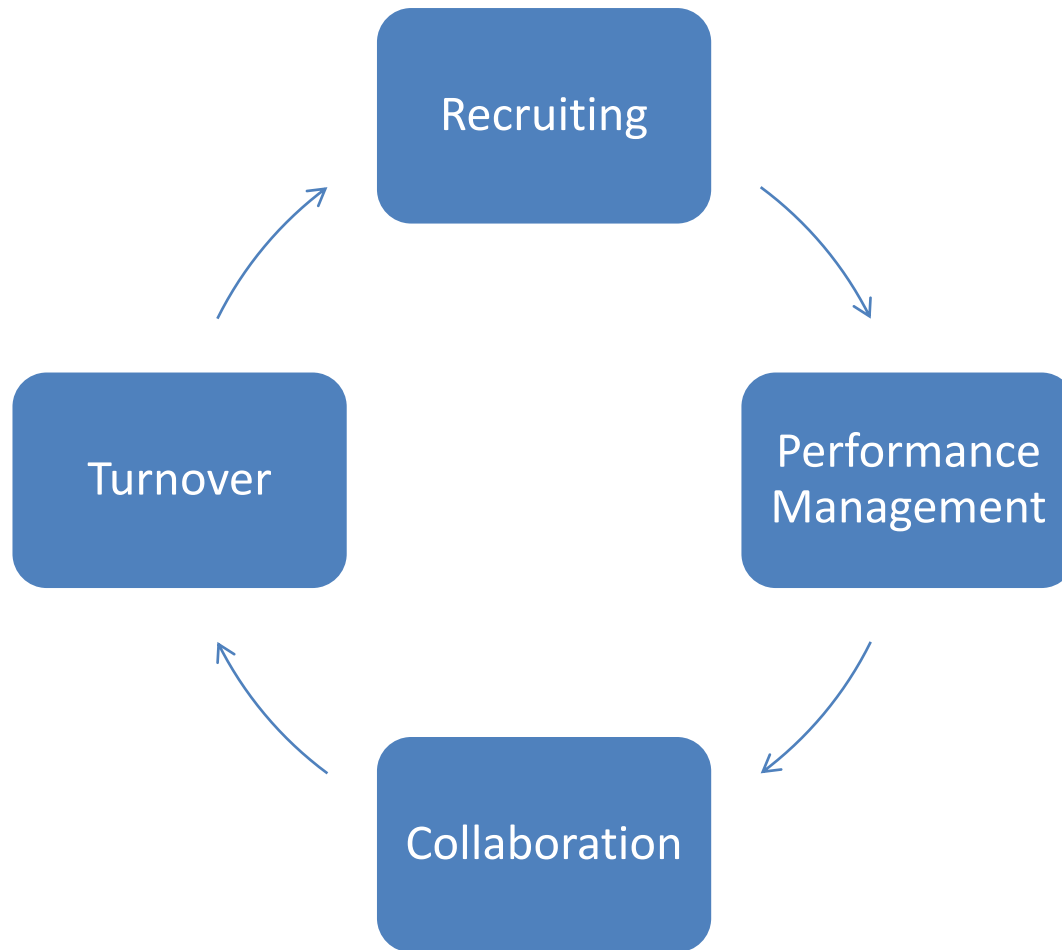
Figure 3. The 2017 trends by Importance



Note: Ratings for "The augmented workforce" and "Robotics, cognitive computing, and AI" both relate to the broader trend on "The future of work" discussed in this report.

Deloitte University Press | [dupress.deloitte.com](http://dupress.deloitte.com)

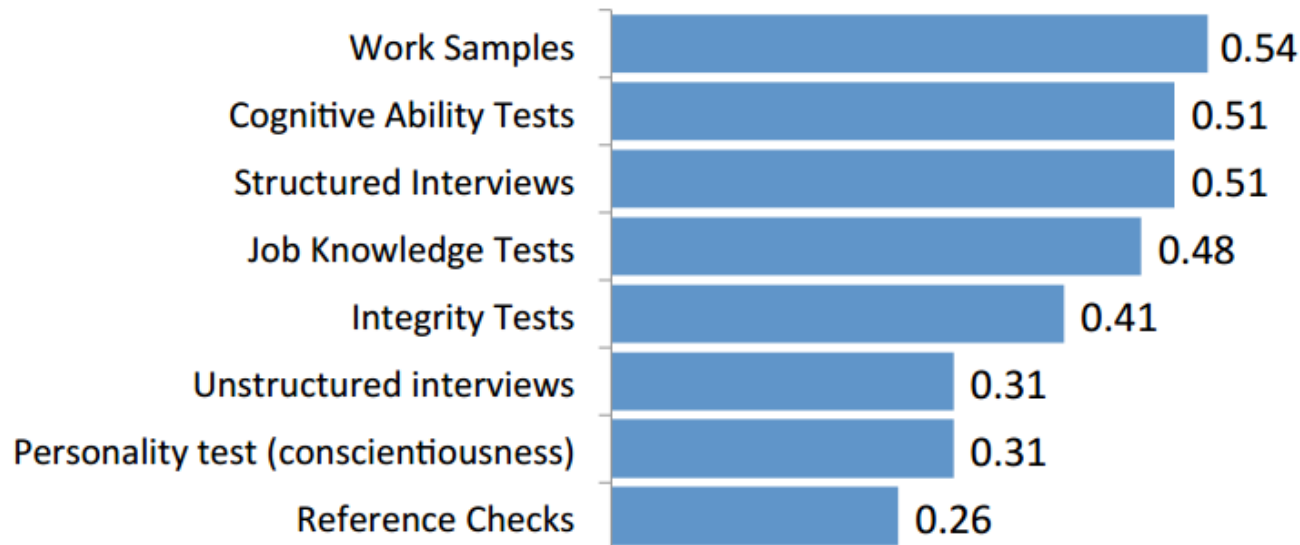
# The Talent Cycle



# Recruiting

# Relationship between interview techniques and employee success

**Correlation with subsequent performance (0-1)**



# Modelling employee performance

- Identify **employee traits** that lead to **high performance**
- Look for these traits in job candidates

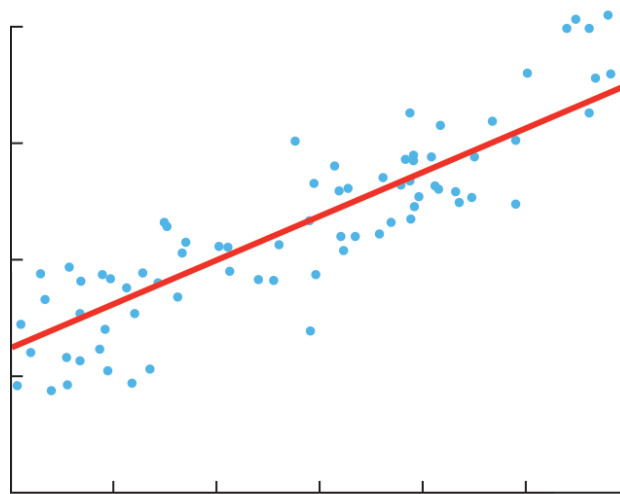
Input observations	Key outputs
Demographics Educational background Professional background Skills Etc.	Performance measures Likelihood to leave Likelihood to get promoted Other key outcomes

# Side bar: Statistical Models

A generalization of the **relationship** between **input** variables and **output** variables

## Building a Regression Model

The line summarizes the relationship between x and y.



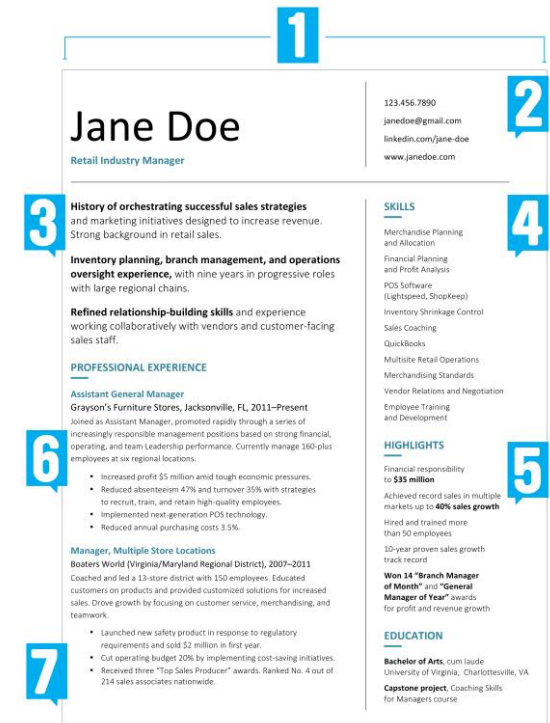
SOURCE HBR.ORG

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# Optimize resume screening

- Use historical hiring data to identify **resume traits** that correlate with a **job offer**
- Eliminates unconscious biases

Input observations	Key outputs
Resume characteristics	Likelihood of offer





# Pairing individuals with right roles

- Department of Defence and others created **profile of a typical employee with high likelihood of succeeding in particular roles**
- Used these profiles to match prospective employees to the right role
- Use Case: promotions

# Performance Management

# Process vs. Outcome

- Companies emphasizing **how** an employee does her job vs. **what** she does
- Measuring processes becomes more important when employees have less control over environment

# Process vs. Outcome



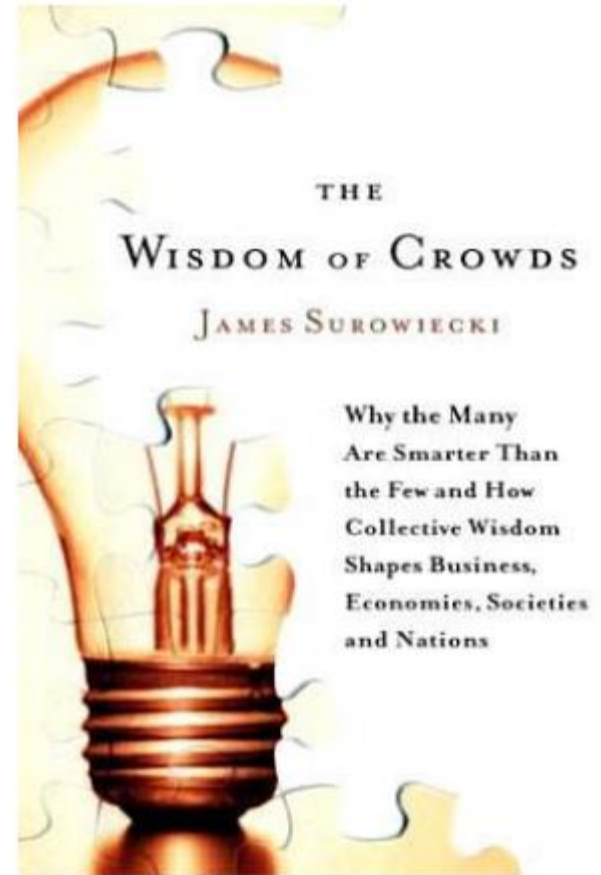
# Process vs. Outcome

**Identify** and **track** which processes lead to key outcomes

Department	Outcomes	Processes
Digital	Releasing bug-free features	Number of JIRA issues closed Number of bugs reported
Advertising	Increase sales	Meeting with clients Creating proposals

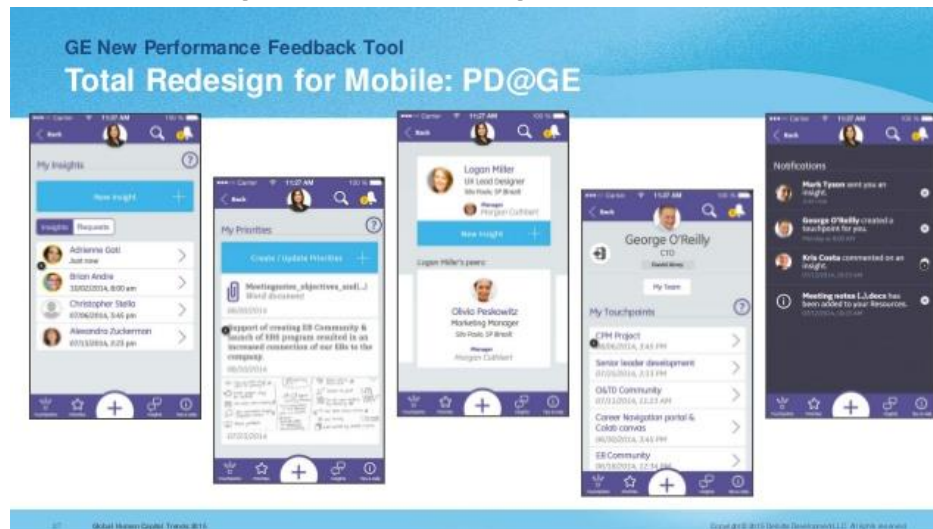
# Crowdsourcing

- **Multiple** sources of feedback to get complete picture of an employee's performance
  - E.g., 360 evaluations, peer evaluations (TapMyBack)
- Caveat: reviews need to be **independent**



# Frequent Reviews

- Companies replacing annual reviews with **real time feedback** and **forward coaching**
- More data allows for more **reliable** results and better analytical capabilities



# Providing Context

“Don’t confuse brains in a bull market”

Key issue: Identify expected performance for each situation.

Remember we did this in  
the performance  
evaluation module





# Team vs. Individual

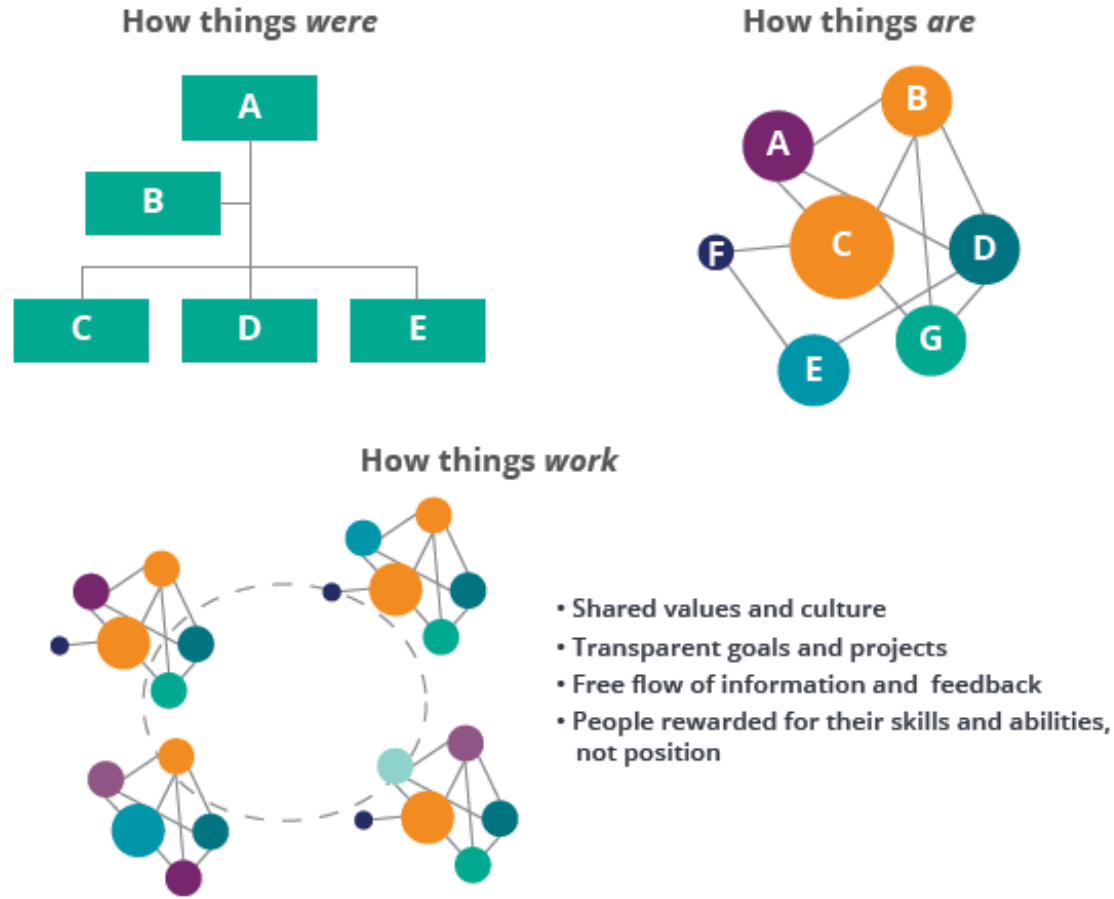
- Recognizing teamwork is involved
- As companies become more **team-centric**, companies focusing on individual's contribution to the team
- Ideally, observe individual in different team settings



# Collaboration

# Collaboration

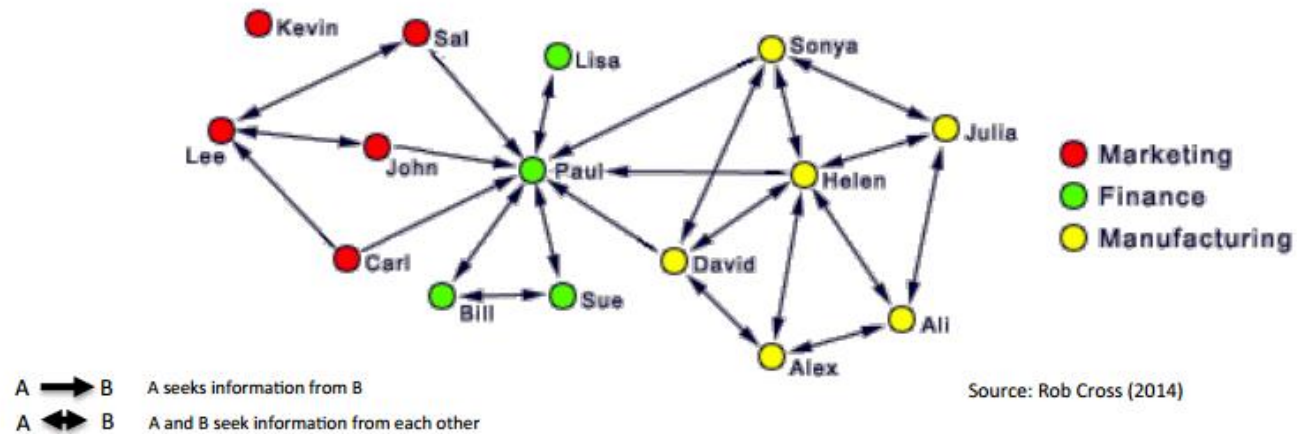
Figure 2. A network of teams



# Collaboration Networks (CN)

## Network Characteristics

- Size
- Strength
- Density
- Range
- Centrality



# Applications of CNs

- Performance management
- Pay and promotion
- Roles and responsibilities
- Training and mentoring

# Identifying processes that lead to business outcomes

...and measuring them in performance reviews



Source: Cross, Martin & Weiss (2014), McKinsey Quarterly

## Problem:

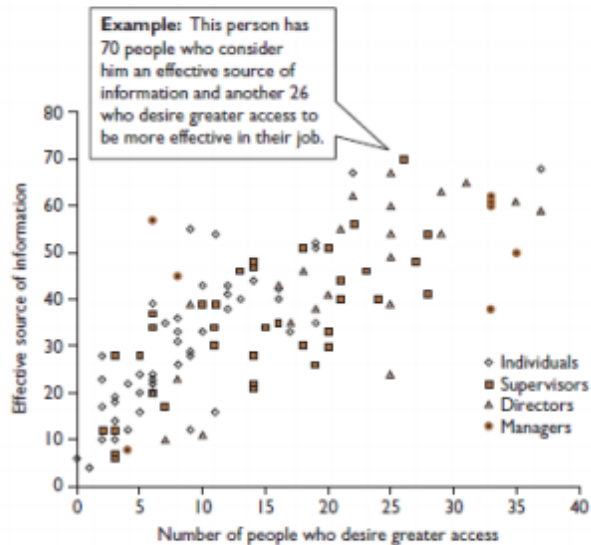
- A **global consulting firm** mapped the networks of about 80 partners, and found **two types of collaboration that were very valuable for the firm but not recognized at all in its performance management processes**, which focused on individual revenue production:
  - Collaborating to win clients
  - Collaborating to serve clients

## Intervention:

- Revise performance evaluation systems to recognize contributions of partners who help others to win new clients or serve current clients

# Redistribute workload

...to reduce work on over utilized individuals



Source: Cross & Gray (2013), California Management Review

## Problem:

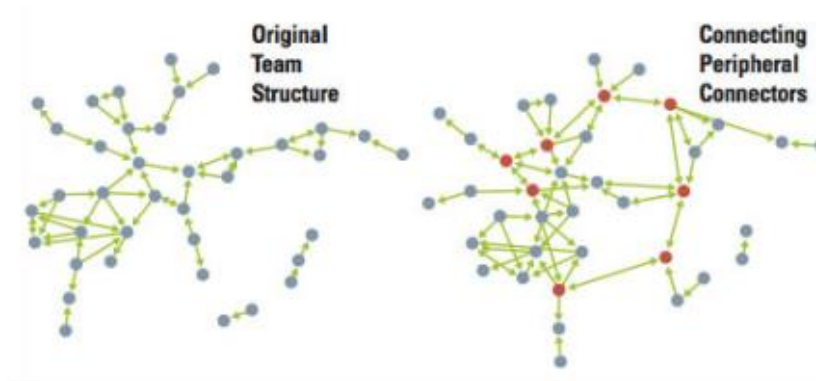
- In this **financial services organization** (like many organizations), a network analysis revealed that about 5% of people accounted for up to 35% of the value-added collaborations; **these valuable people often felt very overloaded.**

## Intervention:

- Identify overloaded people (top right corner), and match them with well-regarded employees who are relatively underutilized (often from bottom left corner), who can relieve some of the burden.

# Increase network resiliency

...by connecting isolated individuals



Source: Cross et al. (2010), MIT Sloan Management Review

## Problem:

- A **multinational agribusiness company** found that its global IT teams often relied on only a few key people to connect their members across the world; **if a few key people left, these teams were vulnerable to breakdown.**

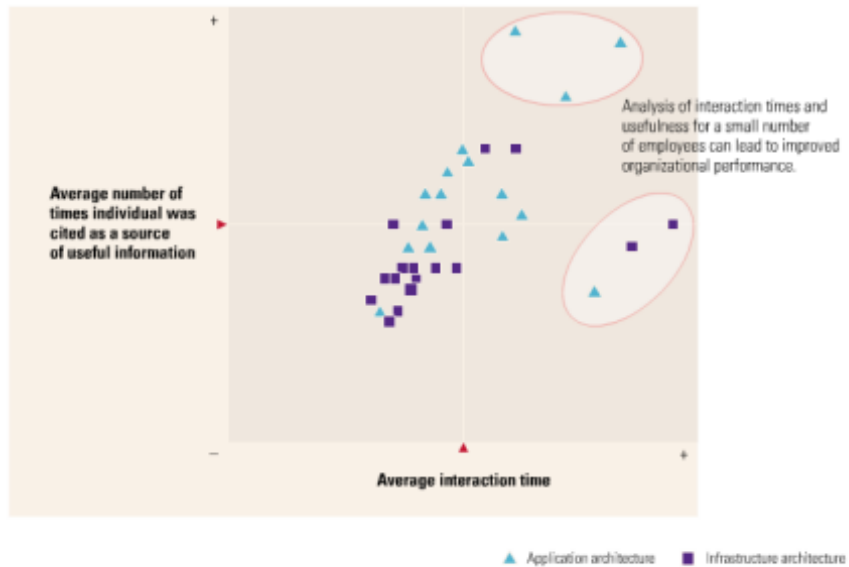
## Intervention:

- Identify a small number of new connections that would have the biggest positive impact on team connectivity, and shift responsibilities more evenly across the members.



# Reducing collaboration inefficiencies

...by identifying ineffective collaborators



Source: Cross, Martin & Weiss (2014), McKinsey Quarterly

## Problem:

- A **major utility company** asked employees how much time they spent interacting with each other and how useful those interactions were; the analysis revealed some employees who were very highly regarded, but also **a small number of employees who were much less effective** than the rest.

## Intervention:

- Focus personalized coaching efforts on collaborative issues unique to each of the low performers.

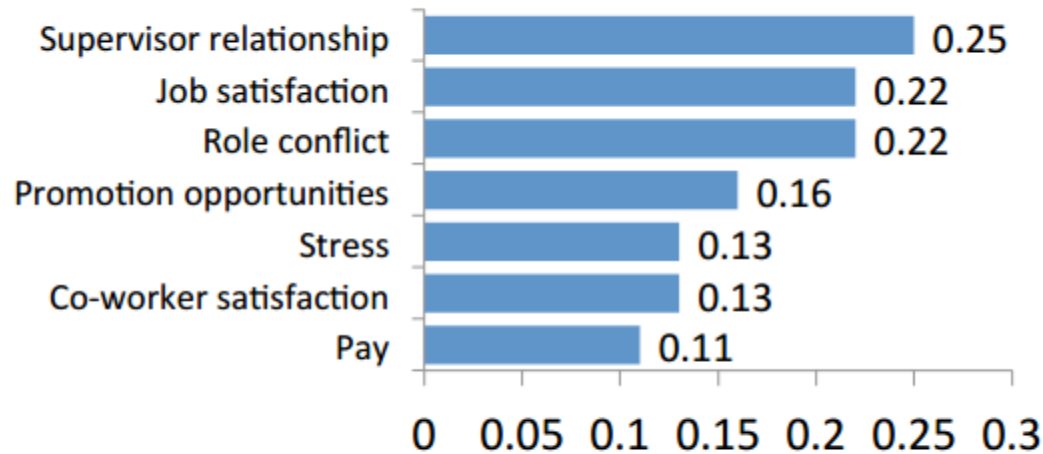
# Where to get this data?

- Surveys
- Calendars
- Emails
- Slack
- Jira

# Turnover & Retention

# Why people leave

## Inverse correlation w turnover



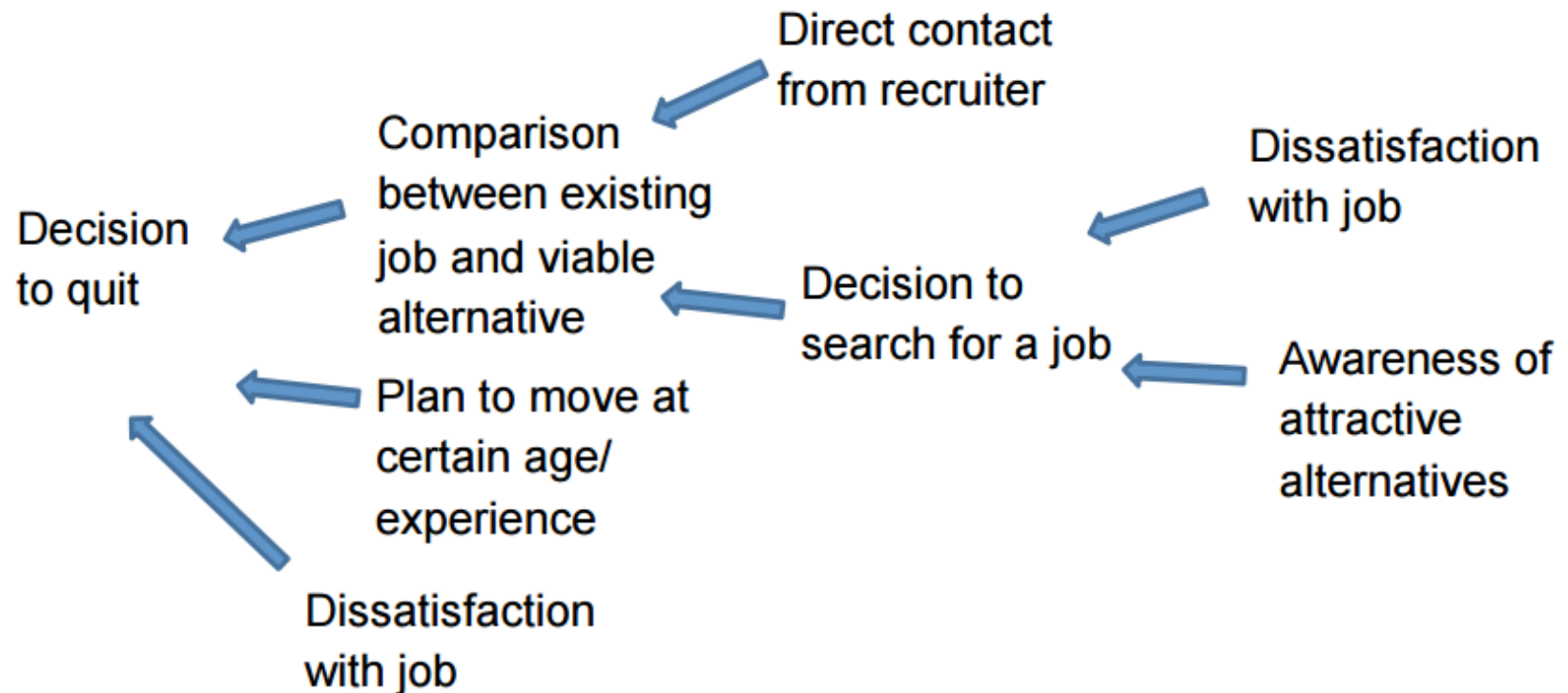
# Strategies for reducing turnover

**Table 3**  
**Evidence-Based HR Management Strategies for Reducing Turnover**

<p><b>Recruitment</b> (Breaugh &amp; Starke, 2000)</p>	<ul style="list-style-type: none"> <li>● Providing a realistic job preview (RJP) during recruitment improves retention.</li> <li>● Employees hired through employee referrals tend to have better retention than those hired through other recruitment sources.</li> </ul>
<p><b>Selection</b> (Griffeth &amp; Hom, 2001; Hunter &amp; Hunter, 1984; Kristof-Brown, Zimmerman, &amp; Johnson, 2005)</p>	<ul style="list-style-type: none"> <li>● Biodata (biographical data) and weighted application blanks (WAB) can be used during the selection process to predict who is most likely to quit.</li> <li>● Assessing fit with the organization and job during selection improves subsequent retention.</li> </ul>
<p><b>Socialization</b> (Allen, 2006; Kammeyer-Mueller &amp; Wanberg, 2003)</p>	<ul style="list-style-type: none"> <li>● Involve experienced organization insiders as role models, mentors, or trainers.</li> <li>● Provide new hires with positive feedback as they adapt.</li> <li>● Structure orientation activities so that groups of new hires experience them together.</li> <li>● Provide clear information about the stages of the socialization process.</li> </ul>
<p><b>Training and Development</b> (Hom &amp; Griffeth, 1995)</p>	<ul style="list-style-type: none"> <li>● Offering training and development opportunities generally decreases the desire to leave; this may be particularly critical in certain jobs that require constant skills updating.</li> <li>● Organizations concerned about losing employees by making them more marketable should consider job-specific training and linking developmental opportunities to tenure.</li> </ul>
<p><b>Compensation and Rewards</b> (Griffeth &amp; Hom, 2001; Heneman &amp; Judge, 2006)</p>	<ul style="list-style-type: none"> <li>● Lead the market for some types of rewards and some positions in ways that fit with business and HR strategy.</li> <li>● Tailor rewards to individual needs and preferences.</li> <li>● Promote justice and fairness in pay and reward decisions.</li> <li>● Explicitly link rewards to retention.</li> </ul>
<p><b>Supervision</b> (Aquino, Griffeth, Allen, &amp; Hom, 1997; Griffeth, Hom, &amp; Gaertner, 2000; Tepper, 2000)</p>	<ul style="list-style-type: none"> <li>● Train supervisors and managers how to lead, how to develop effective relationships with subordinates, and other retention management skills.</li> <li>● Evaluate supervisors and managers on retention.</li> <li>● Identify and remove abusive supervisors.</li> </ul>
<p><b>Engagement</b> (Ramsay, 2006; Vance, 2006)</p>	<ul style="list-style-type: none"> <li>● Design jobs to increase meaningfulness, autonomy, variety, and coworker support.</li> <li>● Hire internally where strategically and practically feasible.</li> <li>● Provide orientation that communicates how jobs contribute to the organizational mission and helps new hires establish relationships.</li> <li>● Offer ongoing skills development.</li> <li>● Consider competency-based and pay-for-performance systems.</li> <li>● Provide challenging goals.</li> <li>● Provide positive feedback and recognition of all types of contributions.</li> </ul>

Allen, Bryant, Vardaman (2010)

# Many paths to turnover



# Modelling attrition

- US insurance company collected data to identify traits of **at-risk** employees
- Employees with **long periods between promotions** and **low-performing managers** **most likely to leave**
- Intervention: development opportunities and training for managers

# Summary

## Recruiting

- Models to streamline hiring and optimize employee success

## Performance Management

- Process vs Outcome
- Wisdom of crowds
- Frequent feedback
- Team vs Individual

## Collaboration

- Identify key processes
- Redistribute workload
- Increase network resiliency
- Reducing collaboration inefficiencies

## Turnover

- People don't quit because of pay
- Other factors involved that are unique to a company and/or team



# References

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- [How Effective Is a Number-crunching Approach to Managing People?](#) (Wharton University)
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- [In headhunting big data may not be such a big deal](#) (New York Times)
- [People analytics reveals three things HR may be getting wrong](#) (McKinsey)
- [Can an algorithm hire better than a human](#) (New York Times)
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- [Wall Street hopes artificial intelligence hires loyal bankers](#) (Reuters)
- [Retaining talent: replacing misconceptions with evidence-based strategies](#) (Academy of Management Perspectives)
- [People Analytics](#) (Coursera)