HR METRICS AND ANALYTICS FOR SRIX
(MOBILE INDUSTRY)

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1. Introduction to the Company- SRIX

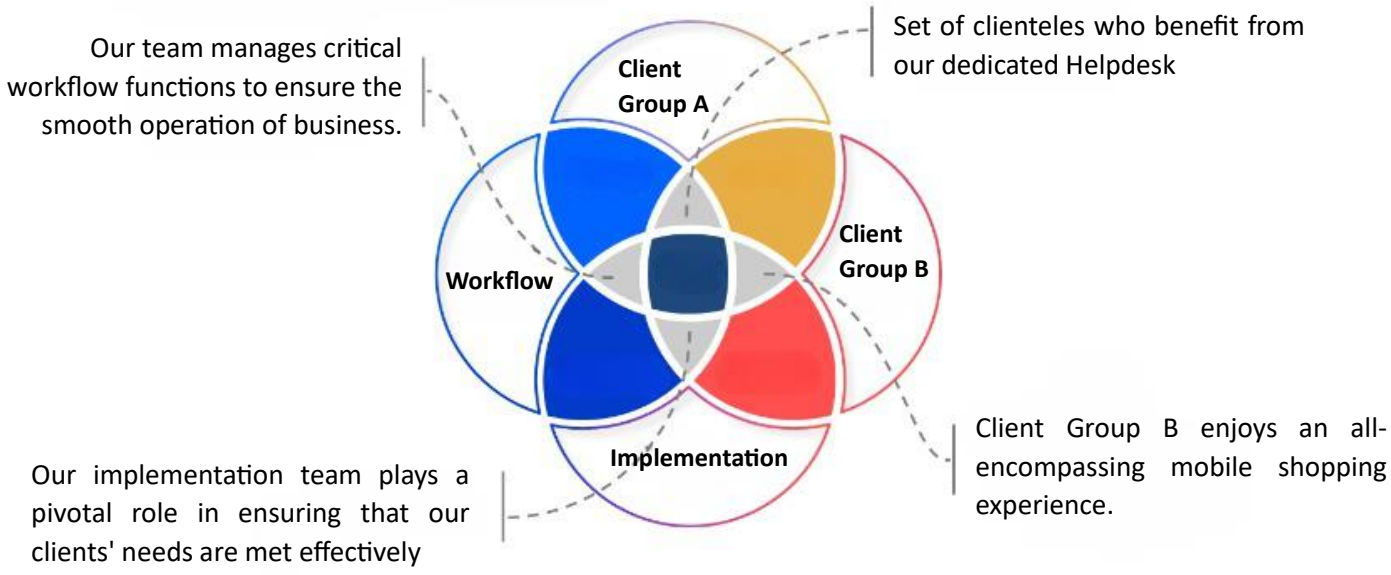
At Srix Mobile Store, our mission is to empower our customers with the latest advancements in mobile technology, ensuring they stay connected, productive, and entertained. With a diverse product range that includes smartphones, tablets, accessories, and exceptional customer support, we strive to provide an unmatched shopping experience.

Srix Mobile Store is dedicated to offering cutting-edge mobile technology, comprehensive services, and a commitment to environmental responsibility.

FOCUS: Product Leadership

Mission: Unveiling a realm of international interconnection through mobile marvels, orchestrating visionary escapades that transcend conventional limits.

Vision: Unveiling the tapestry of global interconnection, mobile marvels orchestrate visionary escapades beyond convention's grasp, inviting us to journey through boundless horizons.



2. PROJECT SUMMARY

1.1. Project Objective

The objective of this project is to conduct an in-depth analysis for SRIX Mobile Store, identify areas that require attention and improvement, and recommend strategic HR initiatives.

1.2. Scope of Project

- Findings and SRIX strategy map based on given case study
- High level guidelines to carry the following HR improvements and initiatives and suggested metrics to use:
    - Culture
    - Talent Management
    - Motivation of Talent
    - Retention of Employees
    - Recruitment
    - Performance Management
    - Learning and Development
    - Diversity
- Operational analytics
- Predictive analytics

3. FINDINGS AND STRATEGY MAP

- FINDINGS

SRIX Mobile Store has been successful in fostering a customer-centric approach. We prioritize customer satisfaction through responsive support and tailored recommendations, creating a culture of service excellence.

Their commitment to offering a wide range of mobile devices and accessories aligns with market demand. Rigorous quality checks ensure that all products meet high standards, providing assurance to our clientele.

SRIX Mobile Store serves as a trusted mediator, connecting clients with reputable insurance providers. Their emphasis on authenticity and data confidentiality enhances the credibility and appeals to clients seeking security in their mobile investments.

While their induction process is streamlined, the intricacies of the mobile industry require additional time for briefing new hires. This uniqueness positions SRIX as a niche provider, attracting interest from other organizations seeking the specialized services.

SRIX Mobile Store recognizes the importance of diversity in fostering clear communication across international teams and with clients. Initiatives are needed to achieve a balanced gender ratio and enhance communication skills among employees.

They invest significantly in employee training and development. However, high attrition rates, primarily among graduates and postgraduates, impact project timelines and pose confidentiality risks. Addressing attrition and implementing succession planning are crucial.

SRIX Mobile Store should focus on enhancing employee engagement, ensuring that their workforce remains motivated and committed. Areas of emphasis include culture, recruitment, succession planning, performance management, and learning and development.

Based on these findings, we will formulate strategic initiatives to further strengthen their position as a leading mobile retailer while prioritizing employee well-being and professional growth.

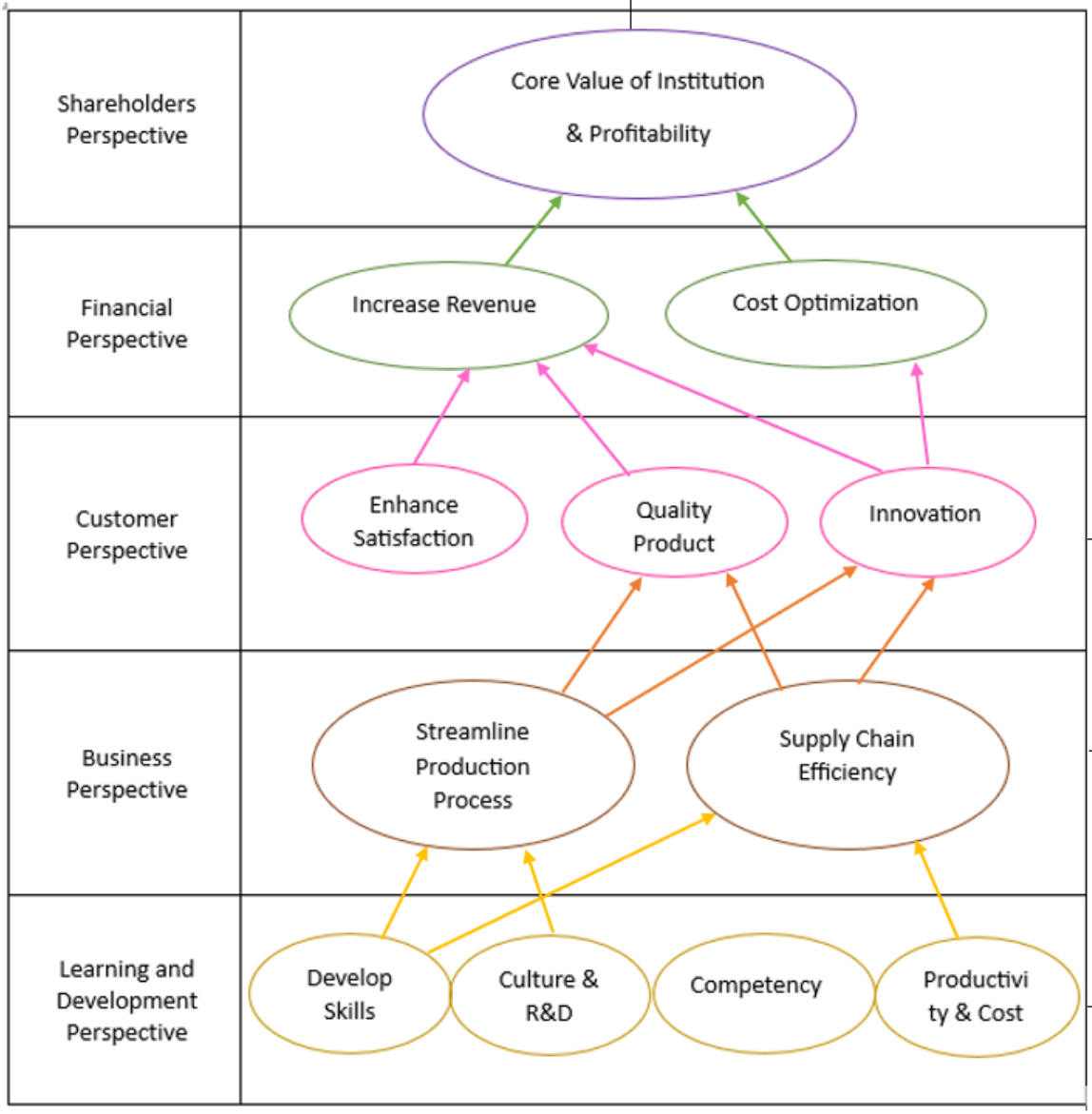
- STRATEGY MAP:

  A strategy map is a visual tool used by organizations to communicate their strategic objectives and the cause-and-effect relationships between these objectives. It provides a clear and concise way to outline how an organization intends to achieve its mission and vision.

  This strategic map outlines SRIX Mobile Store's commitment to delivering top-notch mobile retail services while preserving the highest ethical and confidentiality standards. By aligning their efforts with these strategic objectives, the aim is to achieve sustainable growth, customer loyalty, and a thriving work environment.

  Kindly review the suggested strategy map in the next page.

"Enhancing customer loyalty through exceptional service and product quality to increase both the core value of the institution and profitability at SRIX Mobile Store."



"Implement a seamless and user-friendly mobile app for enhanced customer convenience and satisfaction."

"Implement lean manufacturing principles to streamline SRIX Mobile Store's production process for increased efficiency and reduced waste."

"Invest in continuous learning and development programs tailored to their roles and industry trends."

4. HR OBJECTIVES WITH KEY QUANTIFIABLE MEASURES

SRIX Mobiles should take a careful and measured approach to the transformation of its organizational culture, with a focus on fostering unity among its workforce, creating a more conducive workplace environment, and ensuring that employees understand and adhere to the company's core values and principles.

4.1 CULTURE:

For SRIX Mobile Store, it's important to build a united and positive workplace culture by sharing the company's values with employees. Everyone should understand these values, but any changes should be made slowly and thoughtfully.

Enhancing the Learning & Development Perspective: Culture Metrics for SRIX Mobiles

Objective	HR Measure	Target	Initiative
Ensure a healthy work-life balance	Employee Satisfaction Surveys	Achieve a work-life balance satisfaction score of 85% or higher	Implement flexible working hours and remote work policies
			Promote mental health awareness and resources
Improve working arrangements and mental health	Employee Training on Mental Health	Reduce stress-related absenteeism by 20%	Conduct regular mental health workshops and training
	Employee Engagement Surveys	Increase overall employee engagement by 10%	Create a supportive and inclusive work environment
Prevention of overworking for employees	Overtime Tracking System	Decrease weekly overtime hours by 15%	Monitor and enforce overtime policies
	Workload Assessments	Minimize instances of excessive workload	Implement workload balancing strategies
Clear understanding of business objectives for customers	Employee Training on Objectives	Ensure 90% employee alignment with business objectives	Conduct training on company objectives and values
	Customer Feedback Surveys	Enhance customer satisfaction by 50%	Foster regular communication with customers

Collect more customer feedback for enhancing services	Customer Feedback Collection Tools	Increase feedback responses by 60%	Expand feedback channels (online, in-store, app)
			Encourage customer reviews and surveys
Motivating teams to go the extra mile	Employee Recognition Programs	Recognize outstanding team efforts	Launch an employee recognition program
	Team Performance Evaluations	Achieve a 15% improvement in team performance scores	Encourage collaboration and knowledge sharing within teams

Insights for Culture Metrics:

- The overall culture satisfaction is 74.58 for the organization.
- The employees below the age of 20 and the employees working as project managers have the highest satisfaction rate in the organization as 76.66 and 75.54.
- The work-life balance and customer factors have the low correlation, which depicts that the satisfaction among the customers and employees are low in the organization.

Key Metrics:

Culture Satisfaction Rating

Culture Satisfaction Rating at SRIX Mobiles is a key metric that evaluates the level of satisfaction our employees experience when working in the organization. It signifies the overall contentment and happiness of our work base, which is fundamental to our business's prosperity. Continuously tracking and enhancing this rating enables us to provide top-notch services and products, strengthening customer loyalty and driving our business forward.

Employee Satisfaction: Aim to achieve an 85% or higher work-life balance satisfaction score through flexible work policies and mental health support.

Customer Satisfaction: Target a 50% increase in customer satisfaction by collecting more feedback through various channels and encouraging customer reviews.

4.2 COMPENTENCY:

Competency analysis, specifically through the use of HCRI (Human Capital Return on Investment) and BARS (Behaviorally Anchored Rating Scales), plays a pivotal role in evaluating and enhancing the workforce's skillsets and performance at SRIX Business.

HCRI measures the return on investment for the human capital within the organization. It enables SRIX to assess how effectively its investment in talent and development translates into improved performance, productivity, and overall business results. By utilizing HCRI, SRIX can determine the impact of its HR initiatives, leading to more informed decisions for optimizing human resources.

BARS, on the other hand, provides a structured framework for assessing employee behavior and performance. It involves defining specific behavioral indicators that are anchored to performance levels, allowing for precise and consistent performance evaluations. SRIX can use BARS to ensure that employee assessments are objective, detailed, and linked to desired competencies, enabling a more accurate understanding of individual and team strengths and areas for improvement.

Enhancing the Learning and Growth Perspective: Competency Metrics for SRIX Mobile Store.

Objective	HR Measure	Target	Initiative
Enhance Human Capital Readiness (HCRI)	Current competency of the employee in the function/Competencies required for the function	Improve HCRI to 91%	Continuous support and encouragement
BARS	Current competency level of the employee	Level 4 with 40%, Level 3 with 30%, Level 2 with 30%	Encouraging and rendering financial support to achieve the Level 4 specified in BARS
Enhance Technical Expertise	Assess and improve technical skills of employees	90% of employees proficient in the latest mobile technologies	Technical training programs, certifications, and skill assessments

Accelerate Mobile App Development	Evaluate app development capabilities and efficiency	Reduce time-to-market by 20%	Agile development practices, automation tools, and continuous improvement
Optimize Mobile Supply Chain	Monitor supply chain performance and efficiency	Achieve a 95% on-time delivery rate	Supply chain optimization tools, process streamlining, and vendor partnerships
Improve Mobile Product Quality	Track product defects and customer complaints	Decrease defect rate to below 2%	Rigorous testing protocols, quality control measures, and customer feedback

Insights for Competency:

- The Pearson Correlation Coefficient of -0.06 suggests a weak negative correlation between the variables culture and HCRI.
- The Principal Component Analysis (PCA) suggests that HCRI and Culture have the most influence on all the other components.

Key Metrics to be practised:

- **Human Capital Readiness (HCRI):** Improve HCRI to 91%
- **BARS:** Improve Level 4 with 40%, Level 3 with 30%, Level 2 with 30%
- **% of people attaining internal certification:** This metric assesses the proportion of employees who have successfully acquired internal certifications within the organization.

4.3 Cost and Productivity:

Cost and productivity analysis is a critical aspect of managing operations efficiently. For SRIX Business, this analysis involves examining the relationship between expenses and output to optimize resources and profitability.

Cost and productivity analysis is a dynamic process that aids SRIX Business in making informed decisions to enhance operational efficiency, control expenses, and ultimately drive profitability. It is a valuable tool for achieving sustainable growth and success in a competitive market.

Enhancing the Learning and Growth Perspective: Competency Metrics for SRIX Mobile Store.

Measure	HR Measure	Target	Initiative
Increase Revenue	Annual Sales Revenue	12% growth	Launch new flagship products, expand into new markets
	Market Share Growth	2% increase	Aggressive marketing, competitive pricing
	CLV (Customer Lifetime Value)	10% increase	Enhance customer experience, loyalty programs
Reduce Cost	Cost of Goods Sold (COGS)	5% reduction	Optimize supply chain, reduce manufacturing costs through automation
	Energy Consumption	8% reduction	Implement energy-efficient practices and technology
	Warranty Claims	3% reduction	Improve product quality and testing processes
Compensation Satisfaction	Compensation Satisfaction Score	Increase to 80%	Revise compensation packages, performance-based bonuses
	Training Hours per Employee	20 hours per year	Invest in employee skill development and certifications
	Employee Turnover Rate	8% reduction	Enhance employee retention programs and career advancement

Insights for Cost & Productivity:

- **Feature importance** analysis indicates that HCRI has the highest importance, followed by Culture and BARS. This suggests that HCRI is the most influential variable in the analysis, followed by Culture and BARS.
- **Cost-Benefit Analysis:** The net benefit of 60,000,000 indicates a positive financial outcome for SRIX Mobile Company. This signifies that the company has generated a surplus of 60 million, which can be attributed to revenue exceeding expenses and costs. A positive net benefit is a favorable financial indicator, reflecting the company's profitability and potential for further growth and investment.

Key Metrics for Cost & Productvity:

- **Compensation Satisfaction** - Compensation satisfaction score refers to a metric or rating that assesses how satisfied employees are with their compensation packages and overall remuneration for their work within an organization.

4.4 Recruitment and On-boarding

Recruitment management holds a vital role at SRIX Mobiles as it guarantees the selection of the most suitable candidates. By employing efficient recruitment procedures, the company can pinpoint individuals possessing the requisite skills, drive, and alignment with the company's culture for success within the organization.

Enhancing the Learning and Growth Perspective: Recruitment Metrics for SRIX Mobile Store:

Objective	HR Measure	Target	Initiative
Improve New Hire Performance Satisfaction	Increase New Hires Performance Satisfaction score of employees	Increase from 75 to 85 within 6 months	Enhance onboarding and orientation programs to ensure new hires feel more engaged and prepared.

Optimize Time to Fill Positions	Reduce the Time to Fill	Decrease from 15 days to 10 days	Implement an efficient applicant tracking system (ATS) to monitor and manage the recruitment pipeline.
Enhance Performance Differential	Improve the Performance Differential	Increase by 10% within 12 months	Encourage employees to set and work toward individual performance goals.
Improve Sourcing Channel Effectiveness	Achieve better Correlation between Sourcing Channel & Time to Fill	Optimize sourcing channels for faster recruitment	Continuously assess and adjust sourcing strategies based on data insights.
Enhance Sourcing Channel for Recruitment	Achieve better Correlation between Sourcing Channel & Performance Satisfaction	Optimize sourcing channels for candidate satisfaction	Invest in branding and marketing to attract candidates from preferred channels.

Insights for recruitment metrics:

- New Hires Performance Satisfaction has the highest feature importance (0.393), indicating that it has the most significant impact on the sourcing channel.
- Sourcing Channel & Time to Fill have a weak negative correlation of -0.07, suggesting that as the sourcing channel changes, there is a slight tendency for the time it takes to fill positions to decrease.
- As the sourcing channel changes, there is a moderate tendency for performance satisfaction to decrease.

Key Recruitment Metrics:

4.4.1 New Hire Performance Satisfaction Score: Measure how satisfied new hires are with their roles and performance within the first few months. The target could be to increase this score from a baseline from 75 to 85 within 6 months.

4.4.2 Time to Fill Positions: Monitor the time it takes to fill open positions. Reducing this metric can help ensure that roles are filled more quickly.

4.5 LEARNING AND DEVELOPMENT:

In SRIX Mobile Store, learning and development are crucial aspects of employee growth. They believe in providing training that is customized to fit each person's job and responsibilities. This way, employees can learn the skills they need to do their jobs well.

Enhancing the Learning and Growth Perspective: Learning and Development Metrics for SRIX Mobile Store:

Objective	HR Measure	Target	Initiative
Enhance Employee Training Satisfaction	Improve Employee Training Satisfaction	Increase Satisfaction from 70 to 85% in 6 months	Revise Training Content for Relevance and Increase Training Engagement and Interactivity
Develop Employee Skill Sets	Increase Employees' Skills	Increase and enhance the employee skill sets from 60 to 75%	Implement Skill Development Workshops and encourage Cross-Training Across Departments
Enhance Knowledge Levels of Employees	Improvise the knowledge levels of the employees	Achieve 90% in knowledge levels of employees	Offer Continuous Learning Opportunities and Encourage Certification Programs

Improve Employee Performance Satisfaction	Helps to enhance the performance of the employees	Achieve 85% of employee performance satisfaction in 3 months	Evaluate Performance Metrics and KPIs and Offer Performance Improvement Plans
Enhance Sourcing Channel	Improvise the accuracy of success from each sourching channel	Achieve the success rate of each sourcing channel to 90%	Optimize Job Posting Channels and Implement an Applicant Tracking System

Insights for Learning and Development:

There are weak or negligible correlations between employee training satisfaction and other factors like hours satisfaction, content satisfaction, and skill development, there is a statistically significant and moderate positive correlation between employee training satisfaction and knowledge level. This suggests that efforts to enhance training satisfaction may lead to improved knowledge levels among employees.

Key Metrics for Learning and Development:

4.5.1 Learning & Development Investment per Full-Time Employee:

This metric helps assess the investment made in the development and training of employees. A higher investment per employee often indicates a commitment to their growth and skill enhancement.

4.5.2 Training Hours per Full-Time Employee:

This metric measures the average number of training hours each full-time employee receives. It provides insights into the extent of training and skill development opportunities provided to the workforce.

4.6 PERFORMANCE MANAGEMENT:

In SRIX Mobile Store, performance management plays a pivotal role in driving organizational success. It involves a systematic process aimed at enhancing employee productivity, aligning individual goals with the company's objectives, and fostering a culture of continuous improvement.

SRIX Mobile Store recognizes the significance of performance management as a means to monitor, evaluate, and enhance the performance of its workforce.

The performance management system at SRIX Mobile Store is designed to recognize and reward high achievers, identify areas for improvement, and offer opportunities for skill development and growth. This not only ensures that employees are motivated and engaged but also contributes to the overall success of the store.

Enhancing the Customer and Learning and Growth Perspective: Performance Metrics for SRIX Mobile Store:

Objective	HR Measure	Target	Initiative
Improve Performance Rating	Increase the performance rating by optimizing sourcing channel, hours and training satisfaction	Establish a positive relationship between performance rating with sourcing channel, Hours and Training and Satisfaction	Review and update training content to make it more relevant to employees' roles and responsibilities and and gather detailed feedback from employees regarding training satisfaction and make improvements.
Increase Employee Participation in Training Programs	Increase the percentage of employees participating in relevant training programs	Increase participation target to 75%	Promote training programs through regular communication and awareness campaigns. Develop leadership programs to nurture talent from within.
Improve Training Content Relevance to Roles and Responsibilities	Increase percentage of employees finding training Highly relevant	Increase satisfaction score to above 90%	Conduct regular surveys and feedback sessions to understand employees' needs and align content accordingly.

Enhance Employee Training Satisfaction	Increase the satisfaction rate of the employees	Achieve the target of 85% in employee training satisfaction	Continuously gather feedback and analyze the correlation between satisfaction and performance rating.

Insights for Performance Management:

There are very weak correlations between performance ratings and the variables of sourcing channel, hours satisfaction, and employee training satisfaction. Furthermore, none of these correlations are statistically significant, implying that these variables do not have a substantial impact on employee performance ratings in this dataset.

Key Metrics for Performance Management:

4.6.1 High Performer Growth Rate: This metric assesses how quickly highly skilled employees are advancing within the company.

4.6.2 Goal Attainment: Monitoring the attainment of performance objectives is a way to assess how effectively individuals and teams are meeting their goals.

4.7 MOTIVATION OF TALENT

For SRIX Mobiles to establish a robust and dependable workforce, they should concentrate on motivating and retaining talented individuals. SRIX Mobiles needs to attract individuals with special skills who are dedicated to building their careers in this field. This will enable SRIX Mobiles to recognize key performers and crucial roles within the organization, subsequently leading to improvements in processes like customer support, quality management, and product design.

Enhancing the Learning and Growth Perspective: Talent Management Metrics for SRIX Mobile Store:

Objective	HR Measure	Target	Initiative
Retain High Performers	Maximizing High Performers Retention Rate	Increase the retention rate of high performers to 5 points	Identify and reward high-performing employees to increase their job satisfaction and loyalty. Offer professional development opportunities to high performers to keep them engaged.
Medium Performers to High Performers	Enhance the relationship between employee satisfaction and retention rate	Increase the performance satisfaction of medium performers to 85%	Conduct regular employee satisfaction surveys to identify areas for improvement.
Low Performers to Medium	Maximize the positive satisfaction of performance among employees	Increase the performance satisfaction of low performers to 65%	Provide targeted training and coaching to help employees improve their performance.
Attract and Recruit Best Applicants	Improvise the sourcing channel accuracy to recruit best applicants in the following days	Increase the recruiting accuracy of sourcing channels who suggest top performing applicants	Refine the recruitment process to identify applicants who are more likely to become high performers.
Enhance Employee Satisfaction and Engagement	Maximize the satisfaction of employees to a higher extend	Increase the employee satisfaction and engagement rate to 90% in 3 months	Implement flexible work arrangements to improve work-life balance and job satisfaction. Provide opportunities for skill development and career advancement to boost engagement.

Insights for Talent management:

- High-performing employees generally exhibit a slightly elevated retention rate, suggesting they are inclined to remain with the company.
- Low-performing employees are linked to a slightly increased turnover ratio, implying a greater likelihood of them leaving the company.
- A decrease in employee satisfaction is correlated with a modest reduction in the retention rate, indicating that less satisfied employees are somewhat more prone to departing from the company.

4.7.1 Key Metrics for Talent Motivation:

4.7.1.1 Employee Satisfaction Score: This metric measures overall employee satisfaction through regular anonymous surveys. The target could be to maintain a score of 80% or higher.

4.7.1.2 Employee Productivity: Calculate the amount of work completed by each employee in a specific time frame to ensure that employees are motivated and productive.

4.7.2 Key Metrics for Retention of Talent:

4.7.2.1 Retention Rate: Calculate the percentage of employees who stay with the company over time. A high retention rate suggests talent motivation and satisfaction.

4.7.2.2 Turnover per Employee: Evaluate the total data associated with employee turnover, including separation processing, vacancy gaps, replacement hiring, and training.

4.8 DIVERSITY:

In the context of SRIX Company, diversity is a fundamental aspect of its organizational culture. The company recognizes the importance of embracing diversity as a source of strength and innovation. SRIX is committed to fostering an inclusive environment where employees from various backgrounds, cultures, and experiences come together to drive the company's success.

SRIX Company's dedication to diversity extends to various facets of its operations, from recruitment practices that aim to achieve a balanced representation of genders and backgrounds to initiatives that promote cultural understanding and inclusivity among its workforce.

Key Metrics for Diversity:

4.8.1 Diversity Percentage: This metric quantifies the representation of specific diversity categories among the existing employee population. It helps SRIX assess the diversity within its workforce, emphasizing the importance of inclusivity.

4.8.2 Diversity Hire Ratio: This metric evaluates the ratio of newly hired employees who belong to predefined diversity categories. It provides insight into SRIX's efforts to attract and onboard talent from diverse backgrounds, contributing to a more inclusive and varied workforce.

5. OPERATIONAL ANALYSIS

The findings from the analysis of operations are provided below each metric. The Python code used for the analysis, the results of the analysis, and the dashboard have been included in the annexure for your reference.

6. PREDICTIVE ANALYTICS:

S.no	Correlation between		Reason for Correlation	Correlation coefficient	Result	Description
	A	B				
1	Culture Satisfaction Score	Work-life Balance	To understand if the work-life balance satisfaction is met for the employees	0.554	Medium Correlation	This shows that the employees are satisfied with their work-life balance only on an average
2	Leadership	Teamwork	To undetstand if the leadership principle has a positive impact on the team work	0.995	High Correlation	There is high correlation for the two attributes indicating that the leadership has a high positive impact on team work
3	Employee Training Satisfaction	Knowledge Level	To understand if the knowledge level has increased for the employees during training	0.343	Medium Correlation	This shows that the employees are not much satisfied with the

						quality of the training
4	Employee Performance Rating	Hours Satisfaction	To understand if the employees performs rating has a direct contact with the hours of training they undergone	0.03	Low Correlation	There is low correlation between the two attributes which indicates that the hours of training has no direct impact on employees performance rating
5	High Performer	Retention Rate	To understand if the high performing employees are willing to stay in the organization	0.02	Low Correlation	This shows that there is no satisfactory among high employees although the correlation is positive, it is not strong
6	Low Performer	Turnover ratio	To understand if the low performing employees has any effect on the organization's turnover ratio	-0.03	Low Correlation	There is low correlation between the two attributes which indicates that the low performers are more likely to leave the organization

CONCLUSION:

Our HR analytics project underscores the importance of data-driven decision-making for SRIX Mobile Store's HR processes. The insights gained through data analysis and metrics assessment offer valuable perspectives for informed decision-making and strategic planning. Here are the key takeaways from our project:

1. Learning and Development: Our analysis revealed that SRIX Mobile Store invests in employee learning and development. To further enhance the impact of training

programs, it is advisable to tailor these programs based on regular feedback and employee needs. A continuous improvement loop for training can be established to ensure their effectiveness in day-to-day work.

2. Performance Evaluation: The analysis indicated a disconnect between performance ratings and actual performance. This suggests the need for a more comprehensive and holistic approach to performance evaluation. Encouraging ongoing feedback and discussions can provide a more accurate picture of employee contributions.

3. Employee Engagement: While employee engagement levels appear moderately high, alignment with other measures can be inconsistent. To sustain and improve engagement, innovative culture-building practices can be introduced. Regular engagement surveys will help track progress and identify areas for enhancement.

4. Attrition Management: SRIX Mobile Store faces relatively high attrition rates, particularly among recent recruits. Mitigating attrition requires clear career development paths, attractive incentives, and exit interviews to address root causes. Retaining talent within the organization is essential for stability and growth.

5. Diversity and Inclusion: Our analysis highlighted a gender imbalance within the organization. SRIX Mobile Store should actively pursue diversity and inclusion initiatives. This includes diverse recruitment strategies and fostering an inclusive culture that values all employees.

By implementing the suggested measures and continuously monitoring key metrics, the organization can improve employee satisfaction, operational efficiency, and overall growth.

ANNEXURE:

Dummy Data:

Data for Culture, Competency and Cost & Productivity:

Age	Job Title	team work	salary	Work-life balance	Leadership principle	Innovation	Clients	TOTAL	HCRI	BARS	Units Produced	Hours	productivity	Compensation Cost	Compensation Satisfaction Score	Analysis	Values
		19	7	11	7	12	16	72	36	2	391	8	49	39046	43	Revenue_Per_Employee	500000
1	Data Analyst	16	4	14	5	13	14	66	42	3	472	5	94	31725	60	Cost Per Employee	200000
3	Product Manager	13	2	17	9	13	19	73	87	3	357	5	71	21160	92	No.of employees	200
2	Data Analyst	19	7	16	7	10	13	72	88	1	245	7	35	20869	62		
1	HR	23	10	13	6	8	15	75	98	3	285	6	48	39030	57		
2	Workers	17	4	16	6	7	17	67	60	2	264	7	38	42302	48		
1	E-commerce	23	4	9	3	11	17	67	74	4	234	7	33	32784	98		
2	Data Analyst	14	9	20	8	12	16	79	34	2	546	7	78	44221	86		
1	HR	18	2	15	7	13	18	73	98	2	542	8	68	33001	100		
2	E-commerce	21	8	15	4	14	22	84	77	2	529	6	88	10688	43		
2	Workers	22	4	12	5	12	18	73	84	2	202	6	34	21935	37		
2	Finance	14	5	12	5	15	14	65	32	2	479	7	68	28733	87		
2	Workers	17	9	18	6	13	17	80	76	2	731	8	91	29848	60		
1	HR	18	6	19	4	16	23	86	37	1	212	8	27	27638	90		
2	Data Analyst	16	4	16	5	15	22	78	51	2	368	7	53	33858	42		
1	Finance	22	4	13	3	8	18	68	83	3	629	8	79	20031	90		
2	Product Manager	18	5	9	6	12	16	66	84	4	583	6	97	45061	92		
2	Workers	17	6	14	8	10	19	74	100	4	532	8	67	47387	56		
2	Workers	17	4	19	5	12	22	79	42	4	431	5	86	23421	64		
2	Workers	17	8	14	4	11	15	69	37	3	499	5	100	12860	50		

Data for Recruitment and Training:

E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Recruitng Cost (40000)	Induction Program Cost (30000)	Target Given	Target Achieved	Performance Differential	New Hires performance satisfaction (100)	Time to Fill (Days 15)	Sourcing Channel	Performance Rating	Type of Training	Hours of Training	Hours Satisfaction	Content Satisfaction	Skill Development	Knowledge Level	Employee Training Satisfaction
39696	25418	7	6	-1	56	12	Agent	1	2	3	2	5	3	5	5
21014	12921	5	10	5	50	15	Agent	1	2	4	3	5	4	3	1
24042	11718	5	8	3	55	6	Linkedin	1	2	4	2	4	1	5	2
23939	15895	3	8	5	32	7	Agent	3	2	6	1	4	1	2	5
29866	25920	4	10	6	64	12	Referral	1	1	4	2	2	2	1	4
15026	26972	4	7	3	89	7	Linkedin	3	2	5	5	3	5	1	3
30905	17386	7	6	-1	58	6	Indeed	1	2	5	5	5	1	5	4
21562	29348	6	7	1	38	11	Referral	3	1	2	1	3	4	3	2
39840	18891	4	6	2	29	2	Referral	3	2	6	5	3	4	3	2
19772	25101	6	4	-2	51	10	Campus	3	2	2	2	1	1	1	2
32782	10003	5	7	2	68	3	Campus	1	2	6	5	3	2	5	5
19540	12800	4	4	0	36	5	Campus	2	1	5	4	5	5	5	3
28426	26767	5	8	3	75	7	Indeed	1	2	6	5	1	1	5	4
23155	10894	5	6	1	35	13	Linkedin	3	2	3	3	3	2	2	3
22309	14560	5	7	2	81	4	Linkedin	2	2	3	3	4	3	1	3
29430	19502	4	9	5	38	10	Linkedin	1	2	5	1	5	5	5	2
38375	13223	7	10	3	76	8	Agent	3	1	3	4	4	2	5	2
18862	29207	6	4	-2	28	5	Indeed	2	1	4	1	1	2	5	5
24093	10194	7	5	-2	33	6	Linkedin	2	1	5	3	3	4	3	2
17982	25479	5	8	3	67	7	Campus	2	1	3	2	1	2	4	4
23004	22729	7	10	3	41	8	Indeed	3	2	5	2	1	2	5	3
24603	28326	3	5	2	91	4	Agent	2	1	3	4	2	1	3	5
17586	13518	7	10	3	93	11	Campus	2	1	5	4	1	5	2	3
33068	10353	3	9	6	73	9	Campus	2	1	5	4	3	3	4	5

For Performance and Talent Management:

K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Target Given	Target Achieved	New Hires performance satisfaction (100)	Performance Rating	Experience in Years	Status	Employee Training Satisfaction	Work Life Balance	High Performer	Medium Performer	Low Performer	Turnover_ratio	Retention Rate	Overall Employee Satisfaction
7	6	56	1	12	2	5	11	1	0	0	62	76	72
5	10	50	1	12	1	1	14	1	0	0	58	77	66
5	8	55	1	11	1	2	17	1	0	0	60	72	73
3	8	32	3	8	1	5	16	0	0	1	76	54	72
4	10	64	1	10	1	4	13	1	0	0	59	81	75
4	7	89	3	9	1	3	16	0	0	1	25	54	67
7	6	58	1	12	1	4	9	1	0	0	55	57	67
6	7	38	3	5	2	2	20	0	0	1	23	76	79
4	6	29	3	7	1	2	15	0	0	1	70	42	73
6	4	51	3	2	2	2	15	0	0	1	30	62	84
5	7	68	1	6	1	5	12	1	0	0	78	60	73
4	4	36	2	7	2	3	12	0	1	0	80	59	65
5	8	75	1	3	1	4	18	1	0	0	61	66	80
5	6	35	3	7	1	3	19	0	0	1	63	74	86
5	7	81	2	4	1	3	16	0	1	0	52	60	78
4	9	38	1	9	2	2	13	1	0	0	50	73	68
7	10	76	3	3	2	2	9	0	0	1	51	79	66
6	4	28	2	11	1	5	14	0	1	0	29	41	74
7	5	33	2	5	1	2	19	0	1	0	26	63	79
5	8	67	2	9	2	4	14	0	1	0	55	87	69
7	10	41	3	5	2	3	15	0	0	1	27	71	67
3	5	91	2	6	1	5	15	0	1	0	68	42	75
7	10	93	2	2	1	3	17	0	1	0	31	40	80

Operational Analysis Code Part for Reference:

```
import pandas as pd
import numpy as np
from scipy import stats
from scipy.stats import spearmanr
from scipy.stats import pearsonr
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.preprocessing import LabelEncoder
from sklearn.cluster import KMeans
from sklearn.preprocessing import StandardScaler
from sklearn.decomposition import PCA
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import GaussianNB
from sklearn.metrics import accuracy_score, classification_report
from sklearn.ensemble import RandomForestRegressor
import openpyxl
import warnings
warnings.filterwarnings('ignore')


total=[]
df = pd.read_csv("E:\\sanjay\\HR Lab\\pca.csv")
total.append( (df['TOTAL'] >70).sum())
total.append( (df['TOTAL'] <70).sum())
```

```
total.append((df['TOTAL'] ==70).sum())

tw=[]

tw.append( (df['team work'] >15).sum())

tw.append( (df['team work'] <15).sum())

tw.append((df['team work'] ==15).sum())

sal=[]

sal.append( (df['salary'] >5).sum())

sal.append( (df['salary'] <5).sum())

sal.append((df['salary'] ==5).sum())


wl=[]

wl.append( (df['Work-life balance'] >15).sum())

wl.append( (df['Work-life balance'] <15).sum())

wl.append((df['Work-life balance'] ==15).sum())


l=[]

l.append( (df['Leadership principle'] >5).sum())

l.append( (df['Leadership principle'] <5).sum())

l.append((df['Leadership principle'] ==5).sum())


inno=[]

inno.append( (df['Innovation'] >12).sum())

inno.append( (df['Innovation'] <12).sum())

inno.append((df['Innovation'] ==12).sum())
```

```
client=[]

client.append( (df['Clients'] >25).sum())

client.append( (df['Clients'] <25).sum())

client.append((df['Clients'] ==25).sum())

data=[total,tw,sal,wl,l,inno,client]

print(data)

row_names=['Total', 'Team work', 'salary','Work-life balance','Leadership
principle','Innovation','Clients']

data = pd.DataFrame(data, columns=['High','equal','low'])

data.index=row_names

data=data.transpose()

pd.set_option('display.max_columns', None)

print(data)
```

```
[[143, 44, 13], [146, 37, 17], [111, 57, 32], [81, 94, 25], [110, 54, 36], [86, 79, 35], [3, 192, 5]]
       Total  Team work  salary  Work-life balance  Leadership principle  \
High      143        146     111                 81                   110
equal      44         37      57                 94                    54
low        13         17      32                 25                    36

       Innovation  Clients
High           86        3
equal          79      192
low            35        5
```

```
# Correlation Matrix

correlation_matrix = data.corr()

print(correlation_matrix)
```

	Total	Team work	salary	Work-life balance	\
Total	1.000000	0.996324	0.996437	0.544410	
Team work	0.996324	1.000000	0.985548	0.470548	
salary	0.996437	0.985548	1.000000	0.613217	
Work-life balance	0.544410	0.470548	0.613217	1.000000	
Leadership principle	0.999987	0.995877	0.996852	0.548654	
Innovation	0.771278	0.713915	0.822213	0.953799	
Clients	-0.297910	-0.378593	-0.216337	0.638546	

	Leadership principle	Innovation	Clients
Total	0.999987	0.771278	-0.297910
Team work	0.995877	0.713915	-0.378593
salary	0.996852	0.822213	-0.216337
Work-life balance	0.548654	0.953799	0.638546
Leadership principle	1.000000	0.774494	-0.293068
Innovation	0.774494	1.000000	0.377826
Clients	-0.293068	0.377826	1.000000

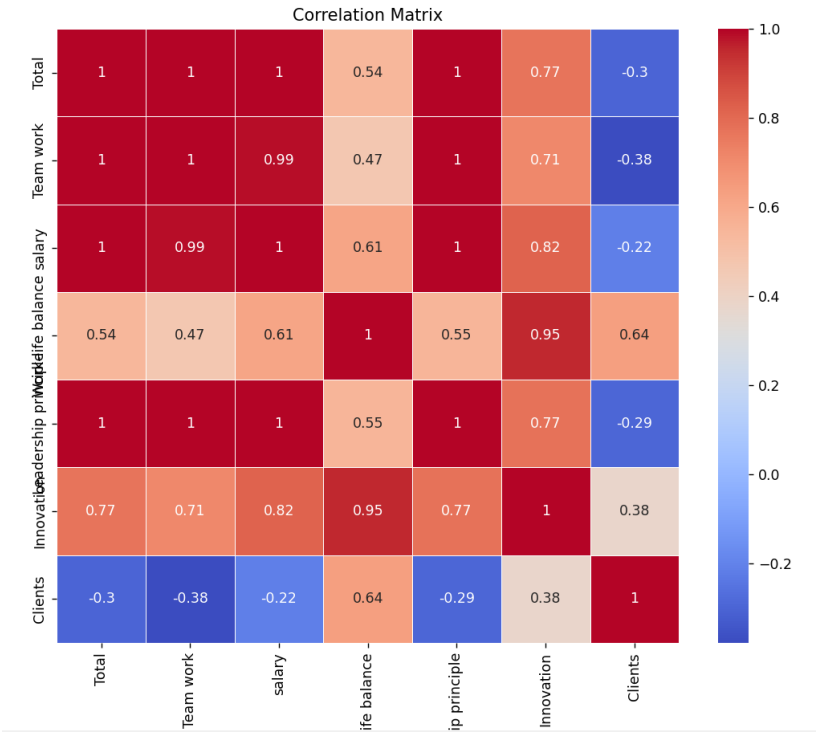
Heat Map

```
plt.figure(figsize=(10, 15))

sns.heatmap(correlation_matrix, annot=True, cmap='coolwarm', linewidths=0.5)

plt.title('Correlation Matrix')

plt.show()
```



```
job_satisfaction = df.groupby('Job Title')['TOTAL'].mean()

print("\nJob Satisfaction:")

print(job_satisfaction)

age_satisfaction = df.groupby('Age')['TOTAL'].mean()

print("\nAge wise Satisfaction:")

print(age_satisfaction)

sat = df['TOTAL'].mean()

print(f"\n\nOverall Satisfaction of Employees: {sat:.2f}")
```

```
Job Satisfaction:
Job Title
1.0    74.848485
2.0    75.250000
3.0    75.433333
5.0    75.548387
6.0    72.742857
7.0    73.766667
Name: TOTAL, dtype: float64

Age wise Satisfaction:
Age
0.0    76.666667
1.0    74.301205
2.0    74.708333
3.0    75.000000
Name: TOTAL, dtype: float64


Overall Satisfaction of Employees: 74.58
```

```
correlation_coefficient, p_value = pearsonr( df['TOTAL'], df['HCRI'] )


# Print the correlation coefficient for Culture and HCRI

print(f"Pearson Correlation Coefficient: {correlation_coefficient:.2f}")

print(f"P-value: {p_value:.2f}")
```

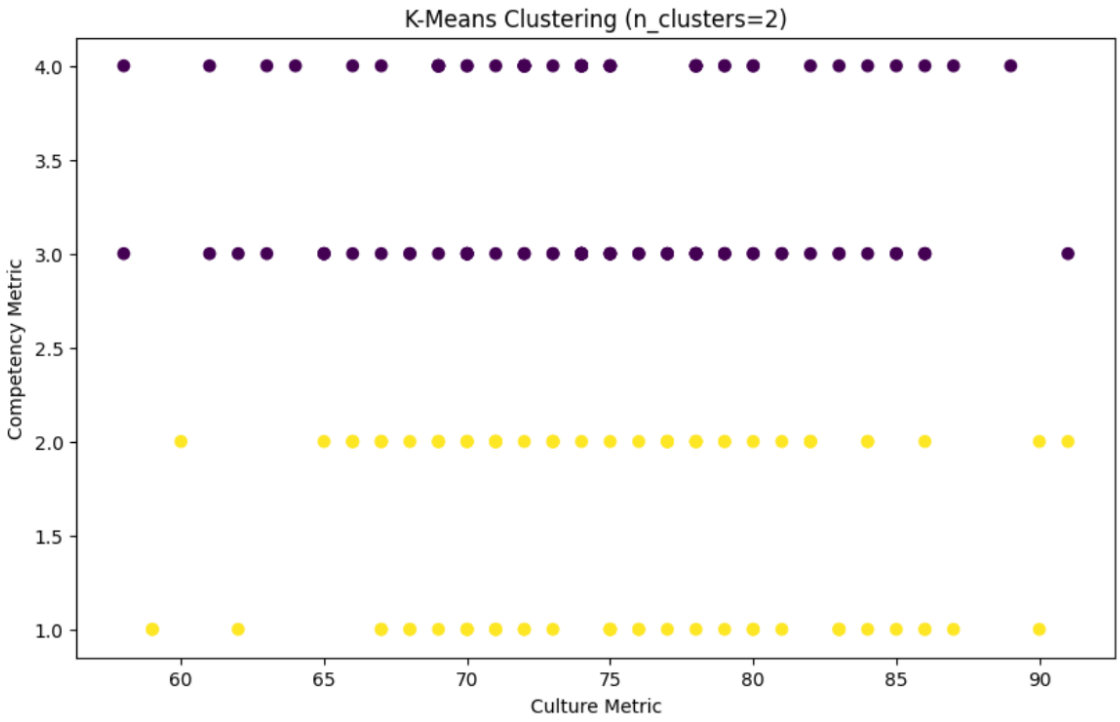
```
# Determine if the correlation is significant (common significance level is 0.05)
if p_value < 0.05:
    print("The correlation is statistically significant.")
else:
    print("The correlation is not statistically significant.")
```

```
Pearson Correlation Coefficient: -0.06
P-value: 0.42
The correlation is not statistically significant.
```

```
# Clustering

X = df[['TOTAL', 'BARS']]
# Standardize the data
scaler = StandardScaler()
X_std = scaler.fit_transform(X)
# Specify the number of clusters
n_clusters = 2
# Create and fit a K-Means clustering model
kmeans = KMeans(n_clusters=n_clusters, random_state=42)
kmeans.fit(X_std)
# Add cluster labels to the original DataFrame
df['Cluster'] = kmeans.labels_
# Visualize the clusters (optional)
plt.figure(figsize=(10, 6))
```

```
plt.scatter(df['TOTAL'], df['BARS'], c=df['Cluster'], cmap='viridis')
plt.xlabel('Culture Metric')
plt.ylabel('Competency Metric')
plt.title(f'K-Means Clustering (n_clusters={n_clusters})')
plt.show()
```




```
# PCA

culture_column_numbers = [4, 5, 6, 7]
competency_column_numbers = [8,9]
# Use .iloc to select culture and competency columns
culture_df = df.iloc[:, culture_column_numbers]
competency_df = df.iloc[:, competency_column_numbers]
```

```
# Concatenate the selected DataFrames horizontally (axis=1)
combined_df = pd.concat([culture_df, competency_df], axis=1)
# Now 'combined_df' contains both culture and competency columns
print(combined_df)
# Standardize the data (important for PCA)
scaler = StandardScaler()
scaled_data = scaler.fit_transform(combined_df)
# Perform PCA
n_components = min(len(culture_column_numbers), len(competency_column_numbers))  # Number of components to retain
pca = PCA(n_components=n_components)
pca_result = pca.fit_transform(scaled_data)
# Explained variance ratio
explained_variance_ratio = pca.explained_variance_ratio_
# Create a scree plot to visualize explained variance
plt.figure(figsize=(8, 5))
plt.bar(range(1, n_components + 1), explained_variance_ratio)
plt.xlabel('Principal Components')
plt.ylabel('Explained Variance Ratio')
plt.title('Scree Plot')
plt.show()
# Print the cumulative explained variance
cumulative_variance = explained_variance_ratio.cumsum()
print("Cumulative Explained Variance:")
```

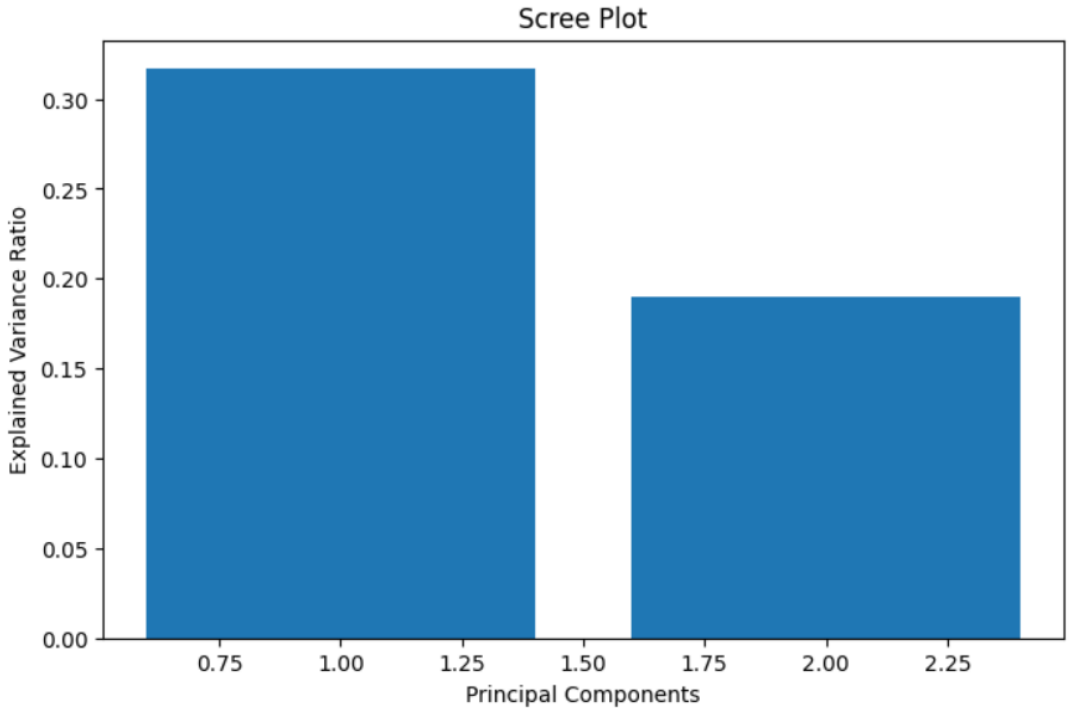
```
print(cumulative_variance)

# You can also print the loadings of each metric on the principal components if needed

loadings = pca.components_

print("Loadings of Metrics on Principal Components:")

print(loadings)
```




```
Cumulative Explained Variance:
[0.31682672 0.50642533]
Loadings of Metrics on Principal Components:
[[-0.43225042 -0.18988157 -0.25413558 -0.49236182 -0.67732998  0.10641248]
 [ 0.36554417 -0.49473266 -0.56437713  0.16468731 -0.08401486 -0.51857024]]
```

```
# Feature Importance

# Split the data into features (X) and the target variable (y)

X = df[['TOTAL', 'HCRI', 'BARS']]

y = df['Compensation Satisfaction Score']

# Create a RandomForestRegressor model

model = RandomForestRegressor(n_estimators=100, random_state=42)
```

```
# Fit the model to your data

model.fit(X, y)

# Get feature importances

feature_importances = model.feature_importances_

# Create a DataFrame to display feature names and their importances

feature_importance_df = pd.DataFrame({'Feature': X.columns, 'Importance':
feature_importances})

# Sort features by importance in descending order

feature_importance_df = feature_importance_df.sort_values(by='Importance',
ascending=False)

# Print or visualize the feature importance

print(feature_importance_df)
```

```
  Feature  Importance
1    HCRI    0.480417
0   TOTAL    0.394497
2    BARS    0.125085
```

```
# Cost-benefit Analysis

workbook = openpyxl.load_workbook("E:\\sanjay\\HR Lab\\pca.xlsx")

worksheet = workbook['pca']

Revenue_Per_Employee = worksheet.cell(row=2, column=18)

Cost_Per_Employee = worksheet.cell(row=3, column=18)

No_of_employees = worksheet.cell(row=4, column=18)

rev = float(Revenue_Per_Employee.value)

num = float(No_of_employees.value)

cost = float(Cost_Per_Employee.value)
```

```
# Calculate Total Revenue

Total_Revenue = rev * num

# Calculate Total Cost

Total_Cost = cost * num

# Calculate Net Benefit

Net_Benefit = Total_Revenue - Total_Cost

print(Net_Benefit)
```

```
Net Benefit:  60000000.0
```

```
## Recruitment Analysis

hire = pd.read_excel("E:\\sanjay\\HR Lab\\pca.xlsx" , sheet_name='hire')

categorical_columns = [ 'Sourcing Channel']

label_encoders = {}

for column in categorical_columns:

    le = LabelEncoder()

    hire[column] = le.fit_transform(hire[column])

    label_encoders[column] = le


## Feature Importance Analysis

# Split the data into features (X) and the target variable (y)

X = hire[['Time to Fill (Days 15)', 'New Hires performance satisfaction (100)', 'Performance Differential']]

Y = hire['Sourcing Channel']
```

```
# Create a RandomForestRegressor model

model = RandomForestRegressor(n_estimators=100, random_state=42)

# Fit the model to your data

model.fit(X, Y)

# Get feature importances

feature_importances = model.feature_importances_

# Create a DataFrame to display feature names and their importances

feature_importance_df = pd.DataFrame({'Feature': X.columns, 'Importance':
feature_importances})

# Sort features by importance in descending order

feature_importance_df = feature_importance_df.sort_values(by='Importance',
ascending=False)

# Print or visualize the feature importance

print(feature_importance_df)
```

```
                                Feature  Importance
1  New Hires performance satisfaction (100)    0.393444
0                   Time to Fill (Days 15)    0.324364
2                Performance Differential    0.282193
```

```
## Correlation Analysis

print("\nCorrelation & P_value:\n")

correlation, p_value = spearmanr(hire['Sourcing Channel'], hire['Time to Fill (Days 15)'])

print(f"Sourcing Channel & Time to Fill - Correlation: {correlation:.2f}  P_value:
{p_value:.2f}")

correlation, p_value = spearmanr(hire['Sourcing Channel'], hire['New Hires performance
satisfaction (100)'])
```

print(f"Sourcing Channel & Performance satisfaction - Correlation: {correlation:.2f} P_value: {p_value:.2f}")

```
Correlation & P_value:

Sourcing Channel & Time to Fill - Correlation: -0.07  P_value: 0.61
Sourcing Channel & Performance satisfaction - Correlation: -0.25  P_value: 0.08
```

Training and development Analysis

Correlation Analysis

print("\nCorrelation & P_value:\n")

correlation, p_value = spearmanr(hire['Employee Training Satisfaction'], hire['Hours Satisfaction'])

print(f"Employee Training Satisfaction & Hours Satisfaction - Correlation: {correlation:.2f} P_value: {p_value:.2f}")

correlation, p_value = spearmanr(hire['Employee Training Satisfaction'], hire['Content Satisfaction'])

print(f"Employee Training Satisfaction & Content Satisfaction - Correlation: {correlation:.2f} P_value: {p_value:.2f}")

correlation, p_value = spearmanr(hire['Employee Training Satisfaction'], hire['Skill Development'])

print(f"Employee Training Satisfaction & Skill Development - Correlation: {correlation:.2f} P_value: {p_value:.2f}")

correlation, p_value = spearmanr(hire['Employee Training Satisfaction'], hire['Knowledge Level'])

print(f"Employee Training Satisfaction & Knowledge Level - Correlation: {correlation:.2f} P_value: {p_value:.2f}")

```
Correlation & P_value:

Employee Training Satisfaction & Hours Satisfaction - Correlation: 0.11  P_value: 0.44
Employee Training Satisfaction & Content Satisfaction - Correlation: -0.08  P_value: 0.57
Employee Training Satisfaction & Skill Development - Correlation: -0.16  P_value: 0.27
Employee Training Satisfaction & Knowledge Level - Correlation: 0.34  P_value: 0.02
```

Correlation for recruitment and training

hired = hire[['Content Satisfaction', 'Skill Development', 'Knowledge Level', 'Hours Satisfaction', 'Sourcing Channel', 'New Hires performance satisfaction (100)','Employee Training Satisfaction']]

correlation_matrix = hired.corr()

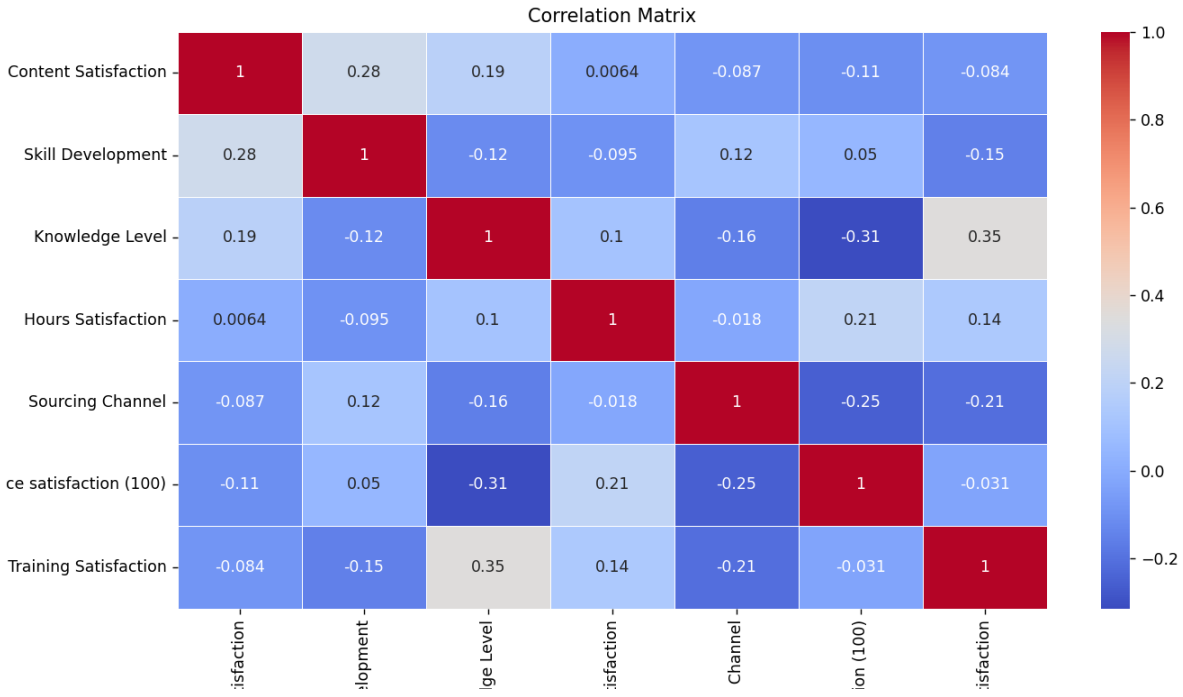
#Create a heatmap of the correlation matrix

plt.figure(figsize=(15, 10))

sns.heatmap(correlation_matrix, annot=True, cmap='coolwarm', linewidths=0.5)

plt.title('Correlation Matrix')

plt.show()



Performance Management

```
per = pd.read_excel("E:\\sanjay\\HR Lab\\pca.xlsx" , sheet_name='data')
```

Correlation Analysis

```
print("\nCorrelation & P_value:\n")
correlation, p_value = spearmanr(hire['Performance Rating'], hire['Sourcing Channel'])
print(f"Performance Rating & Sourcing Channel - Correlation: {correlation:.2f}  P_value: {p_value:.2f}")
correlation, p_value = spearmanr(hire['Performance Rating'], hire['Hours Satisfaction'])
print(f"Performance Rating & Hours Satisfaction - Correlation: {correlation:.2f}  P_value: {p_value:.2f}")
correlation, p_value = spearmanr(hire['Performance Rating'], hire['Employee Training Satisfaction'])
print(f"Performance Rating & Employee Training Satisfaction - Correlation: {correlation:.2f} P_value: {p_value:.2f}")
```

```
Correlation & P_value:

Performance Rating & Sourcing Channel - Correlation: 0.03  P_value: 0.86
Performance Rating & Hours Satisfaction - Correlation: 0.04  P_value: 0.79
Performance Rating & Employee Training Satisfaction - Correlation: -0.07  P_value: 0.62
```

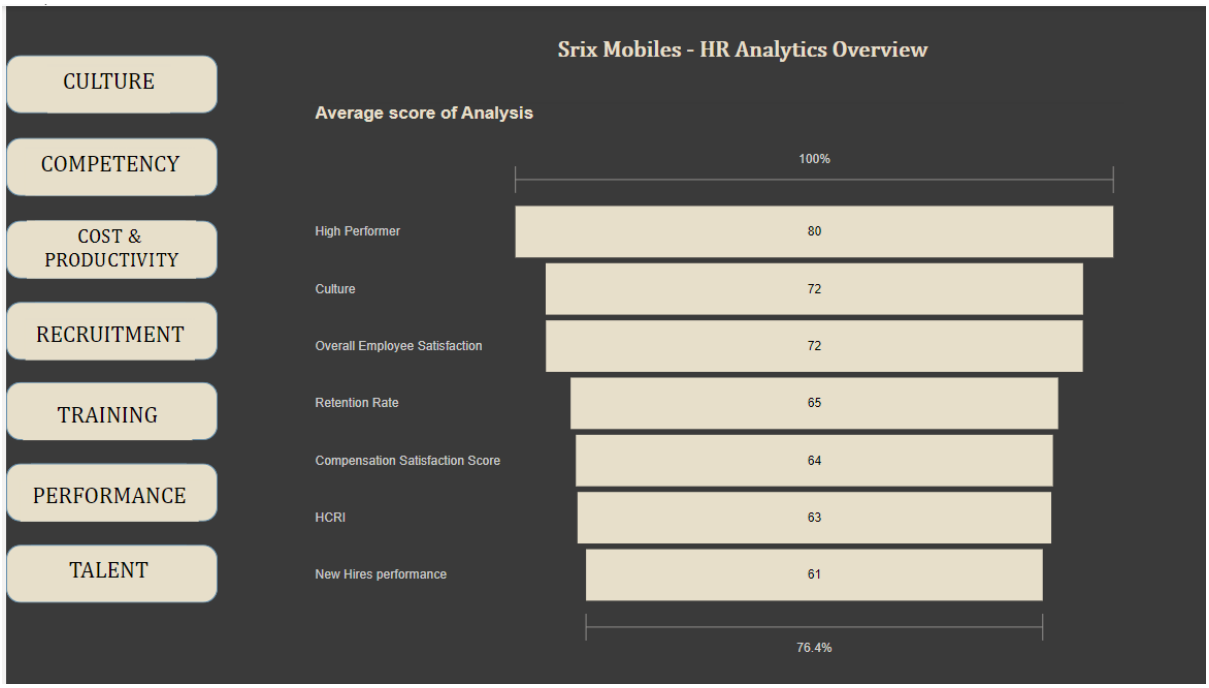
```
# Calculate the correlations
correlation_hp_rr = per['High Performer'].corr(per['Retention Rate'])
correlation_lp_rr = per['Low Performer'].corr(per['Retention Rate'])
correlation_hp_tr = per['High Performer'].corr(per['Turnover_ratio'])
correlation_lp_tr = per['Low Performer'].corr(per['Turnover_ratio'])
correlation_satisfaction_rr = per['Overall Employee Satisfaction'].corr(per['Retention Rate'])
```

```
# Print the correlation coefficients
print(f'Correlation between High Performer and Retention Rate: {correlation_hp_rr:.2f}')
print(f'Correlation between Low Performer and Retention Rate: {correlation_lp_rr:.2f}')
print(f'Correlation between High Performer and Turnover Ratio: {correlation_hp_tr:.2f}')
print(f'Correlation between Low Performer and Turnover Ratio: {correlation_lp_tr:.2f}')
print(f'Correlation between Employee Satisfaction and Retention Rate: {correlation_satisfaction_rr:.2f}')
```

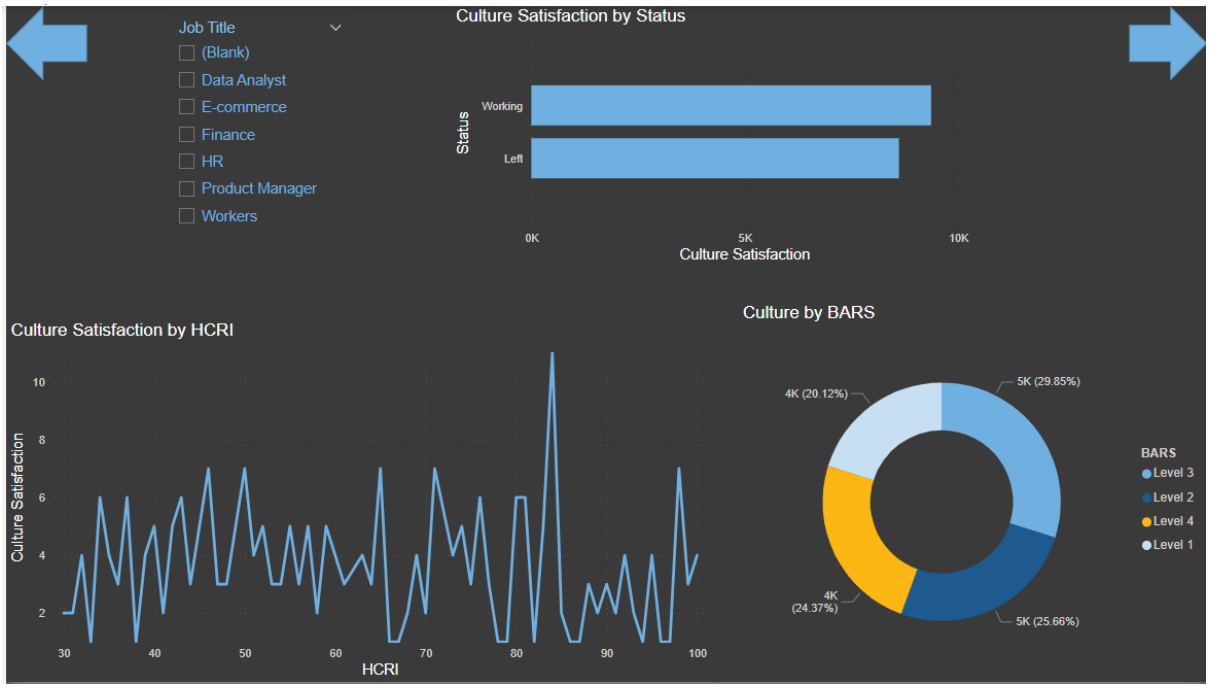
```
Correlation between High Performer and Retention Rate: 0.02
Correlation between Low Performer and Retention Rate: -0.03
Correlation between High Performer and Turnover Ratio: 0.25
Correlation between Low Performer and Turnover Ratio: -0.16
Correlation between Employee Satisfaction and Retention Rate: -0.03
```

Power BI – Dashboard:

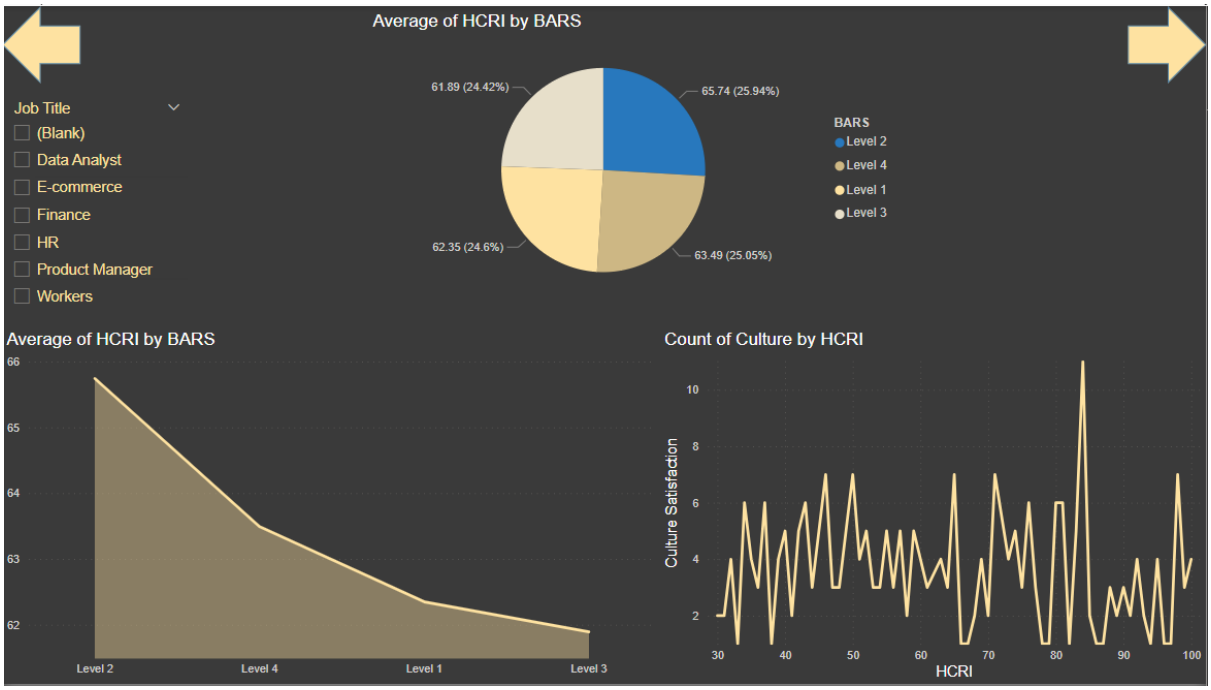
Overview of all the factors:



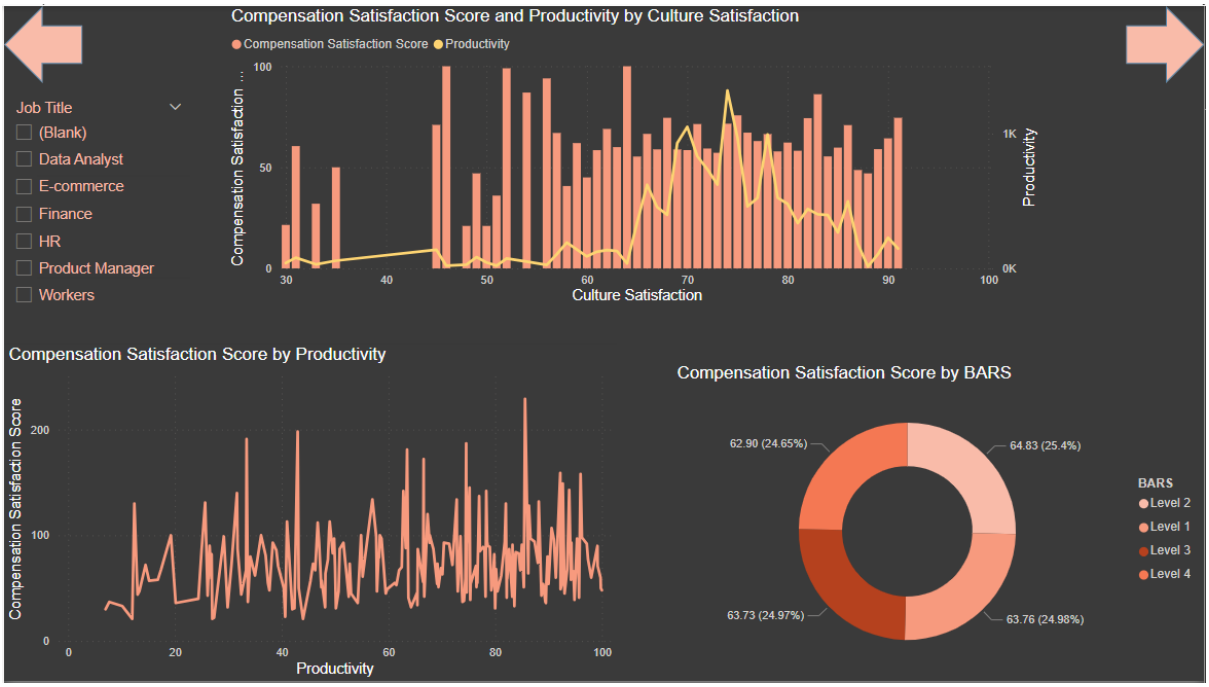
Culture Satisfaction:



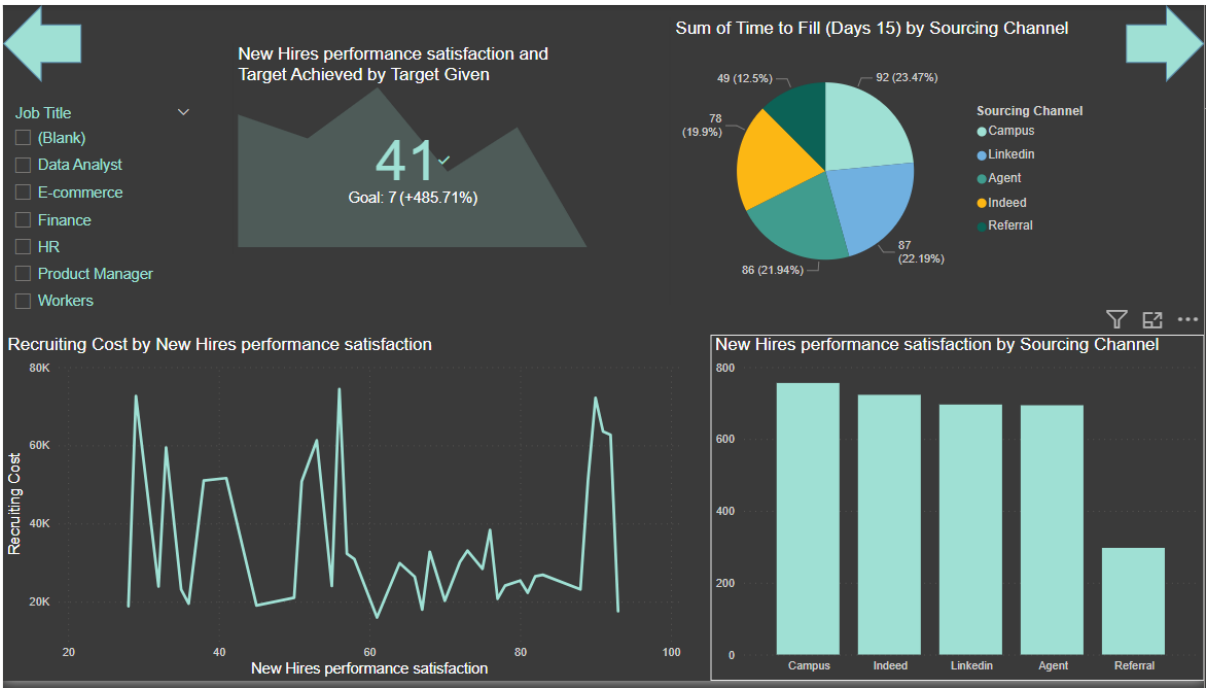
Competency Satisfaction:



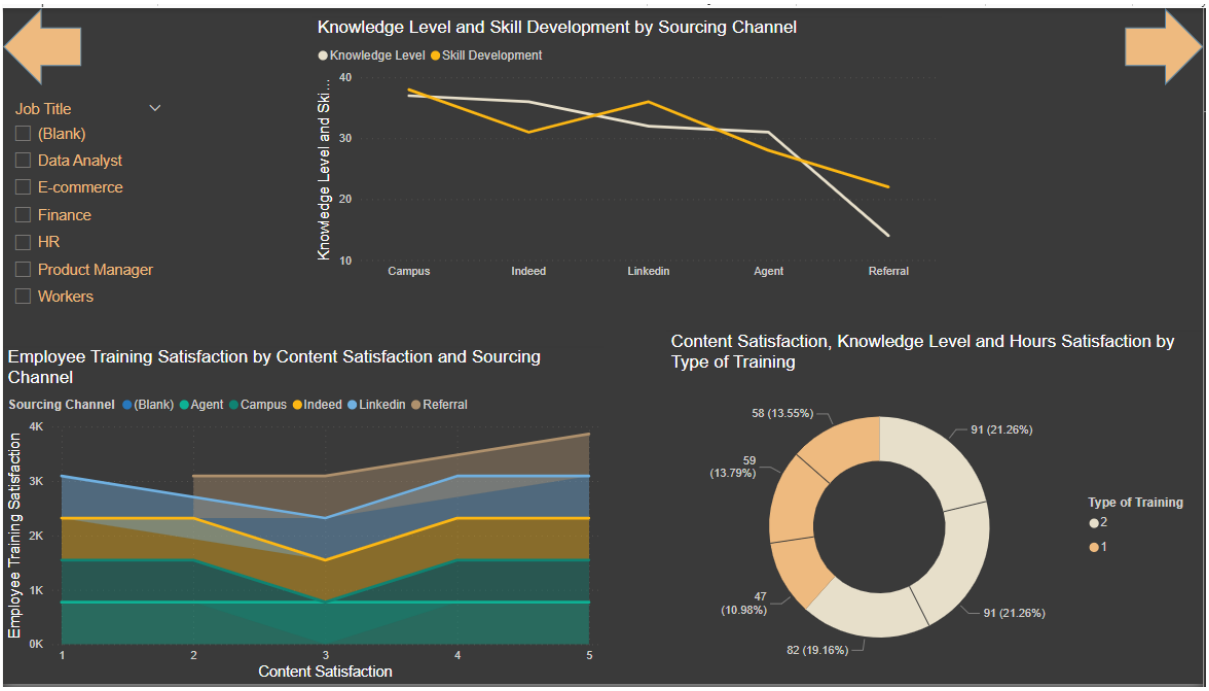
Cost & Productivity:



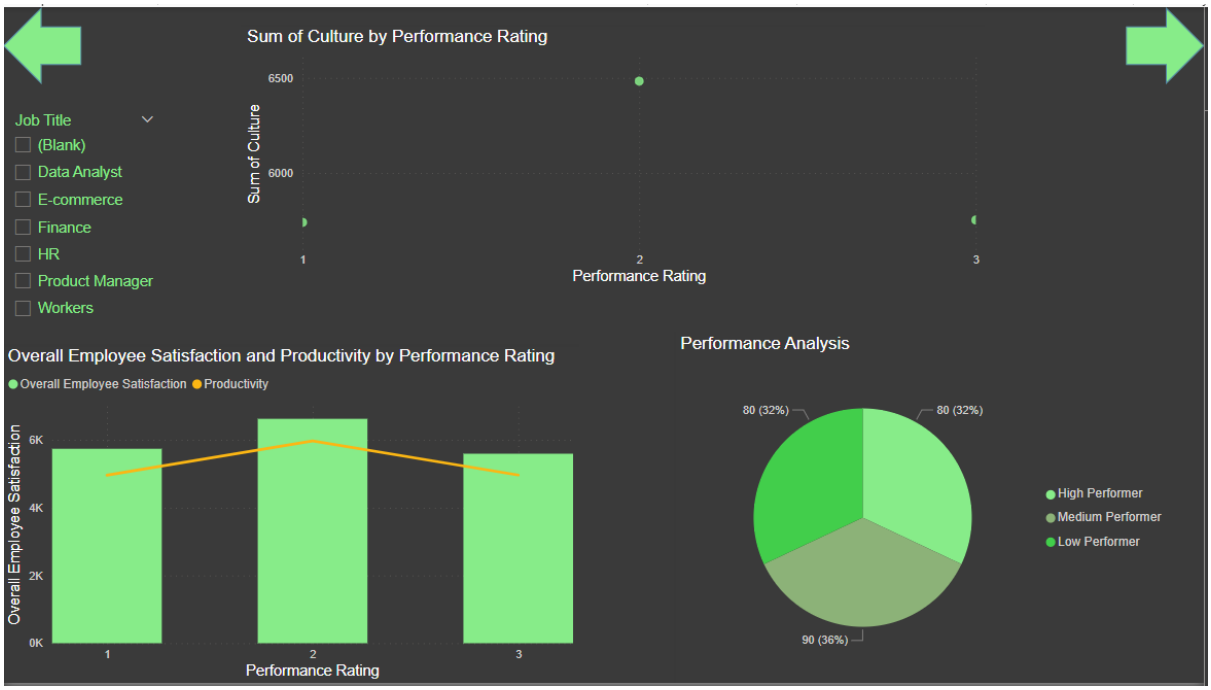
Recruitment – New hire performance satisfaction:



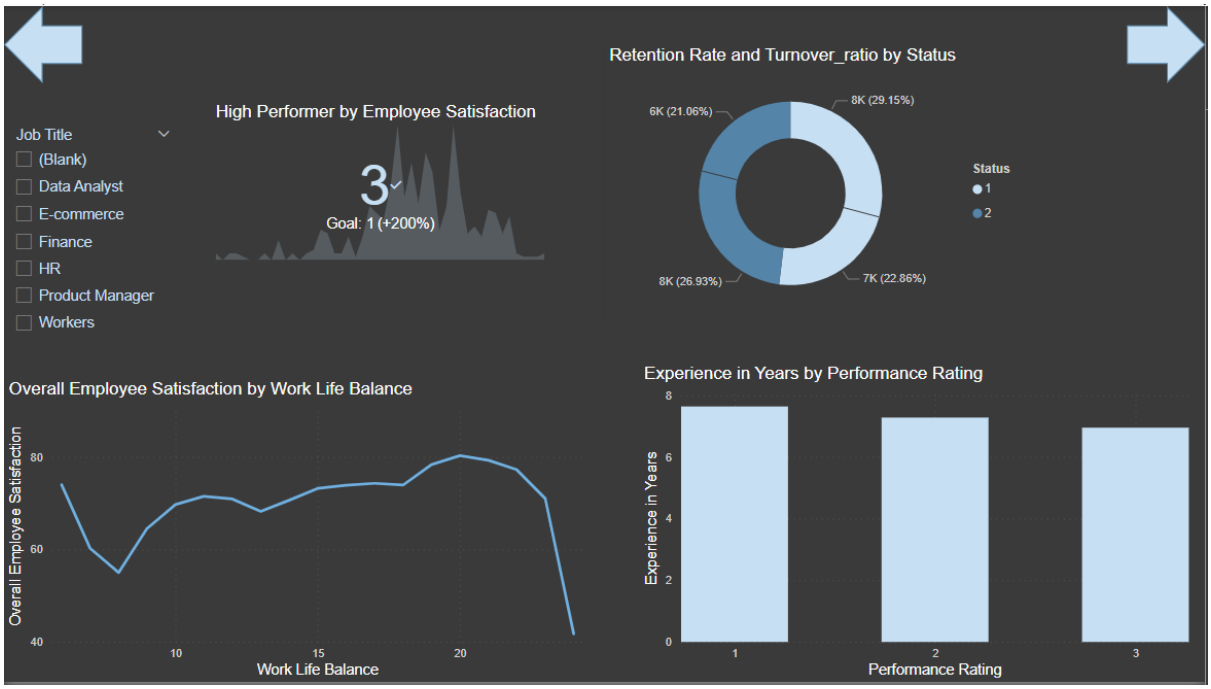
Training & Development Satisfaction:



Performance Management:



Talent Management:



Overall Analysis using Decision Tree: