

VISIER INSIGHTS™ REPORT

TURNOVER CONTAGION IS REAL

A data-based approach to reducing attrition



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Understanding turnover contagion

Many of us have witnessed it, some may have been part of it: As soon as a colleague puts in their resignation at work, their peers start questioning their own career trajectories, exploring other opportunities outside of their organization until they leave their company for the next gig. While many personal, professional, and economic reasons contribute to a person's decision to leave a company¹, the phenomenon of workers quitting their jobs because their peers resigned has long been studied under the term "turnover contagion."²

Turnover contagion is defined as an employee's transmission of their intention to leave to people around them, and occurs as humans tend to compare themselves to others,³ or imitate others' withdrawal from the organization.⁴ In other words, when an employee begins to behave in a way that lets their colleagues think they may be looking for a new job, or if they actually resign, other employees may be triggered to follow suit. Interestingly, current turnover models typically focus on *individual* employee's resignations, causing HR and business leaders to underestimate the impact of a possible contagion effect on peers, and hence, they remain unprepared for mitigating the risk of undesirable levels of attrition.

Many organizations underestimate the impact that one person's resignation can have on their peer's decision to leave or stay.

Is turnover contagion a real phenomenon that can be observed? What can organizations do to mitigate the risks of this phenomenon?

The present report describes the findings from an experimental research study powered by data science, based on the millions of live employee records in the Visier Community Data. The goal of this study: To test if turnover contagion is a real phenomenon that can be detected and better understood in its nature, effect size, and time frame.

It is also meant to help organizations recognize the need for a better data-based assessment of their risk of turnover contagion. We discuss suggestions on the metrics to track in order to mitigate the risk of contagion taking effect.





Resignations can, in fact, be contagious

In times of post-pandemic recovery and in the midst of a tight labor market, turnover caused by resignations in itself is both undesirable and costly for organizations—let alone if it happens in droves. The direct and indirect costs of voluntary turnover have been calculated to be about \$110,000 per lost employee⁵ as well as these additional costs to the company:

- Jeopardizes the organization’s ability to achieve its planned business goals
- Increases the need for external hiring⁶, drives wages up for both new⁷ and rehires⁸
- Creates disruption and frustration for remaining team members

Social psychologists have long argued that how someone’s colleagues see the world, and how they behave at work matters as people naturally look to others, including when making decisions about whether or not to start looking for another job.⁹ However, many turnover models look at resignations as individual occurrences, despite the fact that employee resignations happen within a social setting of peers or colleagues.

Employee resignations are not isolated events, but happen in a social setting.

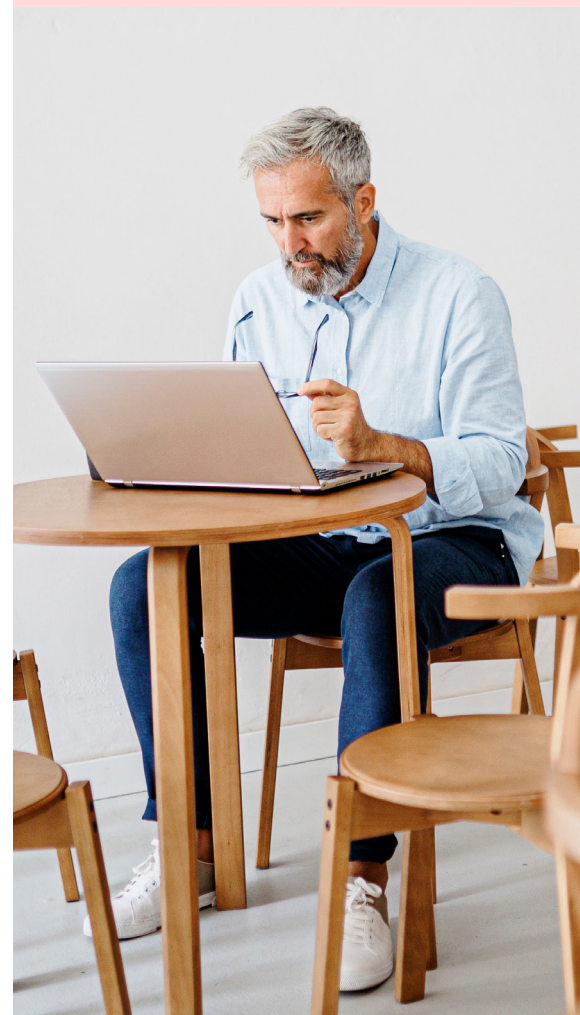
The present study set out to see if the live employee events data in our Visier Community Data reveals if, how, and when turnover contagion has a visible effect on employee resignations. To find out if a resignation by one employee indeed triggers additional resignations by other employees, we conducted an experiment with tens of millions of actual employee records of people who worked in 86 organizations with more than 1,000 employees across all geographies.

We observed two separate groups of employees (which we define as “On the Team” and “Not on the Team”) over a time period of February 2019 to June 2022, and tracked if an *initial resignation* by an employee would lead to more, earlier, and more frequent subsequent resignations by their teammates under the same manager (On the Team). For each On the Team group, we created a second “control” group of the same size by randomly assigning employees as long as they were not part of this team (Not on the Team). This allowed us to directly measure the effect of resignations to teammates—by contrasting them with employees that are not teammates—over the same period of time following an “initial resignation.”¹⁰



9.1%

When a resignation occurs, employees on that team are 9.1% more likely to leave within the next 135 days than employees who are not on that team.





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In our sample, after the initial resignation of any employee we found an increase in their peers' subsequent resignations (On the Team). In contrast to Not on the Team that also experienced resignations throughout the time period of our study, On the Team employees handed in their resignations earlier, and in higher frequency after their first colleague resigned, which supports the turnover contagion effect.¹¹

The difference of these behaviors in terms of earlier, more, and faster resignations for On the Team peers can be thought of as a higher probability of further resignations of 9.1% than that by other employees who were Not on the Team.¹²

These subsequent resignations, which we suggest are due to a turnover contagion effect, were observed within the time frame of zero and 135 days after an initial resignation (Figure 1: Difference in probability of resignations for peers On the Team and Not on the Team).

Figure 1: Difference in probability of resignations for peers On the Team and Not on the Team



Source: Research & Insights, Visier Inc. 2022

The chart shows the normalized count distributions (or probability density distributions) of resignations that follow an initial resignation for On the Team members (red line) and Not on the Team members (gray line). The pink shaded area between the two lines represents the difference in probability of resignations between the two groups and occurrence of subsequent resignations, or a ratio of 9.1% which represents the increased probability for subsequent resignations for On the Team members (red line).



Smaller teams have higher probability to experience higher resignations due to turnover contagion

After establishing that turnover contagion effects can be observed across our samples, we wanted to know if the turnover contagion effect is stronger or weaker, depending on the size of the team.

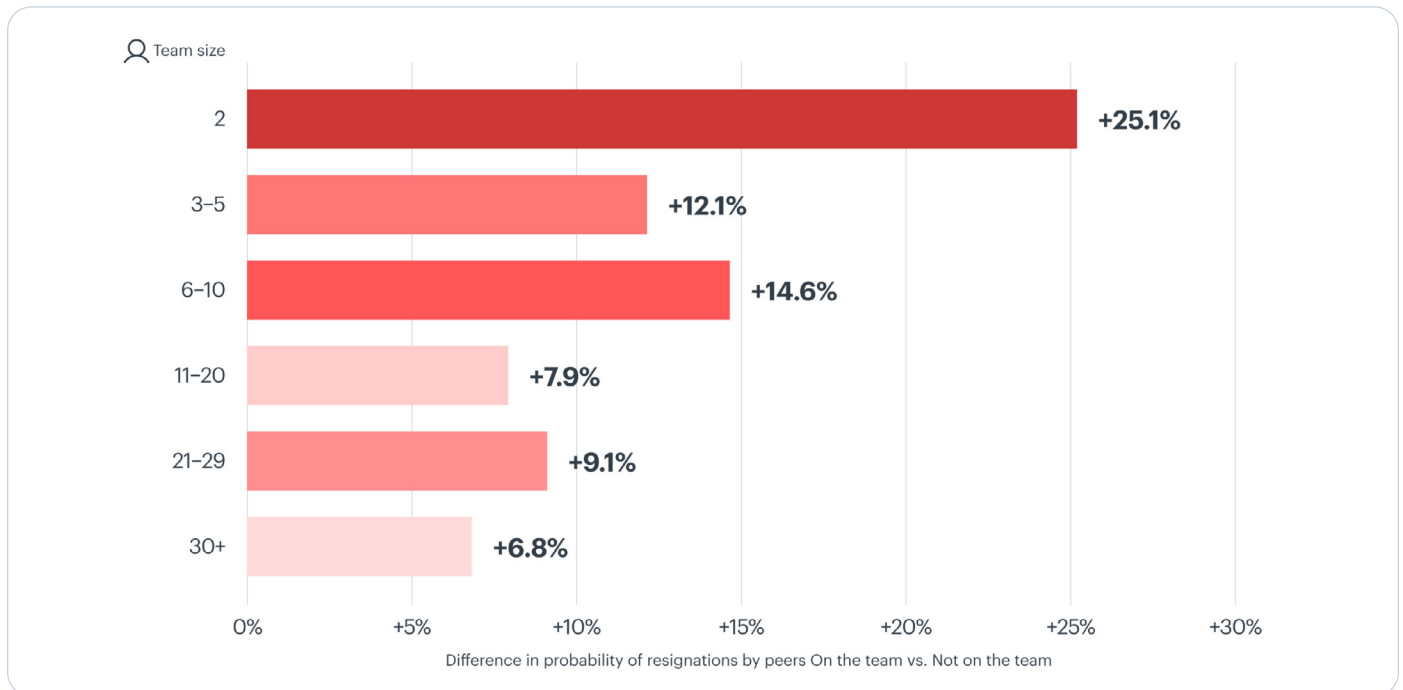
As shown below (Figure 2: Turnover contagion effect by team size), the pattern is in regards to the difference in contagion effects comparing if resignations by employees On the Team and Not on the Team persists.

What's more, smaller teams seem to experience a higher probability of turnover contagion than larger teams, with the difference between On the team and Not on the Team groups in the effect being 25.1% in teams of two, 12.1% in teams of three to five, and 14.6% in teams of six to ten team members.¹³

Teams of six to ten members have a 14.6% increased probability that others leave due to a peer's resignation.

These results coincide with what is known about the link between team size and team cohesiveness and performance, whereby a commonly accepted benchmark for the 'ideal' team size lies between five to seven members.¹⁴ The fact that teams between six to ten members see an increased probability for turnover contagion effects seems to confirm this number, but not without pointing at a possible downside of team coherence; smaller, more interconnected teams might perform better but the risk of turnover contagion also increases.

Figure 2: Turnover contagion effect by team size



Source: Research & Insights, Visier Inc. 2022



Turnover contagion peaks around 70 days after the first resignation

Timing also matters when it comes to turnover contagion. First, our analyses show that the moment an employee resigns, the risk of turnover contagion for other members On the Team exists, and it lasts for about 135 days after that initial resignation.

The risk of turnover contagion rises the day of the initial resignation of a team member.

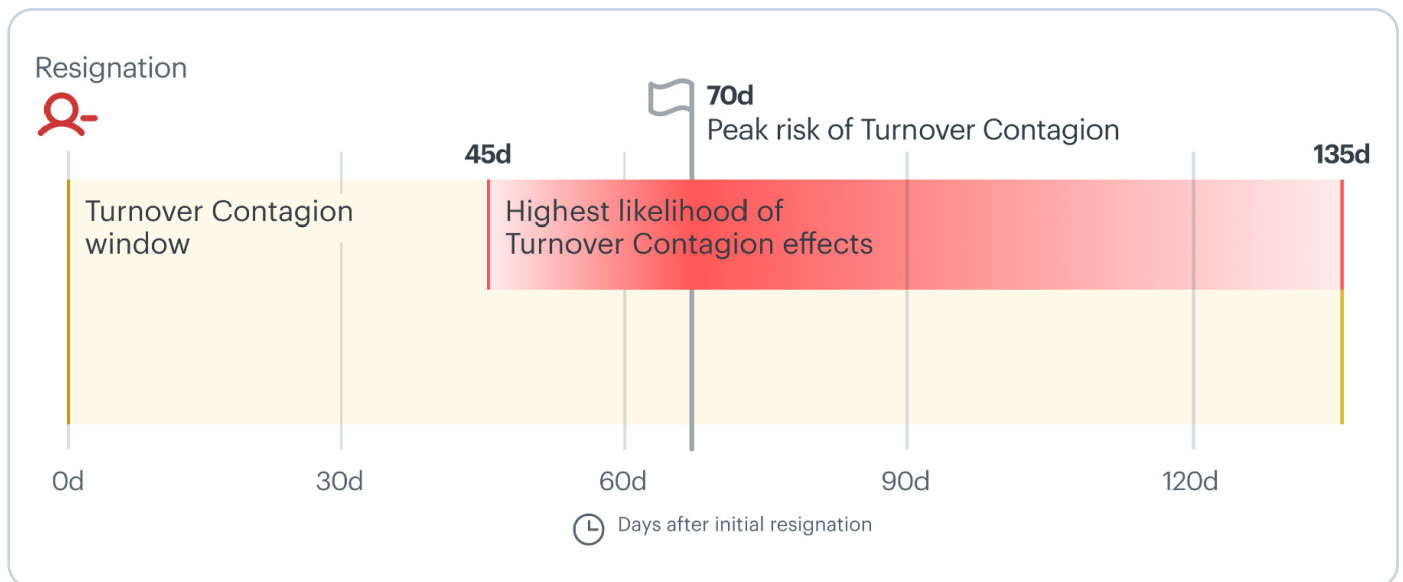
The risk of turnover contagion rises the day of the initial resignation of a team member. Second, the probability of turnover contagion to take effect in the form of further resignations by team members (On the Team) becomes

more likely at around 45 days, and peaks at 70 days after the initial resignation (Figure 3: Critical time frame for turnover contagion).

Knowing the time frame that defines turnover contagion as being an effect, rather than a random occurrence, is critical for both understanding the phenomenon and to plan for interventions.

Mitigation strategies for turnover contagion should aim at 45 to 135 days after the first team member resigns.

Figure 3: Critical time frame for turnover contagion



Source: Research & Insights, Visier Inc. 2022



Summary

Employees observe each others' behaviors, intentions, and choices, and an event such as a colleague quitting their job can trigger such considerations even in employees who had not thought of this option before.

Our findings that are based on actual, live employee events data validate what has long been suspected: Among other possible reasons, people do indeed leave an organization in reaction to their team members' resignations—because such important events do not happen in isolation but within the social setting of a work group or team.

Our analysis shows that team members of a resigning employee are at least 9.1% more likely to quit within 135 days of their colleagues' resignation, an effect that is stronger for smaller teams between two and ten team members, and which peaks around 70 days after the first person resigned. The value of these findings lies in the fact that this information serves valuable insights about the potential risk of turnover contagion, which allows HR, business leaders, and line managers to plan for risk assessment and mitigation strategies for talent retention in a more targeted manner.





Predictive analytics: knowing who might be next to quit

Effective workforce planning and analysis includes being able to forecast how many employees are likely to leave, which may include turnover contagion as an added risk factor. Reliable predictions make it easier to match workforce supply with demand, whereby even small improvements in accuracy can lead to significant savings. While predictive analytics cannot completely eliminate undesirable turnover, it is one critical tool in the toolbox of business and HR leaders that can help assess and track progress in mitigating unnecessary resignations. In addition to using predictive analytics to stay abreast of phenomena like turnover contagion on an organizational level, there are also certain actions people managers and team leaders can take to try to prevent turnover behavior from turning into uncontrolled contagion events. There are a variety of resignation attributes to include in an employees risk profile, such as:

- Job title and internal organization
- Age and tenure
- Location
- Compa-ratio¹⁵
- Performance rating
- Time since last promotion
- Training hours
- Peer resignation events

Understanding the organizational dynamic in terms of voluntary turnover and resignation patterns is one of the most critical steps an organization can take to mitigate the risk of turnover contagion. Predictive models are based on historical employee data and employee events, such as resignations, and calculate the probability of an employee's resignation based on their similarity to previous employees who quit the organization.





Tips for managers to mitigate the risk of turnover contagion

The actual separation process could begin even earlier, and a person who is considering a resignation may have shown other behaviors that are indicative of their plans to leave the organization for quite some time. For example, the making of certain passing remarks, or a decrease in someone's organizational citizenship behaviors may indicate so-called 'pre-quitting' behaviors that may be noticeable to peers,¹⁶ and hence give rise to similar resignation intentions in others. Here are a few actions people managers can take:



Watch out for employees' pre-quitting behaviors

Researchers established a list of 'pre-quitting behaviors' managers can use to assess team members they are worried about losing to resignations due to turnover contagion or other.¹⁷ Decreased productivity, a lesser commitment to long term timelines, or leaving early from work more frequently than usual could be signs of disengagement and reveal quitting intentions. While staying connected with team members should be part of every manager's daily leadership tasks, our research suggests its critical importance in the months especially after a team members' resignation.



Mind the time window after a team member's resignation

The risk of losing further team members after an employee's resignation is increased in the first few months after the initial resignation, specifically for 135 days or 4.5 months after the first team member's resignation. While line managers should always work on talent retention activities, in order to mitigate the risk of turnover contagion it may be particularly important during the first five months after losing a team member to focus on career conversations, 'stay-interviews,' or the exploration of internal mobility opportunities to further engage remaining team members.



Onboard in cohorts to strengthen social ties beyond the team

The consideration of social ties between employees may be an overlooked component in organizational hiring, onboarding, and retention strategies. Especially in hybrid or remote work environments, it has become increasingly important to enable those social ties to others at the organization, and cohort onboarding is one way to achieve this.¹⁸ Giving new employees the opportunity to form relationships with others throughout the company at the beginning of their tenure could help root them beyond their immediate teams, and hence, potentially mitigate the risk of falling prey to turnover contagion.



Experiment Methodology

To conduct this experiment, we first captured initial turnover events which we refer to as initial resignations. Using these employees with initial resignations, we divided the employee populations from our community data into two groups: The 'turnover contagion research groups' (referred to in the subsequent charts as 'On the Team'), and the 'Control groups' (referred to as 'Not on the Team').

While "On the Team" are groups of team members who worked for the same manager at the time of the initial resignation as one of their peers, the 'Not on the Team' are groups of random employees assigned to other teams. Not on the Team group were grouped with the same team sizes as the On The Team group to draw fair comparisons in our analysis.

For both team groups, we tracked the employees over time until capturing a resignation that followed the initial resignation and recorded the count distributions of these resignations over time. These resignations were found within a predefined period of 600 days¹⁹. For On the Team members, we captured around 1.6 million resignation events.

For Not on the Team members, we generated the random groups 20 times to ensure a statistically averaged control for every "On-the-Team" group, resulting in 30 million resignation events captured. The experiment's time frame for the subsequent resignations was between February 2019 and June 2022, whereas the initial resignations were from February 2019 to October 2020 to allow the forward look period of 600 days.²⁰

We were then able to create probability distribution functions for each group (Figure 1) using these counts of subsequent resignations and also slice them by each team size category (Figure 2). The relative probability difference of resignations between the two groups was calculated by measuring the area between the two curves from the start of the experiment to the point of intersection of the curves. The point of intersection was determined as the maximum time in which the difference between the groups had an uncertainty value of > 0.001 . These are the differences or increases in probabilities reported for On the Team vs Not on the Team and this is the turnover contagion effect.





Contributors

Anton Smessaert, PhD, Head of Data Science & Engineering

Dr. Anton Smessaert is the Head of Data Science & Engineering at Visier, the leading innovator in People Analytics solutions. His responsibilities include innovation in advanced statistical techniques, technologies and products based on Visier's unique datasets, as well as joint research programs with academic partners. Anton holds a PhD in Computational Physics and a German Physics degree with specialization in Machine Learning.

Carlina Kim, Data Scientist

Carlina is a Data Scientist at Visier co-leading the Publications Focus Area on the Data Science & Engineering team. Her primary work involves developing findings and analyses with our data for research projects and insights reports working with researchers and data engineers. She holds a Masters in Data Science and a background in Environmental Sciences.

Andrea Derler, PhD, Principal, Research & Value

Dr. Andrea Derler is the Principal, Research and Customer Value at Visier, an organizational researcher, and previously, a human capital analyst. She has a background in management research, human science, and human capital consulting. At Visier, Andrea leads research efforts and helps produce data-based, practice-oriented, and actionable insights for business and HR leaders.

Ian Cook, VP, People Analytics

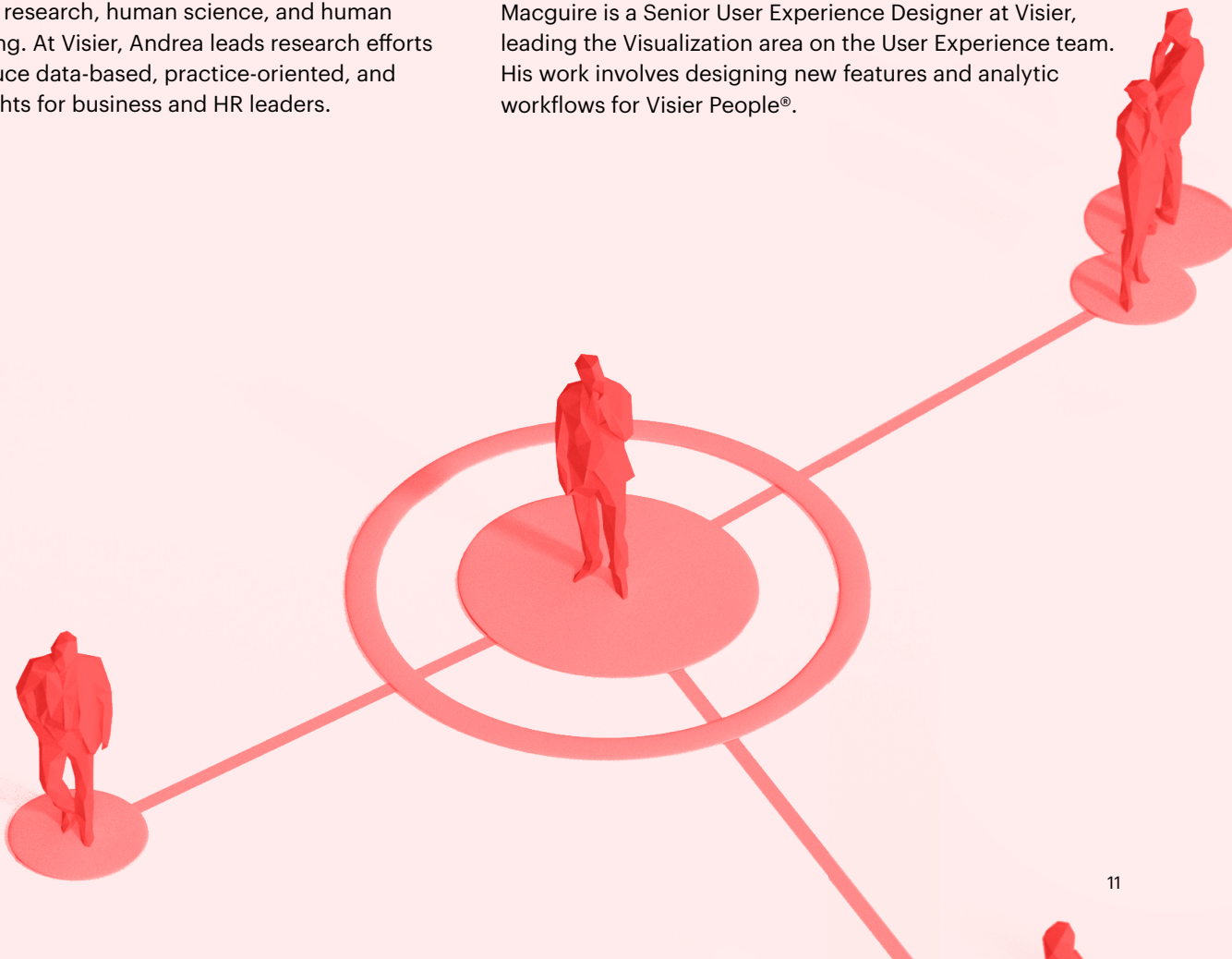
Ian is an advocate for the crucial role that people play in helping companies thrive. His career has focused on enabling people, teams, and companies to perform at their best. For the last 15 years, Ian has been helping leaders elevate their HR strategies and programs through the effective use of people analytics. At Visier Ian led the development of our market-leading solution. He is currently involved in helping people analytics teams everywhere improve their scale and impact. Ian holds a Masters from Edinburg University, UK and an MBC from Lancaster University, UK.

Mike Everitt, Principal Solution Consultant

Mike has spent the last 24 years working for various HR software companies including PeopleSoft, Oracle, and now Visier. He started his career educating customers, before moving into Solution Consulting. Mike advises companies across industries on HR software purchases and deployment, focusing on People Analytics, where he helps organizations understand the benefits and impact it can have on business and talent.

Macquire Rintoul, Senior User Experience Designer

Macquire is a Senior User Experience Designer at Visier, leading the Visualization area on the User Experience team. His work involves designing new features and analytic workflows for Visier People®.





About our Data

The findings as presented in this report are curated from Visier Community Data. Visier's database contains >17 million employee records from over 12,000 customers in 75 countries.

Companies represent a wide range of industries, including healthcare, technology, financial services and insurance, energy, and manufacturing, and weighted averages account for different headcounts per each organization.

For each of the included companies, Visier ensured a high degree of confidence in both data availability and quality for the topics and time period being covered by this report.

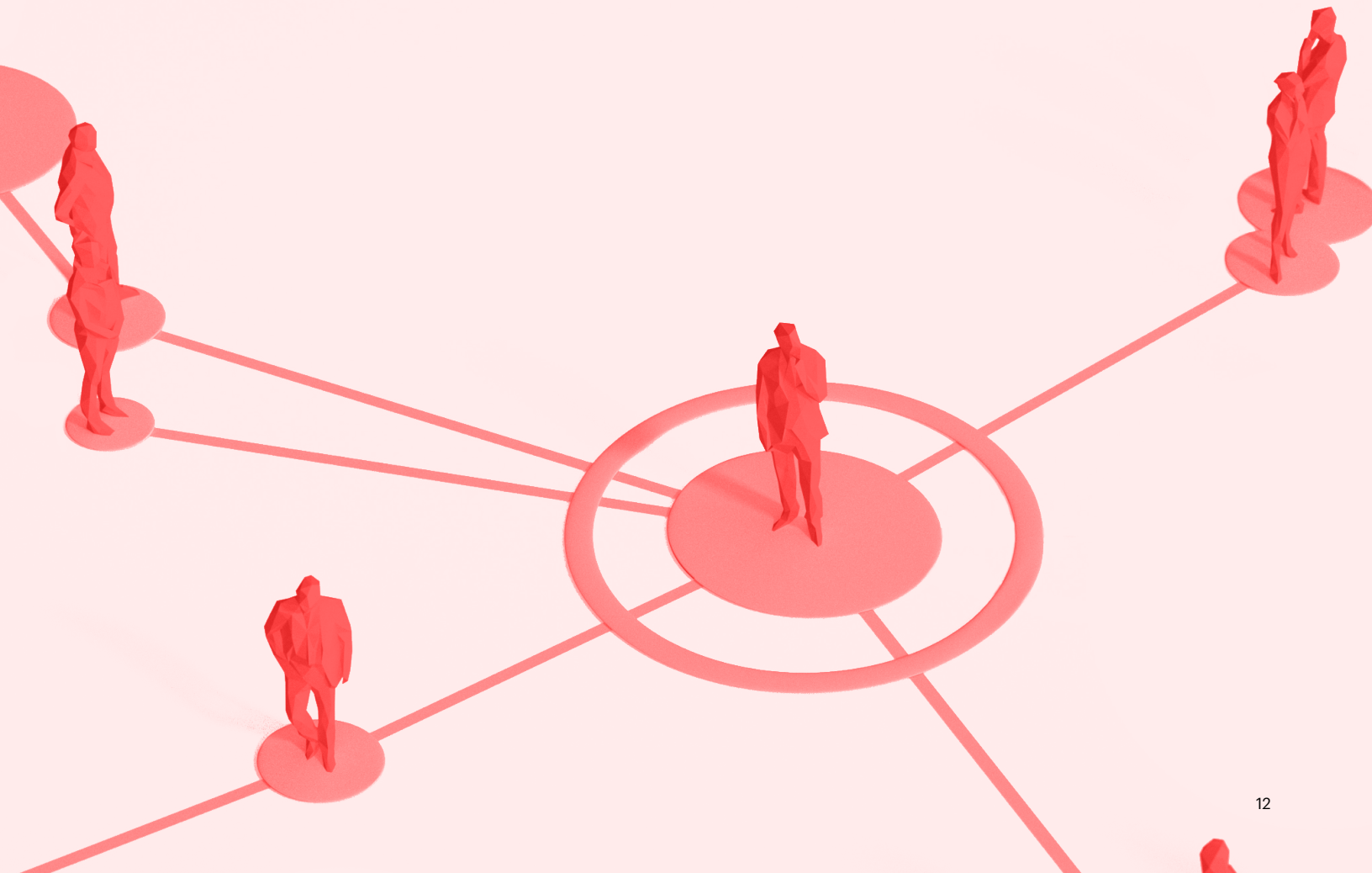
Visier Research Program

Visier's research team is looking for innovation partners to advance people analytics, operations research, diversity and inclusion, economics, and data science. With the Visier research program, we answer questions about the modern workforce and set directions in people analytics.

Qualified academics, partners, and customers can gain access to our unique dataset—HR data containing more than 17 million employee records from over 12,000 customers operating in 75 countries—to find trends in workplaces and the economy.

Interested in working with us?

For inquiries about how to conduct research on our dataset, please email us at research@visier.com.





Endnotes

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10. Please refer to the methodology section of this report for further details on this experiment.
11. The term "turnover contagion" includes other forms of turnover such as voluntary (e.g. retirement), as well as involuntary (e.g. terminations), but found that the contagion effect we measured was most significant for resignation events.
12. The 9.1% describe a relative (as opposed to an absolute) change between the two groups.
13. The team size numbers include the person who kicks off the contagion effect in the team through their resignation.
14. Thompson Britta M. et al (2015). Team cohesiveness, tem size and team performance in team-based learning teams. *Medical Education*, 49: 379-385
15. Compa-ratio measures employees' current pay rates as a percentage of range midpoints. The measure helps assess if an employee is paid below, at or above market rates. Source: shrm.org/resourcesandtools/tools-and-samples/hr-glossary/pages/compa-ratio.aspx; 09/30/2022
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19. We estimated 600 days to be the largest realistic time frame within which resignations due to a contagion effect could be expected.
20. We considered that the COVID-19 pandemic may have impacted the number of overall first resignations, also referred to as origin events. However, since we compared the turnover contagion research group with a control group in the same period the effect on team members' resignations still held true regardless of that particular time period. Critical is the difference of number of resignations for team members in the turnover contagion research group, versus the non team members in the research group.

About Visier

Visier's purpose is to reveal the human truth about your workforce and contribute to a better future.

Visier was founded to focus on what matters to business people: answering the right questions, even the ones a person might not know to ask. Questions that shape business strategy, provide the impetus for taking action, and drive better business results.

Visier delivers fast, clear people insight by using all the available people data—regardless of source. With best-practice expertise built in, decisionmakers can confidently take action. Thanks to our amazing customers, Visier is the market leader in Workforce Analytics, with more than 15,000 customers in 75 countries around the world.

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