BOLT UBC X TEAM 2

REVERSING EMPLOYEE TURNOVER

Team 2

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Agenda

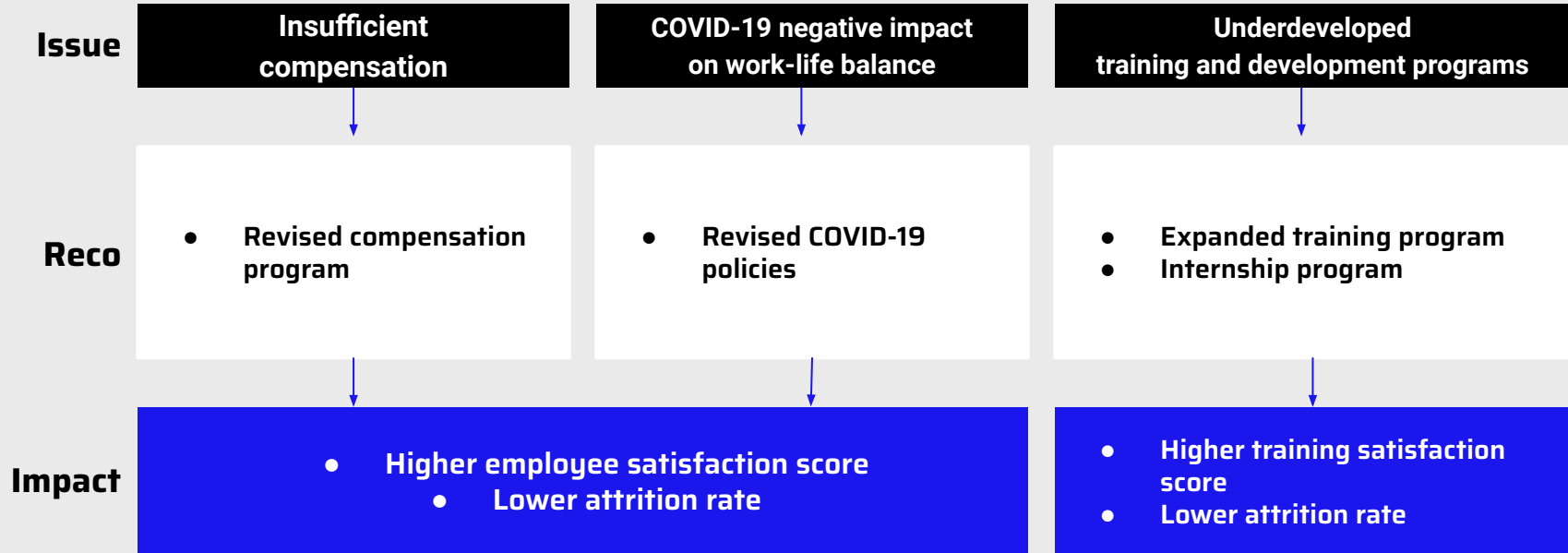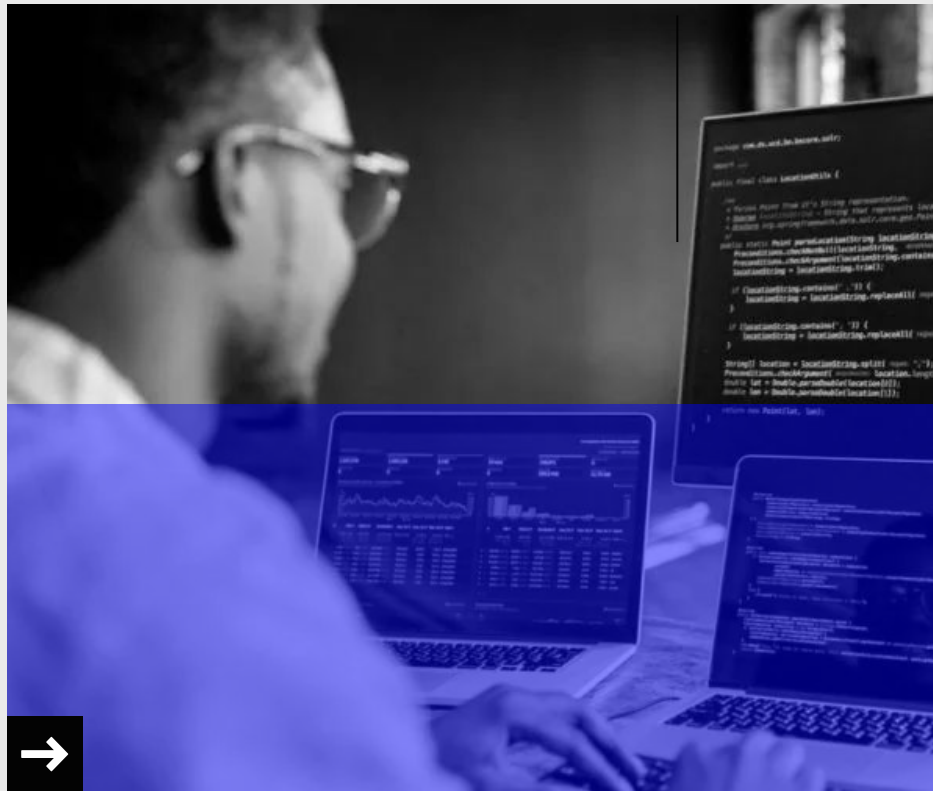| Topic |
|---|
| **Executive Summary** |
| **Situational Analysis**
    1.   Industry analysis
    2.   Company analysis |
| **Issue Analysis** Compensation is insufficient compared to industry standard
    1.   COVID-19 caused major shifts in work-life balance
    2.   Culture, training, and development program are undeveloped |
| **Decision Criteria** |
| **Measure of Success Criteria** |
| **Recommendations**
    1.   Compensation is insufficient compared to industry standard
    2.   COVID-19 caused major shifts in work-life balance
    3.   Culture, training, and development program are undeveloped |
| **Implementation Timeline** |
| **Conclusion** |

EXECUTIVE SUMMARY

Executive Summary

This report analyzes the potential root causes of Summit Biotech's rising attrition rates over the past year and presents recommendations to solve the issue.

Issue

Insufficient compensation	COVID-19 negative impact on work-life balance	Underdeveloped training and development programs

Reco

- Revised compensation program
- Revised COVID-19 policies
- Expanded training program
- Internship program

Impact

- Higher employee satisfaction score
- Lower attrition rate

- Higher training satisfaction score
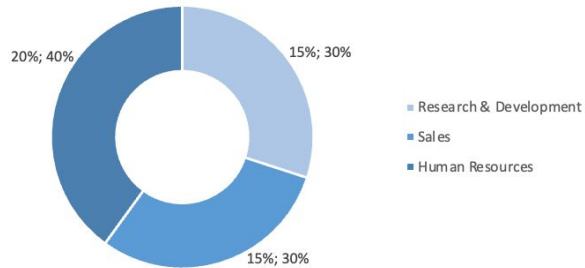- Lower attrition rate

SITUATIONAL ANALYSIS

MEDICAL DEVICE MANUFACTURING INDUSTRY FACTS AND FIGURES

*The medical device manufacturing industry in Canada has grown on average **4.8%** in the past **5 years** (IBISWorld, 2021). The growth of the industry is driven by various factors, most notable being the **growing aging population** and **increased public and private spending** in the healthcare sector.*

Attrition % by Department

20%; 40%

15%; 30%

15%; 30%

- Research & Development
- Sales
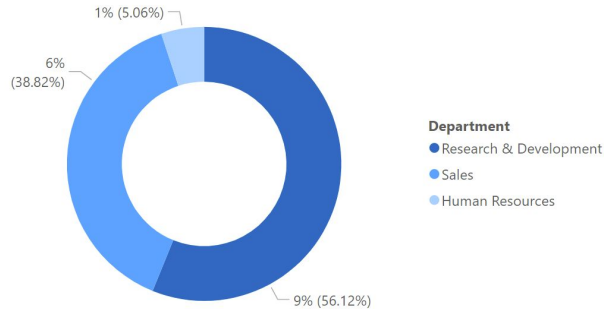- Human Resources

12% — Average Attrition Rate

$1300 — Average Cost per Hire

25% — Average % of employees who have worked OT in the past year, out of total employees

SUMMIT BIOTECH FACTS AND FIGURES

*Summit Biotech is a **medical device manufacturer** based in Vancouver that focuses on developing **proprietary treatments for cardiac conditions**. The company invests heavily in research & development and is focused on recruiting top talent in the life sciences and research sectors.*

Attrition % by Department

1% (5.06%)

6% (38.82%)

9% (56.12%)

Department
- Research & Development
- Sales
- Human Resources

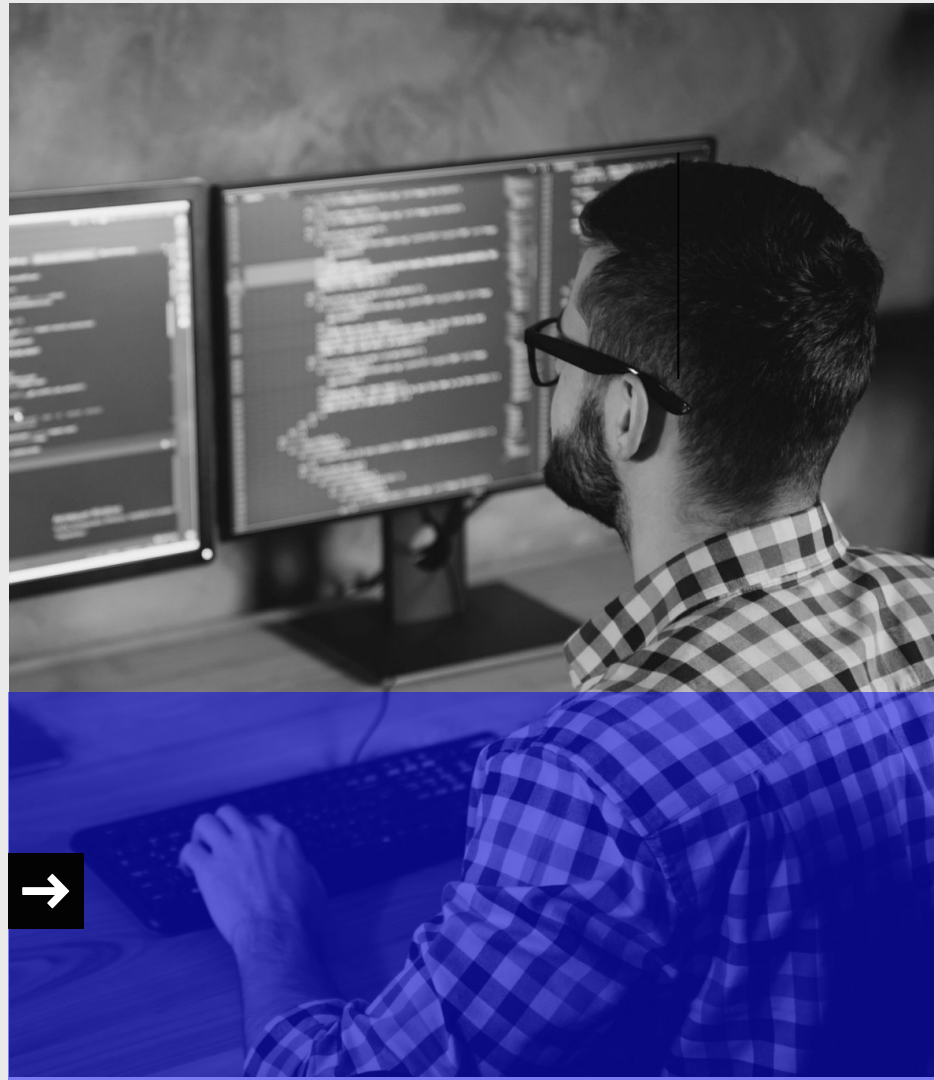|	
1470	Total Number of Employees
16%	Average Attrition Rate Summit Biotech
$1450	Average Cost per Hire Summit Biotech
28%	Average % of employees who have worked OT in the past year, out of total employees

Issues
Analysis - based
on Machine Learning model

01

1.   INSUFFICIENT COMPENSATION

On average, Summit's non-managerial employees' monthly income is lower than industry standard

Non managerial employees who left the company received lower monthly income compared to industry average
- Sales Representatives
- **Research Scientists**
- **Lab Technicians**
- Human Resources

(See Appendix 1)

This has **considerable impacts** on the employee's attritions

Box plot of Monthly Income
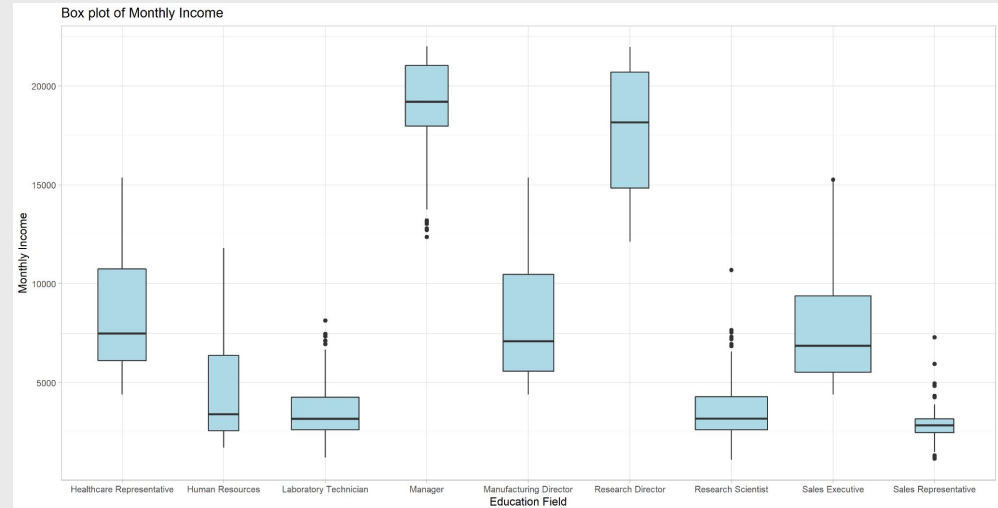
1. INSUFFICIENT COMPENSATION

Stock Option do not have direct impact on employees' attrition

While it is brought to attention that our Stock Options policy is not favoured by some employees, it is **not** directly related to Employees' Attrition Rate
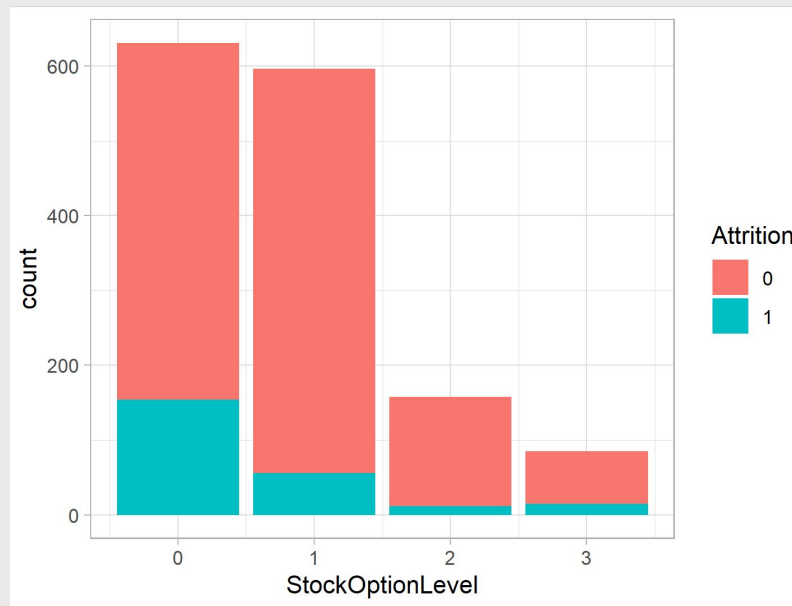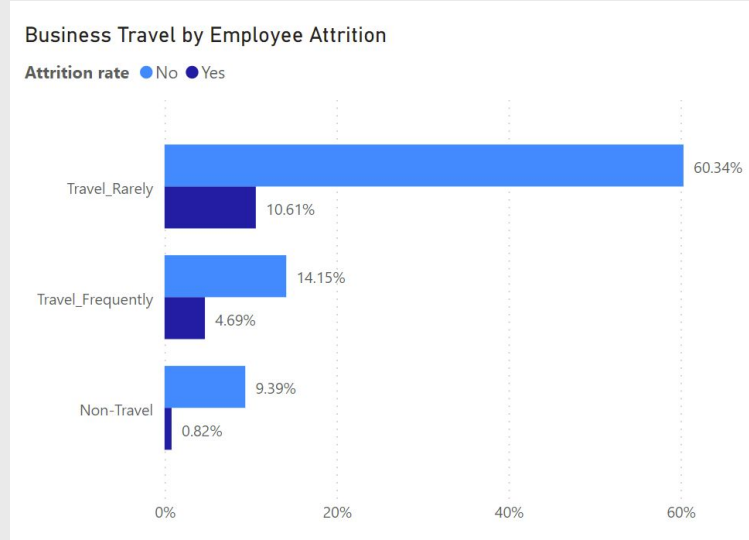
2. COVID-19 IMPACT ON WORK-LIFE BALANCE

Employees who frequently travel are mostly impacted by Covid – 19

While **60%** of Summit's employees rarely engage in business travel, the impact of Covid-19 can be clearly observed among those that travel frequently
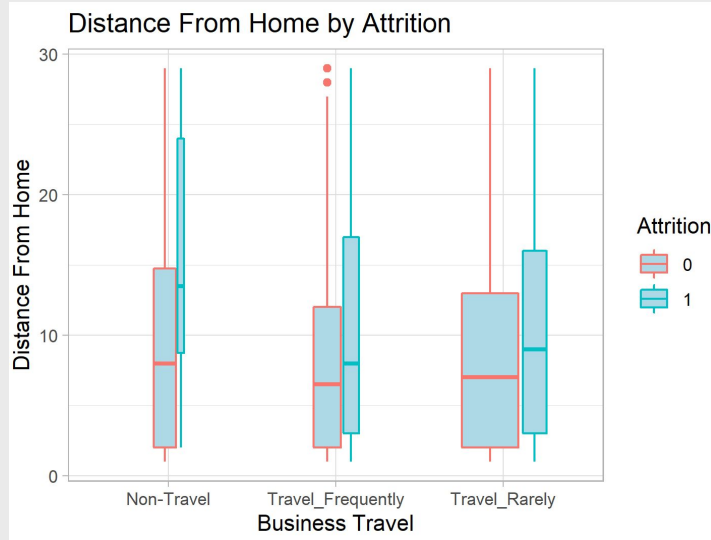
33.14% of employees who **travel frequently** left the company last year compared to 17.5% among those who rarely travel

Distance From Home by Attrition

Business Travel by Employee Attrition

2. COVID-19 IMPACT ON WORK-LIFE BALANCE

*Employees who have worked overtime has a higher tendency to leave the company*

38% Gen Z and 49% Millenials are reported to prioritize Work-Life Balance when choosing an employer (Forbes, 2019)

Over 53.6% of those who left the company in the past year have worked overtime
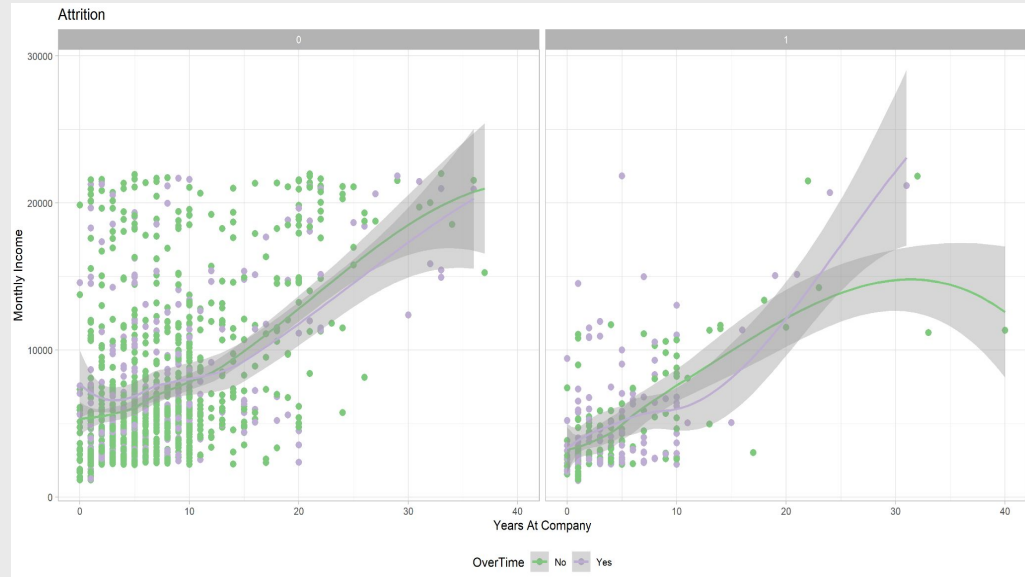
3. UNDERDEVELOPED
TRAINING, AND DEVELOPMENT PROGRAMS

Lack of training, Low development opportunities plays an important role in employees' attrition
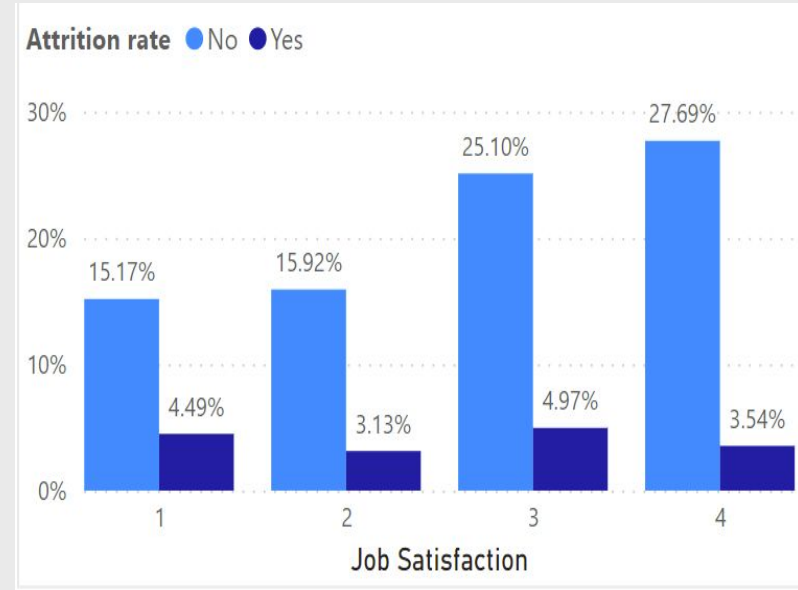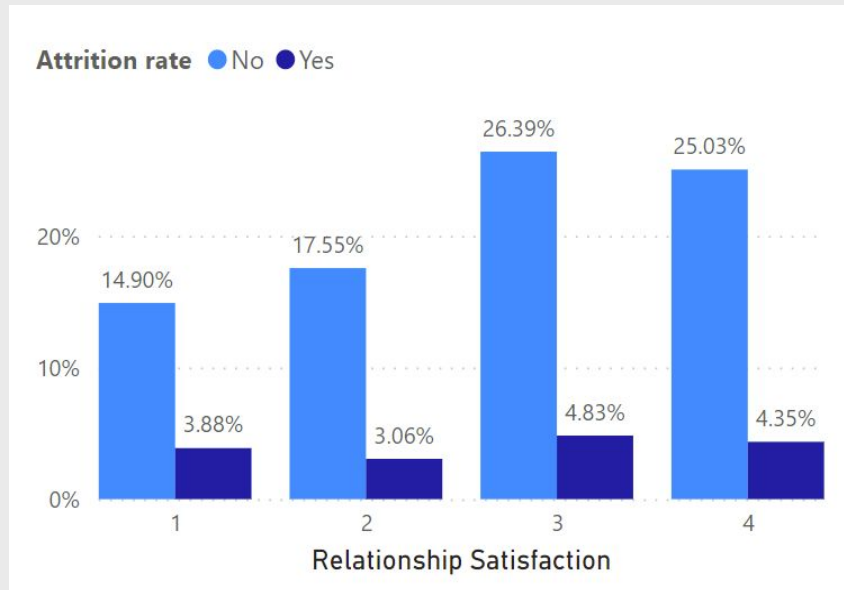
3. UNDERDEVELOPED
TRAINING, AND DEVELOPMENT PROGRAMS

Lack of training and development opportunities plays an important role in employees' attrition

38.46% of those who received **no training** within last year left the company

Attrition rate ● No ● Yes

Training Times Last Year
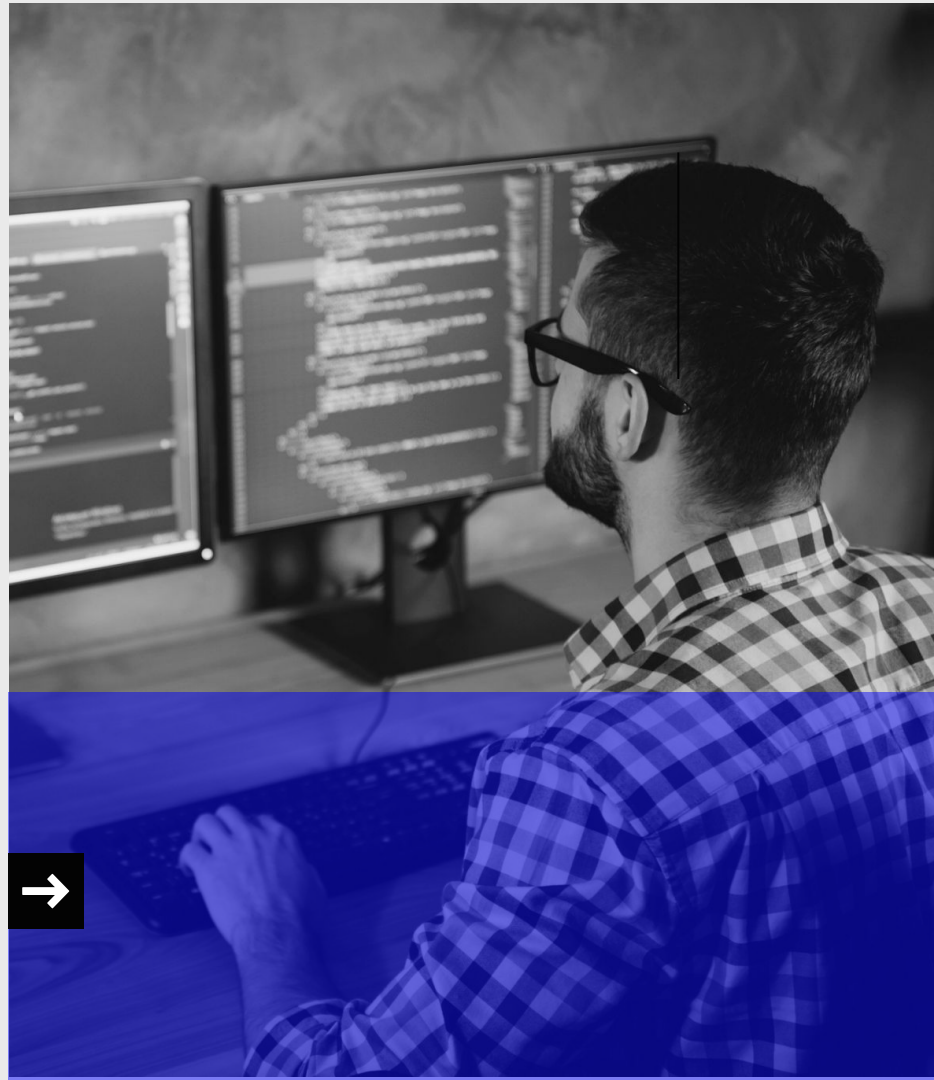
SHORT TERM RECOMMENDATIONS

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Recommandation #1: New Compensation Program
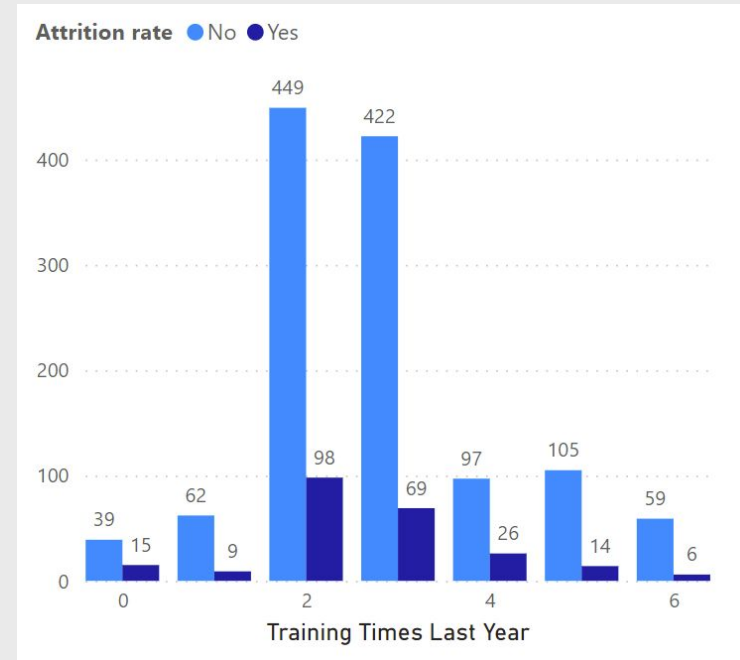
For Business side (focussing specifically on sales reps)

New Compensation Scheme
Base Salary + Sales Commission

- 50% Salary + 50% Commission
- 2x commission for certain sales threshold determined by manager-employees goals
- Manger commission for meeting sales targets
- Overtime: 2x

For Lab Technicians, Human Resources, and Research Scientist

Raise minimum monthly income to match industry standard

- Lab Technicians: $3,400
- Research Scientists: $3,400
- Human Resources: $4,400
- Overtime: 2x

Increase worker retention and incentives increased employee productivity

Recommandation #2: Revised Covid-19 Policies

Department Specific

**Business Side
(Focusing specifically on sales rep)**

Science Side

- Full Remote work and meeting options

- Partial remote for lab staff and scheduling system to allow staff to enter lab spaces when needed

Monthly and final year end town hall events and review of office and lab policies

Completely flexible work schedule with full remote option for appropriate departments to cater to employees' desire for flexible work options

LONG TERM RECOMMENDATIONS

→

Recommandation #3:
Expanded Training and Development Program

- Monthly, Quarterly, Half-Year Performance review and feedback
- 360 Degree Review and Feedback

For Sales Reps	For Lab Tech

One-on-one and team based mentorship programs

Leverage on VR/AR for virtual work

Employer paid higher education opportunities for employees

Recommandation #4: Internship program

Create internship opportunities for students from all major British Columbia higher education institutions and at government organizations like WorkBC

A well-designed internship program can both reduce future turnover and produce long lasting relationships with talented young workers

External Interns Retention Rate:
1-year: 51.7%
5-year: 32.1%

#1 in Biology Research in Canada - UBC

#1 in faculty awards and medical/science grants- UVIC

Success and Prioritization Criteria Matrix

- scale 1-10
  - 1 worst
  - 10 best

		Criterions				
Recommendations		**Turnover Rate**	**Business Impact**	**Implementation Time**	**Company Culture**	**Training**
		KPI: Turnover Rate	KPI: Cost	KPI: Relative time to fully implement	KPI: Employee Satisfaction score	KPI: Training time last year & training satisfaction score
		Weight: 35%	Weight: 20%	Weight: 10%	Weight: 20%	Weight: 15%	Total
	Revised Compensation Scheme	6	3	9	7	5	5.75
	Revised Covid-19 Policies	9	9	7	8	6	8.15
	Expanded Mentorship Programs	8	8	4	9	8	7.8
	Internship program	7	8	4	8	9	7.4

Future Analysis Needed

- Leverage **multiple data sources** to retrieve additional data contexts
- Research **other attrition metrics KPIs**
- (i.e., early turnover, engagement rating, cost per hire)
- **Further trend modeling on the drivers of Attrition over time**
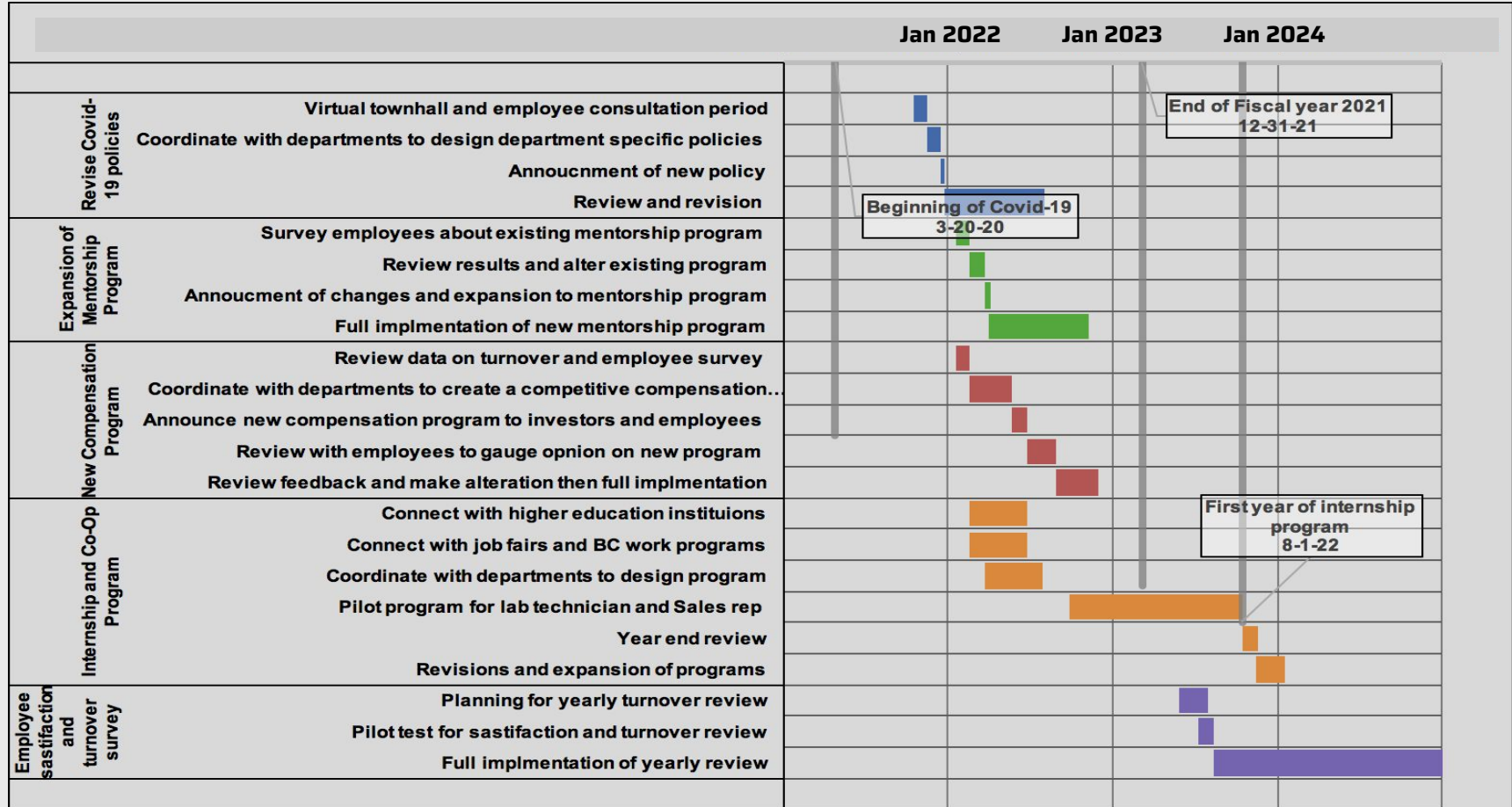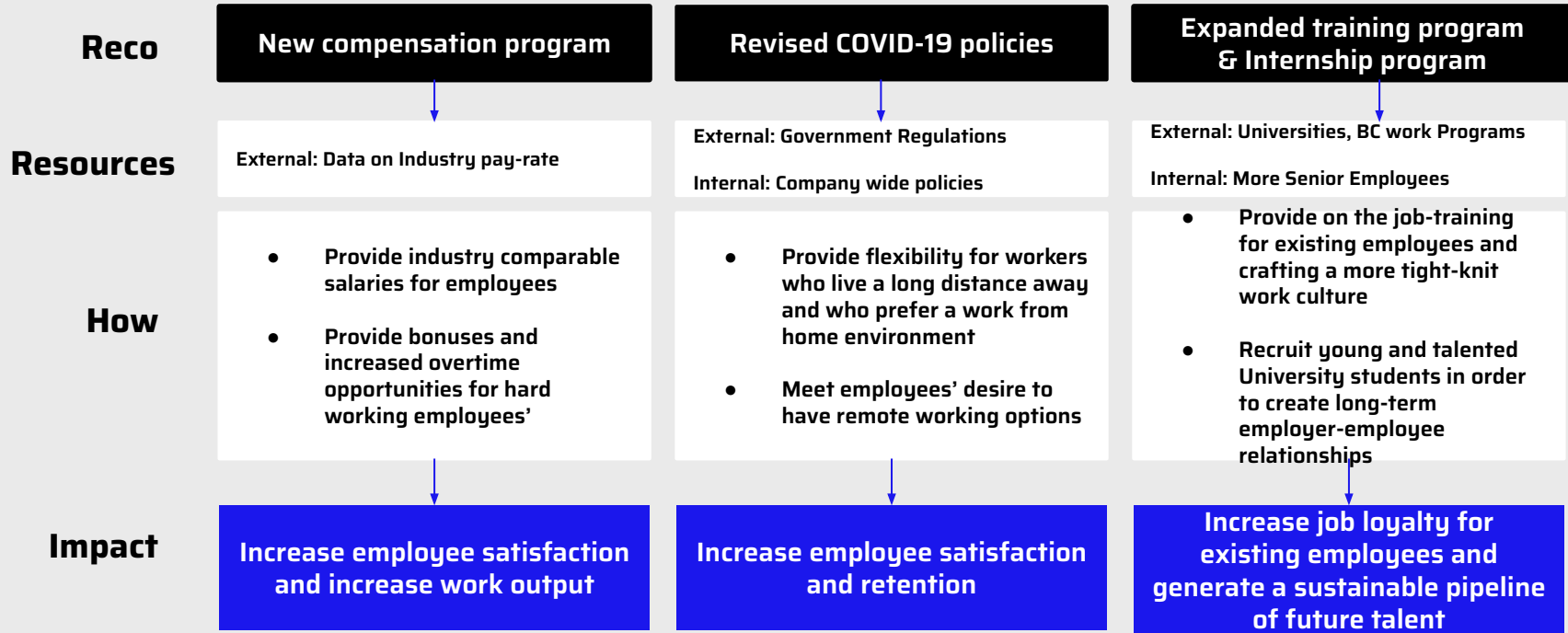
IMPLEMENTATION

03

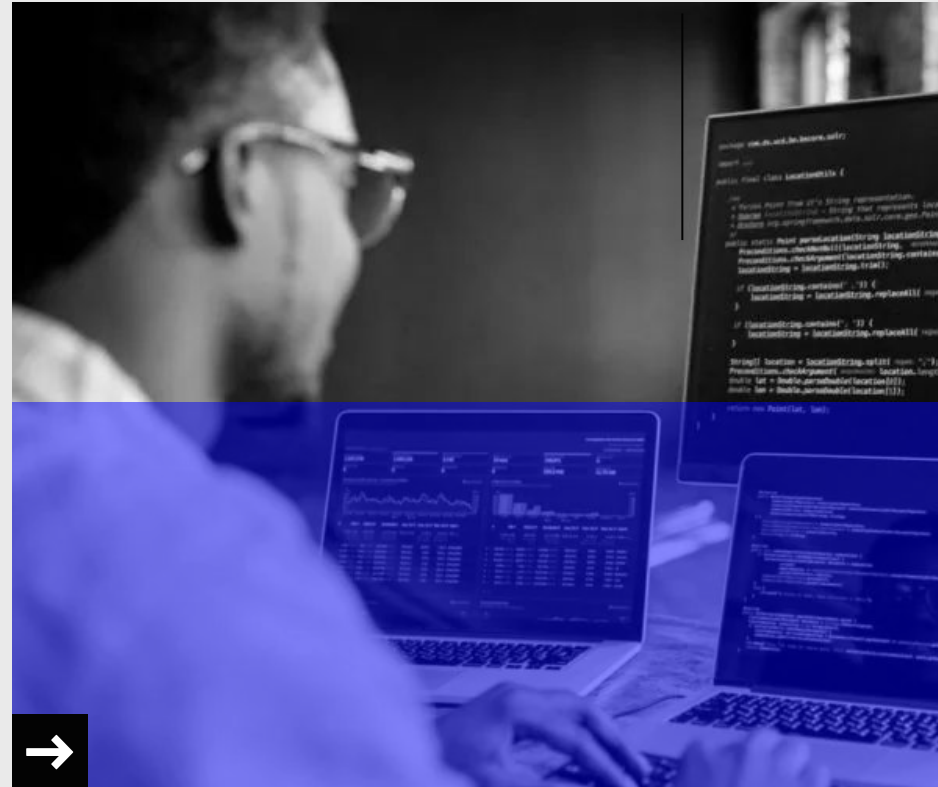# Implementation Timeline

CONCLUSION

Conclusion

Our recommendations provide an all-encompassing solution to the problem of high employee turnover by systemically targeting the root cause of employee turnover within the company

Reco	New compensation program	Revised COVID-19 policies	Expanded training program & Internship program
Resources	External: Data on Industry pay-rate	External: Government Regulations Internal: Company wide policies	External: Universities, BC work Programs Internal: More Senior Employees
How	• Provide industry comparable salaries for employees • Provide bonuses and increased overtime opportunities for hard working employees'	• Provide flexibility for workers who live a long distance away and who prefer a work from home environment • Meet employees' desire to have remote working options	• Provide on the job-training for existing employees and crafting a more tight-knit work culture • Recruit young and talented University students in order to create long-term employer-employee relationships
Impact	Increase employee satisfaction and increase work output	Increase employee satisfaction and retention	Increase job loyalty for existing employees and generate a sustainable pipeline of future talent

Reduce Employee Turnover by at least 60 employees/year
Reduce expense by at least $78,000/year

APPENDICES

Appendix 1:
Average Monthly Income by department and attrition

JobRole	No	Yes	**Total**
Healthcare Representative	8,198.91	9,403.04	**8,281.64**
Human Resources	4,830.93	4,087.33	**4,659.33**
Laboratory Technician	3,670.95	3,211.18	**3,560.89**
Manager	18,921.63	18,477.14	**18,899.84**
Manufacturing Director	8,018.92	8,102.05	**8,024.65**
Research Director	17,542.08	21,335.05	**17,636.91**
Research Scientist	3,660.93	3,058.51	**3,563.97**
Sales Executive	7,485.08	8,237.90	**7,616.71**
Sales Representative	3,078.28	2,601.20	**2,888.60**
Total	**7,516.01**	**5,265.80**	**7,153.22**

Appendix 2: Machine Learning Model

Knowing what characteristics are important in predicting the **employee attrition** can help company increase their chances improving the situation

Outcome Variable: Employee Attrition
Explanatory Variables: Monthly income + Stock option + Travel frequency + Distance + Overtime work +job involvement + job satisfaction

Results

```
Call:
glm(formula = Attrition ~ BusinessTravel + EnvironmentSatisfaction +
    DistanceFromHome + JobInvolvement + JobSatisfaction + StockOptionLevel +
    RelationshipSatisfaction + YearsSinceLastPromotion + WorkLifeBalance +
    RelationshipSatisfaction + OverTime + TotalWorkingYears +
    MonthlyIncome, family = binomial(link = "logit"), data = train_biotech)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.6495  -0.5497  -0.3208  -0.1468   3.3638

Coefficients:
                                  Estimate Std. Error z value Pr(>|z|)
(Intercept)                      2.557e+00  8.465e-01   3.021 0.002518 **
BusinessTravelTravel_Frequently  1.825e+00  5.058e-01   3.608 0.000309 ***
BusinessTravelTravel_Rarely      1.062e+00  4.714e-01   2.253 0.024279 *
EnvironmentSatisfaction         -3.106e-01  9.656e-02  -3.217 0.001296 **
DistanceFromHome                 4.817e-02  1.288e-02   3.739 0.000184 ***
JobInvolvement                  -7.220e-01  1.448e-01  -4.985 6.19e-07 ***
JobSatisfaction                 -4.066e-01  9.573e-02  -4.248 2.16e-05 ***
StockOptionLevel                -5.707e-01  1.379e-01  -4.138 3.51e-05 ***
RelationshipSatisfaction        -1.817e-01  9.767e-02  -1.860 0.062845 .
YearsSinceLastPromotion          8.386e-02  4.165e-02   2.013 0.044084 *
WorkLifeBalance                 -2.092e-01  1.503e-01  -1.392 0.163940
OverTimeYes                      1.378e+00  2.236e-01   6.161 7.21e-10 ***
TotalWorkingYears               -8.871e-02  2.657e-02  -3.339 0.000842 ***
MonthlyIncome                   -7.806e-05  4.244e-05  -1.839 0.065858 .
```
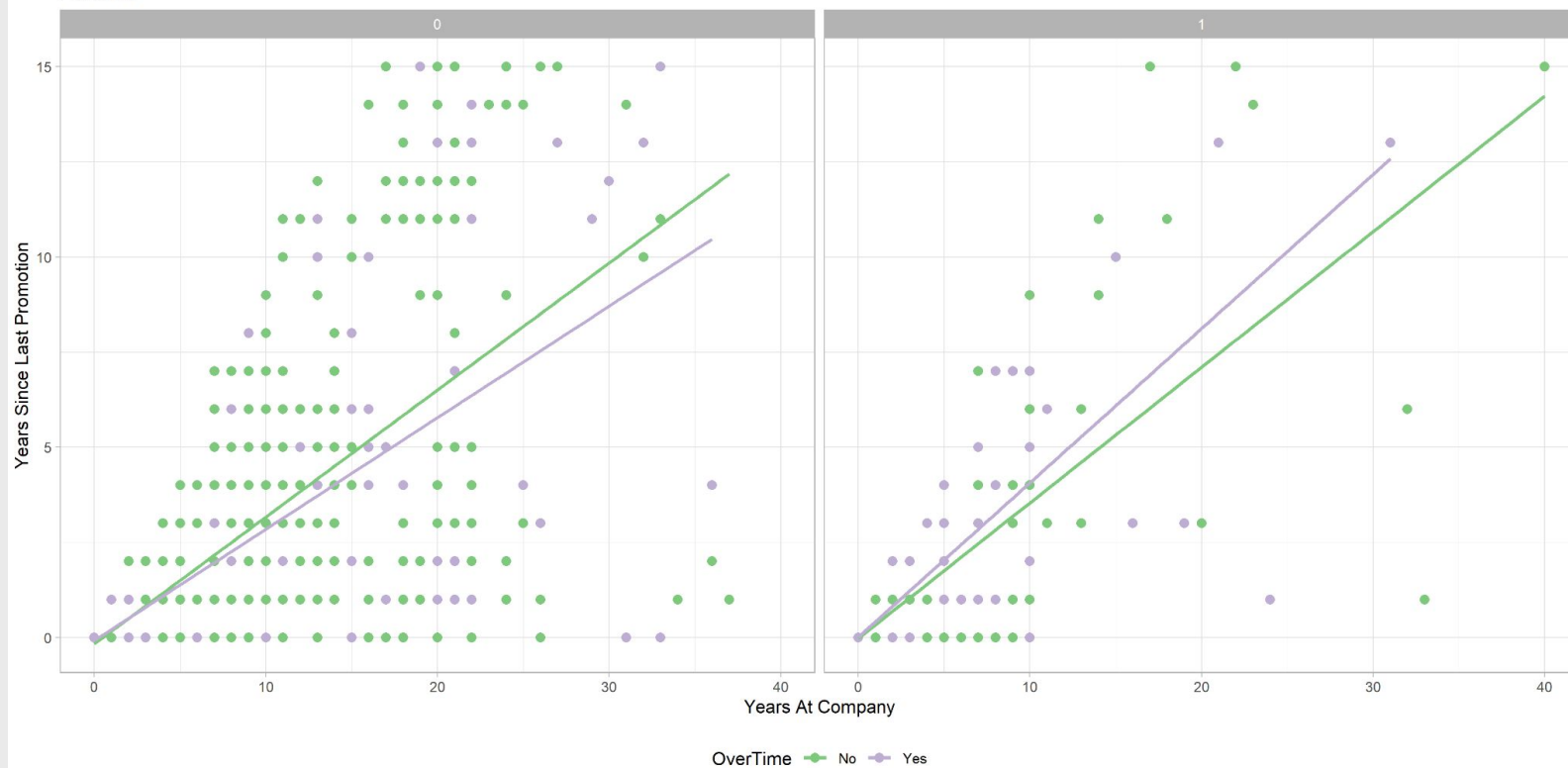
Significant Variables:

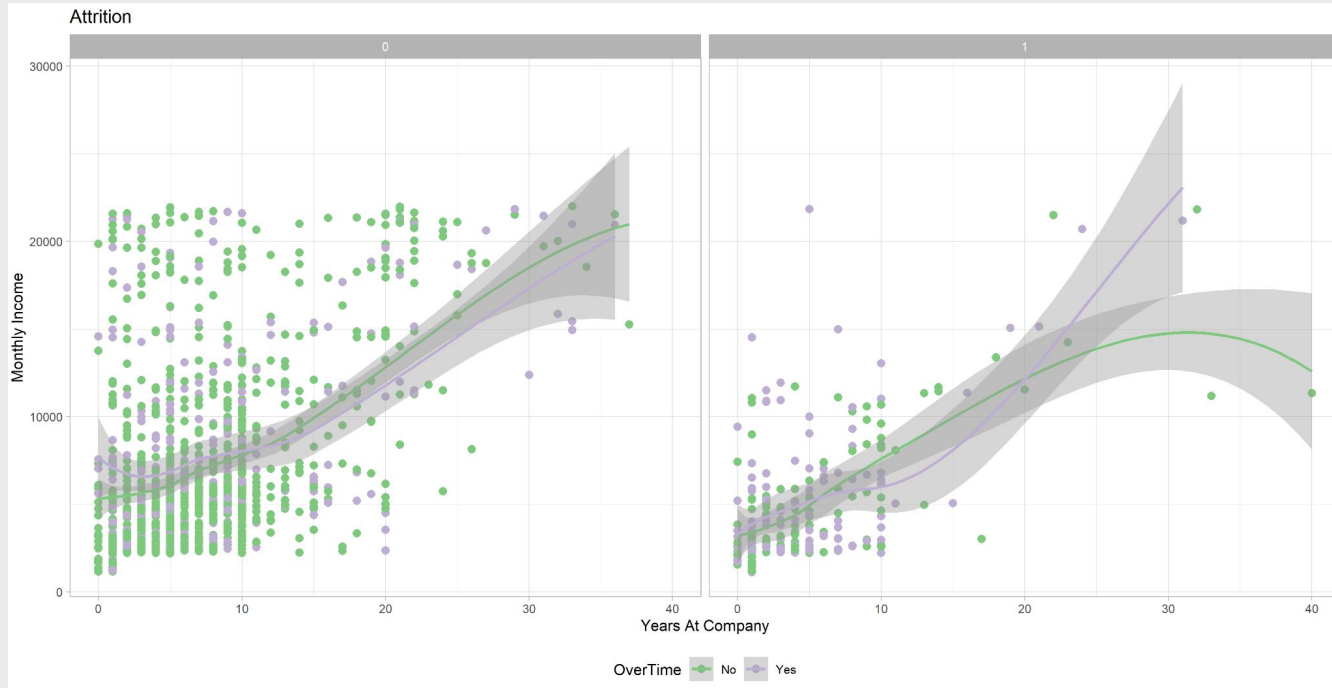**Distance From Home, Job Involvement, Job Satisfaction, Overtime**

- The predicted employee attrition **decreases** as the Environment Satisfaction **increases** and Job Satisfaction **increases**
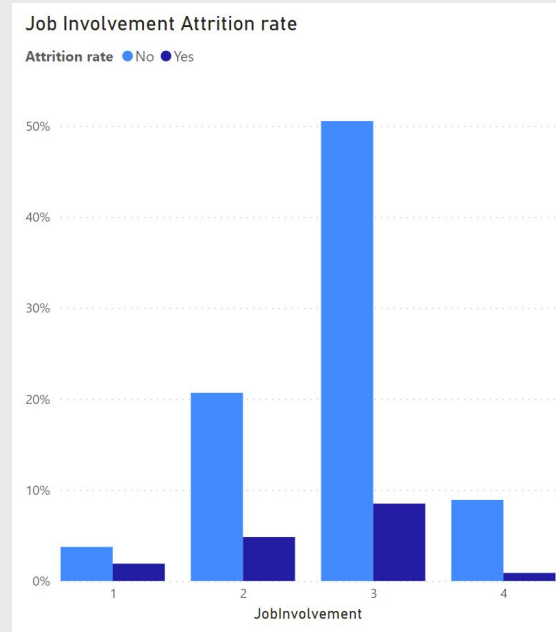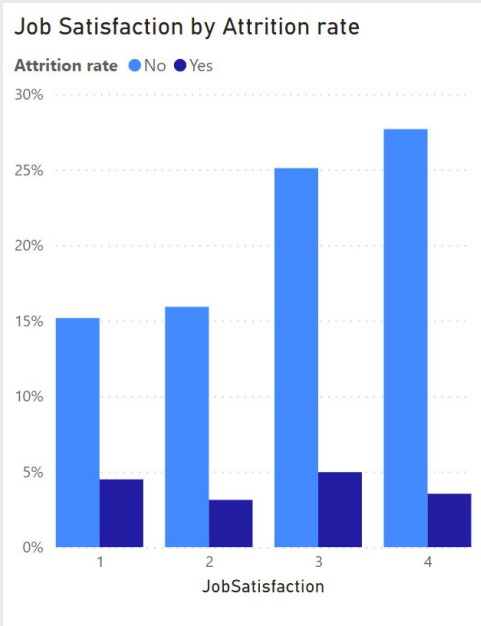- Attrition **increases** as the Overtime and Distance From Home **increases**
◆●◀

% of Age by age_bucket and Attrition rate

Attrition rate ● No ● Yes