Turnover Analysis Proposal

Consult with Stakeholders

Identify and prioritize

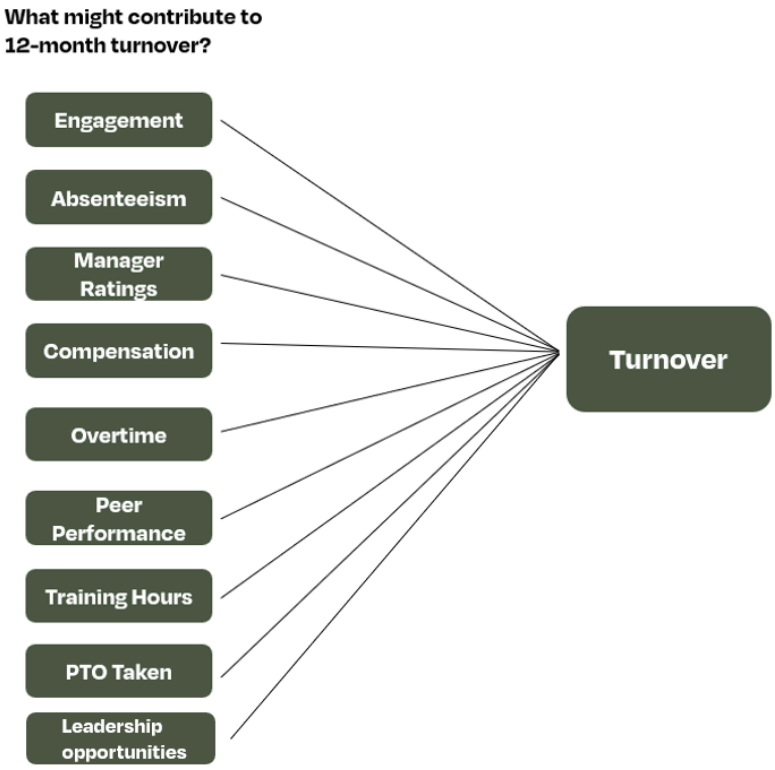
Identify who would provide us with the most diverse perspectives and prioritize them. For instance, we can include leaders whose turnover is the highest to understand what they think is going on.

Create Question Strategy to Surface Issues

Develop strategic questions to guide deeper thinking. Include one or two high gain questions that lead into probing questions then ending with close-ended questions (see table below). Continue questioning to make connections and ask for more information.

Type of Question	
High-Gain Questions	What keeps you up at night? What three changes would make the biggest difference to you? What three changes would make the biggest difference in the organization's metrics? What metrics do you think are driving turnover?
Probing Questions	What are some barriers and challenges? What do you see happening in the 3-4 years if those three changes do not occur?
Closed Questions	Do you think this is an organization or department issue? Do you think the organization could fix these issues?

After collecting stakeholder input, I will create a path diagram to display the different independent variables that could potentially contribute to turnover to visualize the variables.



Develop Hypotheses

Based on what we learn from stakeholders, we can create some possible hypotheses. In this example, the dependent variable is turnover and the independent variables are engagement, absenteeism, manager ratings, compensation, overtime, performance, training hours, PTO taken, and leadership opportunities.

1. Low engagement among team members leads to turnover.
2. The more absenteeism, the greater the turnover.
3. Team members whose managers have low performance ratings are more likely to leave.
4. Team members with low compensation are more likely to leave.
5. The amount of overtime team members work is tied to turnover.
6. Team members with lower performance are more likely to leave.
7. The less training hours are tied to turnover.
8. The fewer PTO days team members take, the greater the turnover.
9. Less leadership opportunities lead to turnover.

Assemble Metrics to Test Hypotheses

In this step I will identify and access the data needed to test our hypotheses. In this beginning step, I would start by pulling only quantitative data. See below for an example of potential metrics I can use to measure all our independent variables and where to find them.

Engagement
- Engagement scores - Engagement survey

Absenteeism
- Absenteeism Rate - Workforce Management

Manager Ratings
- Performance review ratings
- 360-degree feedback

Compensation
- Pay grade/range - Benefits (Compensation Analysts)
- Compensation Ratings - Engagement Survey

Overtime
- Overtime hours worked - Workforce management

Peer Performance
- Ratings from Managers
- Ratings from team members

Training Hours
- Number of hours spent training - Learning & Development

PTO Taken
- Amount of PTO taken - Workforce management

Leadership Opportunities
- Internal promotions to leadership roles YTD

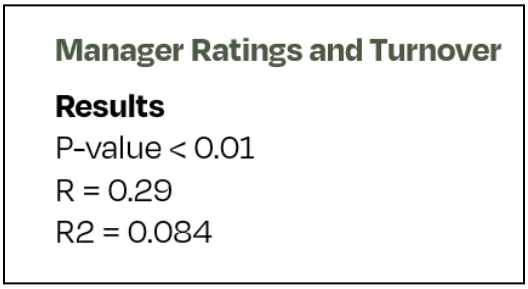
Analyze Data

Once I have received all necessary and clean data to test our hypotheses, I'd begin running different statistical models.

Establish correlations

First, I would test the correlations between the independent variables and turnover. If the relationship is significant, it tells us that the relationship is due more than chance. The

correlation strength will tell us how strong of a relationship the two variables have and how much of turnover is accounted for by the variable. See below for example.



This tells us that the relationship between manager ratings and turnover is significant–it is due to more than chance, but the relationship is weak. This means that manager ratings explain only 8.4% of the variance in turnover.

I would test all independent variables to examine whether they have a relationship with turnover. With these results, we can conclude which variables have a link to turnover. Next, I will run a logistic regression model to determine the weight of each variable's contribution to turnover.

Use regression analysis to determine likely causes

This will help us drive decision-making. We can run a logistic regression model on all the variables so we can make the case that one variable is likely to have caused another. The regression analysis will tell us how the changes in each independent variable is related to changes in turnover.

Independent Variable	p-value	Beta
Engagement Score	0.00	1.096
Absenteeism	0.00	2.282
Manager Rating	0.002	0.256
Compensation Rating	0.136	0.583
Overtime	0.148	2.872
Peer Performance Rating	0.163	0.485
Training Hours	0.692	1.432
PTO Days Taken	0.815	1.842
Leadership Opportunities	0.996	0.483

Only three variables in this model significantly contribute to turnover independently (e.g., engagement, absenteeism, manager rating). The beta coefficient will tell us the weight of each variable on turnover and the amount of change each variable has on turnover.

For instance, the beta coefficients for Absenteeism suggest that on average, a one-unit increase in absenteeism is associated with a 2.282 unit increase in turnover. It implies a strong positive impact.

Findings from the Regression Model & Probability of Risk

After I run the regression model, we will discover what variables contribute to turnover. Next, I can use probability to uncover risk. Data from the logistic regression will allow me to calculate the probability of a team member leaving based on the variables that contribute to turnover (e.g., engagement, absenteeism, manager rating).

I can narrow the focus to look at individuals by each risk factor. I will use the beta values to weigh each variable based on their contribution to turnover. I will then analyze the probability of each individual leaving by next year. This will reveal who is most likely to leave.

Consult

Once we have the top team members at risk, we can develop a plan to consult with them. We can conduct stay interviews. Stay interviews will help us see what factors are working, see what they think is going on, and what they would change to make their experience better.

Compare groups

I can follow the variables that have a relationship with turnover across groups to examine whether there are any significant differences (i.e., org level 3, employee type, location). I can use this to figure out if specific variables are a department or organization issue. I will run a chi-squared or ANOVA test to show statistical significance by each group. The p-value will tell us whether the variables move independently or in relationship with one another. It will also indicate the probability that the data could be explained by chance.

Manager Ratings

Department	Number of Ratings (N)	Mean	Std. Deviation	Std. Error Mean
7 Kitchens	45	2.89	0.822	0.048
Emerald	50	3.85	0.553	0.032

p-value < 0.01

In this example, the p-value tells us that there is a significant difference in manager ratings between the departments. 7 Kitchens rate their manager significantly less than Emerald. This will allow us to dive in deeper to what is going on between departments.

Odds Ratio

An odds ratio can be conducted as another form of probability. However, instead of looking at specific individuals at risk, odds ratio will tell us what group of individuals are at risk and how likely they are opposed to the opposite group. See below for examples using real data.

- Team members with higher engagement are about 2x more likely to stay.

	High Engagement	Low Engagement
Active	1805	374
Inactive	471	179
Ratio	3.83	2.09

3.83/2.09 = 1.83

- Team members that work in 7 Kitchens are just as likely to leave as team members that work in Emerald.

	7 Kitchens	Emerald
Active	65	88
Voluntary Terminations	32	46
Ratio	2.03	1.91

2.03/1.91 = 1.06

There is no significant difference.

Odds ratios are useful when we want to look at the probability of risk by groups. Using beta coefficients to create probability ratios can be useful when we want to look at specific individuals.

Future Direction

After discovering the variables that contribute to turnover, their variance of contribution, to turnover and what groups are most at risk for leaving, we can dig deeper and investigate what might be going on. With more information, we can create plans to improve retention and test that process to see if it has an effect on turnover.