



## **Optimizing Passenger Service Roster Planning: Enhancing Employee Well-being and Satisfaction at Finavia Oyj**

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Aviation Business

Bachelor's thesis

2024

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| <p><b>Degree</b><br/>Bachelor of Business Administration, Aviation Business</p>   |
| <p><b>Thesis Title</b><br/>Optimizing Passenger Service Roster Planning: Enhancing Employee Well-being and Satisfaction at Finavia Oyj</p>  |
| <p><b>Number of pages and appendix pages</b><br/>45+ 6</p>  |
| <p>This bachelor's thesis explores enhancing roster planning within Finavia Oyj's passenger service operations. As a critical aspect of workforce management in the aviation sector, effective roster planning is essential for operational efficiency, employee satisfaction, and the overall passenger experience. The study investigates current rostering practices at Finavia Oyj, evaluates employee feedback, and integrates theoretical models to develop a comprehensive shift scheduling framework tailored to the unique needs of airport operations.</p> <p>Through a mixed-method approach combining quantitative surveys and qualitative insights, this research analyses the impact of shift scheduling on various aspects of employee well-being and organisational performance. The findings highlight the importance of flexibility, predictability, and fairness in shift planning, suggesting that well-designed roster systems contribute significantly to job satisfaction and operational effectiveness. The study proposes several improvements to foster a more engaged and productive workforce, including advanced scheduling tools and strategies for better work-life balance.</p> <p>This thesis contributes to the academic discourse on human resource management in the aviation industry and provides practical recommendations for Finavia Oyj and similar organisations seeking to optimise their roster planning processes. By aligning scheduling practices with both employee preferences and operational demands, companies can enhance their service quality and competitive edge in the global market</p> |
| <p><b>Key words</b><br/>Roster planning, Employee satisfaction, Workforce Management, Aviation industry, Operational efficiency, Shift scheduling</p>   |

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| <b>Opinnäytetyön otsikko</b><br>Matkustajapalvelun työvuorosuunnittelun optimointi: Työntekijöiden hyvinvoinnin ja tyytyväisyyden parantaminen Finavia Oyj:ssä  |
| <b>Sivujen lukumäärä ja liitteet</b><br>45+ 6   |
| <p>Tämä Opinnäytetyö käsittelee työvuorosuunnittelun kehittämistä Finavia Oyj:n matkustajapalvelutoiminnoissa. Tehokas työvuorosuunnittelu on olennainen osa työvoiman hallintaa ilmailualalla ja välttämätöntä operatiivisen tehokkuuden, työntekijöiden tyytyväisyyden ja kokonaisvaltaisen matkustajakokemuksen kannalta. Tutkimuksessa tarkastellaan Finavia Oyj:n nykyisiä työvuorokäytäntöjä, arvioidaan työntekijöiden palautetta ja yhdistetään teoreettisia malleja kehittämään kattava työvuorojen suunnittelukehys lentokenttätoimintojen erityistarpeisiin.</p> <p>Sekametodologialla, joka yhdistää määrälliset kyselyt ja laadulliset näkemykset, tämä tutkimus analysoi työvuorosuunnittelun vaikutusta eri tekijöihin työntekijöiden hyvinvoinnissa ja organisaation suorituskyvyssä. Tulokset korostavat joustavuuden, ennakoitavuuden ja oikeudenmukaisuuden merkitystä työvuorosuunnittelussa ja osoittavat, että hyvin suunnitellut työvuorojärjestelmät parantavat huomattavasti työtyytyväisyyttä ja toiminnan tehokkuutta. Tutkimus ehdottaa useita parannuksia motivoituneemman ja tuottavamman työvoiman tukemiseksi, mukaan lukien kehittyneet aikataulutustyökalut ja strategiat paremman työn ja vapaa-ajan tasapainon saavuttamiseksi.</p> <p>Tämä tutkielma tarjoaa panoksensa ilmailualan henkilöstöhallinnon akateemiseen keskusteluun ja käytännön suosituksia Finavia Oyj:lle sekä vastaaville organisaatioille työvuorosuunnitteluprosessien optimoinnin edistämiseksi. Yhdistelemällä suunnittelukäytännöt sekä työntekijöiden toiveiden että toiminnallisten vaatimusten kanssa yritykset voivat parantaa palvelun laatua ja kilpailuetuaan globaalilla markkinalla.</p> |
| <b>Avainsanat</b><br>Työvuorosuunnittelu, Työntekijöiden tyytyväisyys, Ilmailuala, Toiminnallinen tehokkuus, Työhyvinvointi   |

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# 1 Introduction

This paper is a research type of bachelor's thesis for the degree programme in Aviation business. The topic consists of roster planning in Finavia Oyj (referred as Finavia) passenger service department. Workforce scheduling in the aviation sector is inherently intricate due to its 24/7 nature, operational demands, and diverse employee needs. In the wake of global changes in work patterns, such as remote work, and the industry's ever-evolving landscape, it is essential to evaluate and innovate scheduling practices. Timely and efficient scheduling improves employee morale and directly influences airport efficiency, passenger satisfaction, and operational cost-effectiveness.

The aviation industry is a dynamic and critical sector, with airports serving as vital hubs for global travel and commerce. Within this intricate web of operations, efficient workforce scheduling is paramount to ensuring airports' smooth functioning while addressing employees' well-being and preferences. This thesis embarks on a journey to optimise workforce scheduling at Finavia, a key player in the Finnish aviation landscape. The following sub-chapters present the aim of the thesis, research questions and scope, and structure of the thesis.

## 1.1 The aim of the thesis and research problem

This thesis topic is not confined to the narrow boundaries of aviation but resonates with broader contexts such as organisational management, human resource optimisation, and operational efficiency. The challenges faced by Finavia in workforce scheduling are not unique to the aviation industry and can be extrapolated to various sectors where around-the-clock operations intersect with employee well-being.

The product of this thesis is a comprehensive workforce scheduling model designed to address the specific needs of Finavia. This model encompasses planning principles, tools, and guidelines, intending to revolutionise the way scheduling is conducted within the organisation. It is a practical solution to balance employee satisfaction and operational excellence harmoniously.

This practical study is initiated to bridge the gap between theory and practice in aviation workforce management. While academic knowledge is crucial, its real-world application often requires tailored solutions. This thesis aims to provide Finavia with a customised, data-driven scheduling framework that aligns with its operational realities, ultimately enhancing its competitive edge in the aviation market.

## **1.2 Significance of the research**

This chapter discusses the research-based thesis's significance in improving roster planning for Finavia's airport operations. It outlines the potential impact of the thesis on various stakeholders and the broader industry.

The client for this research-based thesis is Finavia, a leading Finnish airport operator. The research and tools developed will be primarily utilised within the company's roster planning department. This department is responsible for creating work schedules for airport staff, ensuring the smooth operation of Finland's airports.

It improved Operational Efficiency in the department. The research-based thesis aims to optimise staff rosters, leading to more efficient resource allocation and reduced operational disruptions due to understaffing or overstaffing. Allowing Cost Saving for the company to align work schedules with actual operational needs, Finavia can potentially reduce unnecessary labour costs and create enhanced Employee Satisfaction. Better roster planning can improve employee work-life balance, fostering higher job satisfaction and reducing turnover.

Best Practices. The research and solutions developed in this thesis can serve as a model for other airports and aviation companies worldwide, contributing to the overall enhancement of industry practices. Improved Passenger Experience: Efficient roster planning can lead to smoother airport operations, benefiting passengers by reducing wait times and enhancing overall travel experiences.

The research findings can be shared within the broader aviation industry through conferences, seminars, and industry publications. Other airport operators and aviation companies can adopt and adapt the best practices identified in this thesis to improve their roster planning processes. This research-based thesis holds significant potential benefits for Finavia, the aviation industry, the academic community, and the thesis author's professional development. The practical tools and research findings will contribute to airport staff's efficient and effective roster planning, ultimately enhancing the passenger experience and industry standards.

## **1.3 Objectives of the study and research questions**

This research-based thesis aims to improve the shift scheduling process at Finavia, focusing on achieving efficient and balanced work shift planning in airport operations. The primary objectives are to create a comprehensive plan and workflow that optimizes employee shifts, considering both employee well-being and the operational requirements of the airport. This document outlines this thesis project's objectives, scope, success indicators, and sustainability considerations.

The main objectives of this thesis can be summarised as follows:

**Analyze Current Shift Scheduling Practices** To conduct an in-depth analysis of the existing shift scheduling practices within Finavia. This includes understanding how shifts are currently assigned, identifying pain points, and assessing their impact on both employees and operational efficiency.

**Employee needs assessment** to survey employees regarding their work-hour preferences, needs, and specific requirements. This will help craft shift schedules that align with employee preferences and promote well-being.

**Operational requirements analyse** to gather data and insights on the operational demands of the airport, including peak hours, seasonal variations, and any special events that might affect shift planning.

The scope of this research-based thesis is as follows:

2.1. **Inclusion:** The thesis will encompass an extensive analysis of current shift scheduling practices at Finavia, employee surveys, data collection on operational requirements.

2.2. **Exclusion:** This thesis will not delve into broader human resource management aspects beyond shift scheduling. It will not address unrelated operational issues within the airport nor offer a comprehensive solution for all potential shifts and roles within the organisation.

2.3. **Justification:** The limitations are set to maintain the focus of the research and ensure that the objectives are achievable within the given timeframe. The exclusion of unrelated issues is necessary to maintain the project's feasibility.



Table 1 Overlay matrix

| Investigate Questions                                     | Theoretical framework | Survey Questions     | Results |
|---|-----------------------|----------------------|---------|
| What is the current status of roster planning?            | 3.1,3.4,3.5           | 6,13,14,16,17,19     | 5.2,5.5 |
| What are the employee needs for the roster planning?      | 3.2,3.3               | 7,8,11,13,15, 18     | 5.3,5.4 |
| Which roster planning components do employees value most? | 3.4,3.3               | 9,10,12,14, 18,19,20 | 5.5,5.3 |

## 1.4 Structure of the thesis

This academic work aims to enhance the work scheduling processes within Finavia, a leading airport operator focusing on passenger service. The thesis structure is organised into six main chapters, each contributing to a comprehensive understanding of the research, methodology, results, and conclusions.

### Chapter 1

This chapter introduces the research problem and provides the context for the study. It outlines the objectives and research questions. It provides a rationale for the study and its significance within the aviation industry. The chapter ends with an overview of the thesis structure, highlighting the subsequent chapters.

### Chapter 2 background of thesis

In this chapter, we delve into the background and motivation for the thesis. It briefly describes the organisation, Finavia, and its passenger service work scheduling. It lays the foundation for understanding the practical implications of the study.

### Chapter 3: Theoretical Framework

This chapter serves as the first theoretical part of the thesis. It presents an in-depth literature review of relevant concepts and theories related to work scheduling, passenger service, and airport operations. Theoretical models, frameworks, and previous research findings are discussed to build

a theoretical foundation for the study. The chapter highlights the gaps in the existing literature that this research aims to address.

#### Chapter 4: Research Methods

provides a detailed description of the research methods employed in this study. It discusses the research design, data collection methods, and data analysis techniques. The chapter explains the rationale for selecting these methods and the data collection and analysis procedures. Ethical considerations and limitations are also addressed in this chapter.

#### Chapter 5: Survey Results and Summary

This chapter presents the findings of the research based on the survey conducted. The results are analysed, and key patterns, trends, and insights are discussed. The survey findings are summarised, highlighting their relevance to the research questions and objectives. This chapter forms the empirical basis for the subsequent chapters.

#### Chapter 6: Reflections, Conclusions, and Development Proposals

synthesises the key findings from the research and reflects upon their implications. It revisits the research questions and objectives, drawing conclusions based on the empirical evidence. Development proposals for improving passenger service work scheduling at Finavia are presented. This chapter discusses the study's practical implications and offers recommendations for future research in the field.

The chapter structure outlined in this essay provides a roadmap for the thesis. Each chapter is crucial in developing a comprehensive understanding of the research problem, methodology, findings, and practical implications. This structure ensures that the thesis is well-organised, logically coherent, and contributes to the broader knowledge in aviation and work scheduling.

## 2 Background for the thesis

This research-based thesis aims to improve the shift scheduling process at Finavia, focusing on achieving efficient and balanced work shift planning in airport operations. The primary objectives are to create a comprehensive plan and workflow that optimises employee shifts, considering both employee well-being and the operational requirements of the airport. This document outlines this thesis project's objectives, scope, success indicators, and sustainability considerations.

### 2.1 Commissioner

In global aviation, airport operators play a pivotal role in ensuring airports' smooth and efficient functioning. Finavia stands out as a beacon of excellence in airport management and operations among these operators. As Finland's leading airport operator, Finavia has consistently demonstrated its commitment to innovation, sustainability, and passenger satisfaction. This chapter represents Finavia as an airport operator company, shedding light on its history, operational strategies, commitment to sustainability, and unwavering dedication to enhancing the passenger experience.

Finavia's journey in the aviation industry began in 1924, initially established as a state-owned enterprise managing Finland's airports. Over nearly a century, Finavia has transformed from a national airport authority into a significant global aviation player. Finavia operates 20 airports across Finland, with Helsinki Airport being the most notable, serving as the primary international gateway to the country (Finavia Corporation, 2021).

Finavia's success is grounded in its commitment to operational excellence, heavily investing in modernising airport infrastructure, technology, and facilities. For instance, Helsinki Airport has seen considerable renovations, adopting advanced technologies and amenities to elevate the traveller's experience (Helsinki Airport, 2022). Safety and security are paramount, with Finavia adhering to the highest international aviation standards, establishing itself as one of the safest airport operators worldwide (Aviation Safety Network, 2020).

Finavia's approach to sustainability transcends environmental considerations, embracing social responsibility by enhancing inclusivity, diversity, and accessibility. Initiatives to improve services for passengers with reduced mobility and to adopt diverse hiring practices ensure that Finavia's airports are accessible and welcoming to all users (Finavia Corporation, Diversity Report, 2019).

Central to Finavia's ethos is delivering an exceptional passenger experience. Investments in customer service improvements, digital innovations, and an array of dining and shopping options

are designed to meet varied passenger needs. Collaboration with airlines to expand flight networks further bolsters traveller convenience and satisfaction (Finavia Annual Report, 2021).

Finavia's role as an airport operator company represents a commitment to excellence, sustainability, and passenger satisfaction.

## **2.2 Roster planning**

Roster planning, commonly referred to as staff scheduling, is a critical aspect of workforce management in various sectors. It involves the systematic arrangement of employee work shifts to optimise labour resources while meeting organisational goals and compliance with labour laws. This chapter delves into the fundamental concepts and terms associated with roster planning, providing an academic perspective on its importance, methodologies, and impacts on organisational efficiency.

Roster planning is defined as the process of organising employees' working hours in a way that ensures the efficient operation of the organisation while considering legal, contractual, and personal constraints. The goal is to match employee availability with the needs of the business, ensuring optimal staffing levels at all times (Tiwari et al., 2009).

Key terms in roster planning:

**Shift Work:** Employment practice designed to use the 24 hours of the clock rather than a standard working day. This term is crucial in roster planning as it dictates the cyclic patterns of work hours (Folkard & Lombardi, 2006).

**Work Shifts:** These are the specific periods during which different groups of employees are scheduled to work. Standard shifts include morning, afternoon, and night shifts.

**Rotation:** This refers to the cyclic pattern in which employees move through various shifts to distribute work hours equitably and manage fatigue (Harrington, 2001).

**Flextime:** A scheduling system that allows employees to choose their starting and finishing times within agreed limits. Flextime is increasingly important in modern roster planning to accommodate diverse workforce needs (Bal & De Lange, 2015).

**On-call Work:** Refers to employees who are not currently on shift but can be called in at short notice to meet unforeseen demands.

**Part-time Work:** Employment with fewer hours per week than a full-time job, often utilised in roster planning to provide flexibility and cover peak periods.

Overtime: The time worked beyond regular working hours as defined by organisational policy or labour law. Overtime planning is critical to roster planning, requiring careful regulation to prevent employee burnout (Capshaw, 2003).

Work-life Balance: The equilibrium that an individual needs between time allocated for work and other aspects of life. Effective roster planning must consider work-life balance to maintain employee satisfaction and productivity (Greenhaus & Allen, 2011).

Roster planning is a dynamic and complex process that requires careful consideration of various factors, including operational needs, employee preferences, and legal constraints. By understanding and implementing effective roster planning, organisations can significantly enhance their operational efficiency and employee satisfaction.

### 3 Literature review

This chapter provides a comprehensive review of the literature related to work scheduling within the context of passenger service in the aviation industry. This literature review aims to establish the theoretical foundation for the thesis by examining existing research and relevant concepts, we identify gaps, opportunities, and best practices in optimising work scheduling for airport passenger service.

#### 3.1 Roster planning models

24/7 operations pose unique challenges for roster planning due to the continuous nature of work and the need to balance operational demands with legal, social, and health considerations for the workforce (Tucker et al., 2010). Effective roster planning models must address issues such as shift rotation, rest periods, and equitable distribution of work hours while ensuring operational efficiency (Williamson et al., 2011). Different roster planning methods are listed below.

Linear programming (LP) models are widely used in roster planning to optimise staffing schedules based on operational demands and constraints (Ernst et al., 2004). These models generate schedules that minimise costs or maximise coverage under constraints such as labour laws, employee preferences, and qualifications (Dantzig, 1954). Despite their efficiency, LP models require precise input data and may not fully capture the complexity of human factors in scheduling (Bechtold & Jacobs, 1990).

Cyclical roster models involve creating repeating patterns of shifts that cycle over a specific period, offering predictability and simplicity in scheduling (Easton et al., 2009). These models are particularly effective in operations where demand patterns are stable. However, they may lack the flexibility needed to address unexpected changes in demand or workforce availability (Burke et al., 2004).

Flexible scheduling models offer adaptability to changing demands and employee preferences by allowing shifts to be adjusted within specific parameters (Hill et al., 2001). This approach can improve employee satisfaction and retention by accommodating personal preferences and work-life balance needs (Kelly et al., 2008). Challenges include maintaining operational coverage and managing the increased complexity in schedule planning (Barton et al., 1992).

Simulation-based models use computer simulations to evaluate different scheduling scenarios and their impacts on operations and workforce (Viana et al., 2013). This approach allows planners to assess the feasibility and effectiveness of different roster configurations before implementation.

While powerful, simulation models require extensive data and computing resources (Law & Kelton, 2000).

### **3.2 Maslow's hierarchy**

Abraham Maslow, a pioneering figure in psychology, introduced the hierarchy of needs in his 1943 paper "A Theory of Human Motivation" (Maslow, 1943). This framework proposes that human beings are motivated by a hierarchy of needs, starting with the most necessities, and moving towards the pursuit of personal growth and fulfilment (Maslow, 1943). Different levels of hierarchies are explained below.

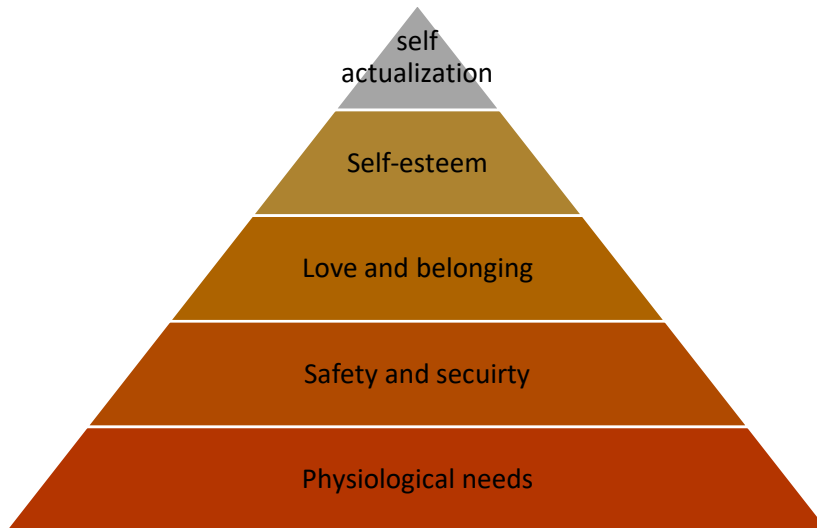
**Physiological Needs:** These are the biological requirements for human survival, including air, water, food, shelter, and sleep. Maslow argued that these needs must be met before individuals can focus on any higher-level aspirations (Maslow, 1943).

**Safety Needs:** Once physiological needs are satisfied, the need for safety becomes prominent. This encompasses personal and financial security, health and well-being, and safety against accidents or illness (Maslow, 1943).

**Love and Belongingness Needs:** Human beings have an inherent desire to belong to groups, whether they are families, friendships, or romantic relationships. Fulfilling these needs involves giving and receiving love, feeling a sense of belonging, and avoiding loneliness (Maslow, 1968).

**Esteem Needs:** Esteem needs are associated with achieving, gaining recognition, and feeling respected by others. This level includes both self-esteem (dignity, achievement, mastery, independence) and the desire for reputation or respect from others (status, prestige) (Maslow, 1968).

**Self-Actualisation Needs:** The highest level of Maslow's hierarchy is the need for self-actualisation, which is the pursuit of realising one's potential, self-fulfilment, seeking personal growth, and peak experiences. Maslow described this as the desire to accomplish everything that one can, to become the most that one can be (Maslow, 1954).



Picture 1: Representation of Maslow's hierarchy (adapted from Herrity 24 October 2022; Maslow 1987, 15-22)

Understanding Maslow's hierarchy can greatly benefit various fields, such as education, where teachers can support students in fulfilling their basic needs before expecting optimal learning (Oleson, 2004). In business, employers can create environments that satisfy employees' needs, leading to higher motivation and productivity (Herzberg, 1968).

While Maslow's hierarchy has been influential, it has faced criticism for its lack of empirical support and its assumption that the same hierarchy applies universally across cultures. Recent studies suggest that the order of needs might not be as rigid as Maslow proposed and that cultural factors play a significant role in determining the hierarchy of needs (Hofstede, 1984; Tay & Diener, 2011).

Maslow's hierarchy of needs remains a valuable tool for understanding human motivation despite its limitations. It emphasises the complexity of human needs and the idea that until the more fundamental needs are satisfied, individuals cannot fully engage with higher-level goals. As we apply this theory, it is crucial to consider individual differences and cultural contexts to fully understand human motivation (Ryan & Deci, 2000).

Maslow's hierarchy can explain employee satisfaction in the company and explain the values of the employees. Creating a framework for the employee experience.

### **3.3 Impact of roster planning**

In contemporary work environments, particularly within sectors necessitated to operate continuously, such as airport ground handling, roster planning emerges as a pivotal factor not only in logistical execution but also in influencing employee well-being and organisational performance



(Kunaviktikul et al., 2015). How shifts are allocated profoundly impacts an individual's personal life, mental health, and job efficiency (Dall'Ora et al., 2016). This paper draws upon insights from advanced solutions in roster planning, to explore the scheduling process from an employee perspective and its subsequent effects.

Effective roster planning is characterised by a sophisticated equilibrium between organisational demands and employee preferences, serving as a cornerstone for both operational efficiency and employee contentment (Stone et al., 2015). Modern tools that leverage artificial intelligence and machine learning, significantly diminish the administrative workload, ensuring equitable shift distribution while adhering to legal and operational parameters (Li et al., 2019).

### Key Benefits from an Employee's Perspective

**Work-Life Balance:** Advanced roster planning tools facilitate predictability and fairness in shift allocation, enabling employees to manage better their personal commitments, which in turn fosters a healthier work-life balance (Stimpfel et al., 2020).

**Job Satisfaction:** The equitable distribution of shifts and the accommodation of individual preferences contribute to heightened job satisfaction. Systems that permit employee input engender a sense of agency and participation in the scheduling process (Moore et al., 2018).

**Reduced Stress and Burnout:** Efficient roster planning can prevent erratic and unsociable working hours, mitigating the risk of employee burnout and enhancing overall well-being (Dall'Ora et al., 2015).

**Increased Productivity:** A workforce that is well-rested and mentally prepared is inherently more productive. Effective roster planning ensures that employees work in patterns that maximise their performance and safety (Russo et al., 2018).

Despite these advancements, challenges persist. The complexity of aligning organisational requirements with employee preferences often necessitates compromises. Furthermore, the unpredictability inherent in specific roles, especially within airport operations, demands a degree of flexibility that can challenge even the most advanced planning systems.

The future trajectory of roster planning involves continually incorporating employee feedback into the scheduling process, leveraging technology to create more adaptable and responsive systems. As solutions evolve, maintaining a focus on the human aspect of scheduling is crucial. Recognising that at the core of every roster is an individual whose quality of life and work is significantly influenced by these plans (Kunaviktikul et al., 2015).

In conclusion, as we navigate the intricacies of modern work environments, the significance of roster planning in shaping the employee experience cannot be overstated. By prioritising fairness, flexibility, and the well-being of employees in scheduling practices, organisations can cultivate a more engaged, satisfied, and productive workforce, equipped to confront the challenges of continuous operations with resilience and dedication.

### **3.4 Importance of roster planning**

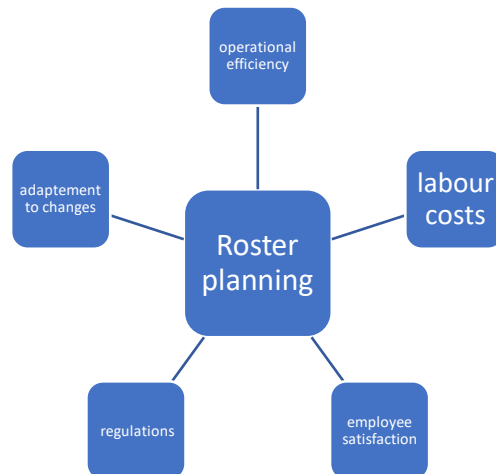
Effective workforce management is pivotal to organisational success in the contemporary business landscape. Roster planning, the systematic scheduling of employee work hours, is instrumental in aligning human resource capabilities with the dynamic needs of businesses (Smith & Jones, 2020). This paper delves into the essence of roster planning, highlighting its significance across various operational dimensions.

Roster planning is integral to achieving high levels of operational efficiency, ensuring that staff with the appropriate skills are available when needed (Doe et al., 2018). This alignment is crucial for seamless service delivery and optimal customer satisfaction, particularly in sectors like retail and healthcare, where demand can fluctuate significantly.

Labour costs represent a significant expenditure for many organisations. Strategic roster planning facilitates the judicious allocation of human resources, minimising unnecessary overtime and enhancing payroll efficiency (Lee, 2019). This approach is vital for maintaining financial health and operational agility.

The correlation between roster planning and employee satisfaction is well-documented. Schedules that consider employee preferences contribute to a more engaged workforce and lower turnover rates (Chen & Huang, 2017). This aspect of roster planning is especially critical in industries where skilled labour is at a premium. Adherence to labour laws and regulations is a non-negotiable aspect of roster planning. Effective scheduling practices ensure compliance with working hours, rest periods, and overtime mandates, safeguarding organisations from legal penalties (Robinson & Zhang, 2021).

The ability to swiftly adapt to changing circumstances is a hallmark of resilient organisations. Flexible roster planning enables businesses to respond to unforeseen challenges, ensuring continuity and stability (Patel & Davidson, 2020)



Picture 2: Roster planning model

The strategic importance of roster planning is evident across multiple dimensions of business operations. Not only does it directly impact operational efficiency and financial performance, but it also plays a crucial role in workforce management and regulatory compliance. Best practices in roster planning, including employee engagement, technological integration, demand forecasting, and continuous evaluation, are vital to leveraging its full benefits (Garcia & Thompson, 2022).

Roster planning emerges as a critical strategy for modern organisations, enabling them to navigate the complexities of workforce management effectively. By prioritising efficient, flexible, and compliant scheduling practices, businesses can achieve operational excellence and strategic agility. Future research should explore the integration of advanced analytics and artificial intelligence in roster planning to further enhance its effectiveness (Kim & Park, 2023).

### 3.5 Airport staffing

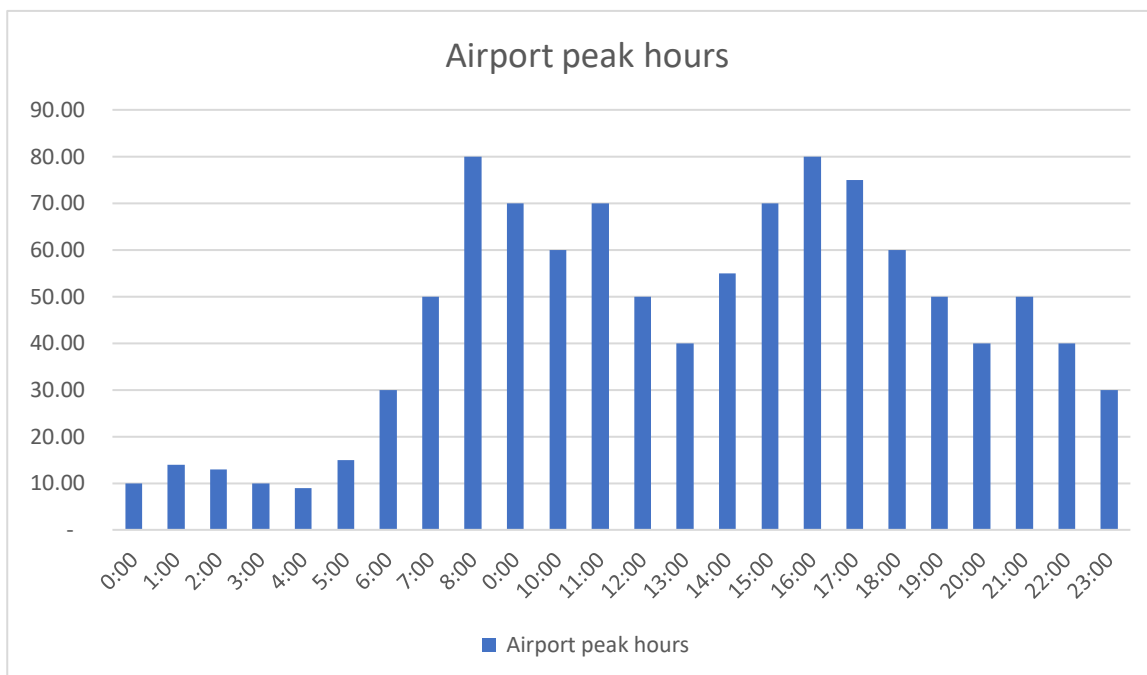
Airports are pivotal in facilitating global connectivity, requiring continuous operation to manage passenger and cargo flow efficiently. This necessitates a workforce that is both skilled and adaptable to the demands of round-the-clock service. However, the operational complexity and the need for a dedicated staff present significant staffing challenges, impacting safety, efficiency, and regulatory compliance (Adey, P., Budd, L., & Hubbard, P. 2007).

Attracting and retaining qualified personnel is a critical challenge for airports. The competition for skilled workers across sectors, coupled with the deterrent effect of unsociable hours and demanding work conditions, complicates recruitment efforts (Ashford, N., Stanton, H. P., Moore, C. A., Coutu, P., & Beasley, J., 2013). High turnover rates, driven by job dissatisfaction from irregular hours and physical demands, further exacerbate the staffing issue, leading to operational

disruptions and increased costs associated with recruiting and training new employees (Lincoln, J. E., & Kalleberg, A. L., 1990).

Continuous training is essential in maintaining compliance with evolving safety and security standards. However, aligning training sessions with the varied schedules of shift workers poses logistical challenges, underlining the need for flexible and innovative training solutions to foster professional development and enhance employee engagement (Button, K., Stough, R., & Nijkamp, P., 2000).

The impact of irregular working hours on work-life balance is a significant concern, with potential implications for employee well-being, including stress and burnout. Picture 3 presents airport peak hours, which shows peak hours at the airport are at 04:00-09:00 and 13:00-18:00. Effective scheduling and support mechanisms are crucial in mitigating these effects, balancing operational needs with personal life (Ahlstrom, V., 1995). Unlike airlines, which may adjust flight schedules seasonally, airport staff must be consistently available year-round. However, demand fluctuates seasonally due to holidays, sporting events, and global trends. Rostering must account for these variations to ensure optimal staffing during peak and off-peak periods (Robinson & Chen, 2014).



Picture 3: Airport peak hours (adapted from IATA Sustainability and economics, July 2023)

Navigating the complex landscape of labour laws and regulations related to working hours, rest periods, and overtime is a pivotal challenge. Airports must ensure compliance while striving for operational efficiency, requiring a nuanced understanding of legal frameworks across jurisdictions (McPhail, R., Patiar, A., Herington, C., Creed, P., & Davidson, M., 2015).

In response to staffing challenges, especially during peak seasons, airports have employed flexible shift patterns and temporary staffing strategies. While effective in the short term, these highlight the necessity for sustainable staffing solutions (Graham, A., 2014). Offering competitive salaries, flexible working arrangements, wellness programs, and career advancement opportunities are vital to making airport roles more attractive (Graham, A., 2014). Technology is vital in alleviating staffing pressures by optimising scheduling and reducing manual task requirements through automation, such as automated baggage handling systems (Ashford, N., & Stanton, H. P., 1997).

A culture that promotes continuous learning and development, accommodates the unique schedules of shift workers, and provides clear career advancement paths is essential for enhancing employee engagement (Adey, P., Budd, L., & Hubbard, P., 2007)

## **4 Methodology**

### **4.1 Research method**

Research methods consist of the strategies, processes, and techniques utilised for collecting and analysing information (Creswell, 2014). These methods are broadly categorised into qualitative, quantitative, and mixed methods approaches, each serving different research purposes.

#### **4.1.1 Quantitative research**

The cornerstone of quantitative research lies in its ability to provide precise, quantifiable evidence to support hypotheses about phenomena (Bryman, 2016). Researchers can analyse data using statistical techniques to understand patterns, relationships, and causations. This methodological approach is precious in fields such as psychology, sociology, economics, and health sciences, where researchers seek to test theories and models (Cohen, Manion, & Morrison, 2018).

One of the fundamental aspects of quantitative research is its emphasis on objectivity and replicability. Researchers use standardised measurement instruments to minimise bias and ensure that findings can be replicated in other settings or populations (Kothari, 2004). This is essential for advancing scientific knowledge, allowing subsequent researchers to build upon previous findings through further experimentation and analysis.

#### **4.1.2 Qualitative research**

Qualitative research is an investigative approach that seeks to understand human behaviour, beliefs, and experiences by collecting non-numerical data. This method is grounded in constructivism and interpretivism, emphasising the subjective interpretation of social phenomena. Unlike quantitative research, which focuses on quantifying relationships between variables, qualitative research delves into the complexities of human life to uncover the meanings behind actions, reactions, and interactions (Denzin & Lincoln, 2011).

The strength of qualitative research lies in its flexibility and depth. Through techniques such as in-depth interviews, participant observation, focus groups, and content analysis of texts and media, researchers gather rich, detailed narratives that offer insights into people's lives, cultures, and communities (Creswell & Poth, 2018). This approach allows researchers to explore the context and process behind social phenomena, generating theories and understandings grounded in empirical evidence (Merriam & Tisdell, 2015).

### **4.1.3 Mixed-method research**

Mixed-method research represents a methodological approach that integrates qualitative and quantitative research techniques within a single study to comprehensively understand research problems. This approach leverages the strengths of both methodologies to address complex research questions, allowing for a more thorough analysis than either method could provide on its own.

The essence of mixed-method research lies in its ability to triangulate data, offering multiple perspectives on the same issue. Researchers can produce more reliable and nuanced findings by combining numerical data with rich, contextual insights. This approach is precious in the social sciences, education, health research, and policy studies, where understanding the depth and breadth of human experiences is crucial (Creswell & Plano Clark, 2018).

## **4.2 Data collection of the survey**

In this study, data collection was conducted using a survey, selected for its ability to reach a large number of respondents quickly and efficiently. The survey was distributed using the Webropol platform through Haaga-Helia domains, and data analysis was performed using Webropol's tools, which facilitate the creation of charts and figures for more straightforward interpretation of results. The questionnaire was sent to everyone's email through the company distribution list, and the cover letter is in appendix 1. To ensure more responders, the QR code to the questionnaire was available at the break room QR code on appendix 2.

The survey consisted of 20 questions, primarily multiple-choice to efficiently gather necessary information, though it also included open-ended questions to allow for more detailed responses. The specifics of the questions are detailed in Appendix 3.

However, the survey methodology presents potential challenges. There is a risk of respondents misunderstanding the questions, which could compromise the data's reliability. Another concern is achieving a sufficient sample size; for this survey, the target was 50 respondents, a goal that was met within the survey's one-week duration. These factors are critical as they influence the trustworthiness and validity of the data collected.

## **4.3 Reliability and validity of the research**

This study employed a survey as its research method, primarily to leverage the advantage of effectively reaching many respondents. The objective was to minimise sampling error and enhance the precision of the data collected. According to Babbie (2016), in quantitative research, such as

surveys, securing an adequate sample size is critical to reduce the margin of error and increase the representativeness of the findings. For this type of study, achieving at least 100 responses is typically sufficient to ensure statistical significance, a benchmark this study successfully met. However, as Fowler (2013) notes, even with 100 responses, caution must be exercised before generalising the findings too broadly, as this sample size might still introduce a risk of sampling bias—where certain groups or characteristics could be overrepresented or underrepresented.

The risk of misinterpretation by respondents also posed a potential threat to the reliability and validity of the survey data. As Groves et al. (2009) discuss, even when survey instructions and items are clearly stated, respondent misunderstanding can occur, affecting the accuracy of the data. In quantitative research, the lack of opportunity for researchers to provide additional clarifications during the survey process can exacerbate this issue (Dillman et al., 2014). To mitigate these risks, the survey was rigorously pre-tested; the author and an external reviewer conducted multiple tests to ensure the survey's functionality and clarity.

A vital aspect of the discussion on validity concerns the quality of the survey questions. The integrity of the research hinges significantly on whether these questions accurately capture the data relevant to the theoretical framework and research questions (Krosnick, 1999). The construction of survey questions that yield valid data is challenging and requires careful consideration of how each question contributes to the overall objectives of the study. This is particularly pertinent in this case, as the researcher's status as a student may influence the depth of theoretical integration and operationalisation in the survey design.

Furthermore, the appropriate analysis of the data and the accurate interpretation of results are essential for drawing conclusions that genuinely reflect the study's aims and that answer the research questions (Healey, 2014). Ensuring that the data analysis aligns with accepted statistical methods and that the data justifiably support the conclusions drawn is critical for affirming the study's validity and reliability.



## 5 Survey results

This chapter presents the analysis of the questionnaire distributed among employees to assess various aspects of shift scheduling and its impact on their job satisfaction, work-life balance, and overall well-being. The survey captured responses from diverse employees, offering insights into their experiences and perceptions regarding their work schedules, shift flexibility, communication, and health-related issues stemming from their work arrangements.

### 5.1 Participant Demographics and work Information

Vastaajien määrä: 52

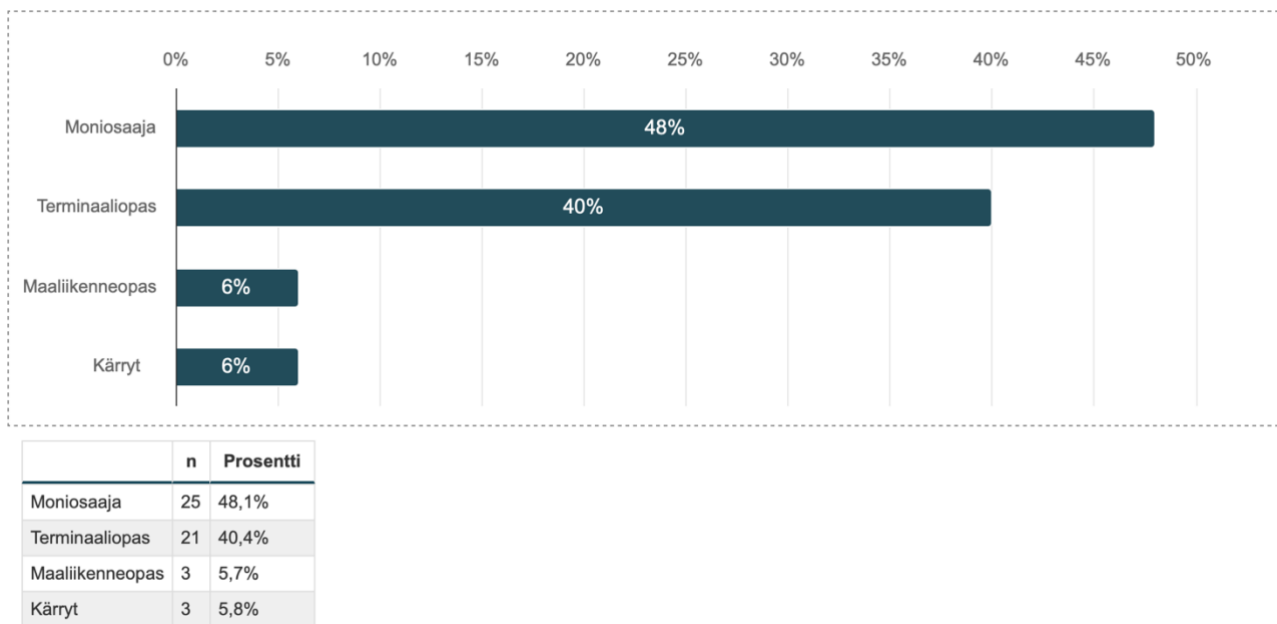
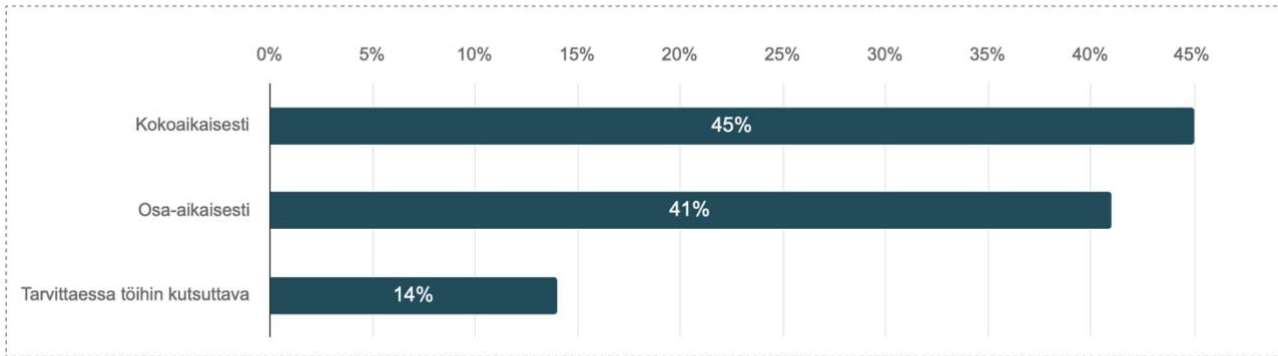


Figure 1: Job titles (N=52)

Figure 1 shows the diversity in job titles among the respondents, which indicates the company's operational structure. With 48.1% identifying as "Multitaskers" and 40.4% as "Terminal Guides," the roles represented show a blend of versatility and specialisation. More minor roles like "Ground Transport Guides" and "Carts," each around 5.7%, point to niche areas within the company's crucial but less populated operations.

### Työkenteletkö osa-aikaisesti vai kokoaikaisesti?

Vastaajien määrä: 51



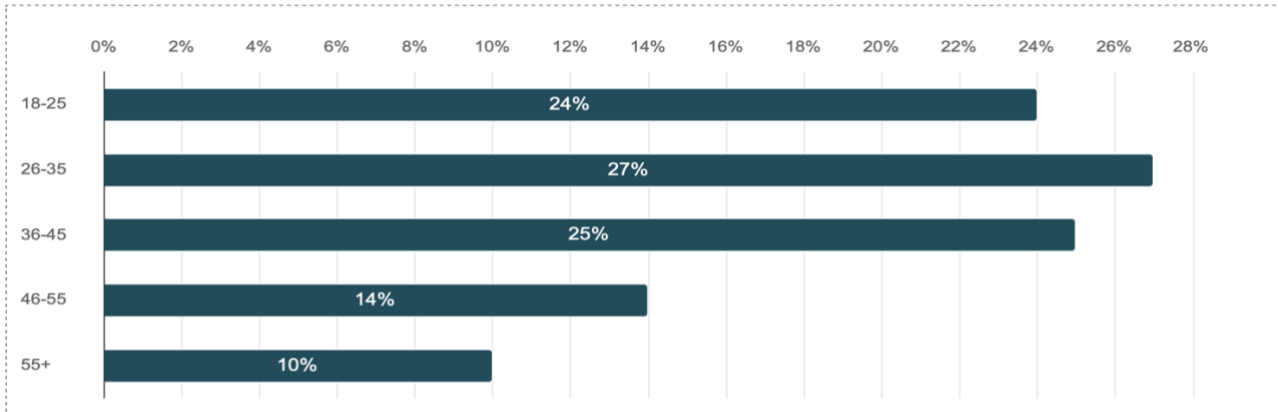
|                                | n  | Prosentti |
|--------------------------------|----|-----------|
| Kokoaikaisesti                 | 23 | 45,1%     |
| Osa-aikaisesti                 | 21 | 41,2%     |
| Tarvittaessa töihin kutsuttava | 7  | 13,7%     |

Figure 2: Employment status (N=51)

Figure 2 shows the distribution between full-time (45.1%) and part-time (41.2%) roles, with a smaller portion of on-call staff (13.7%), reflecting a workforce structured to accommodate both stable and flexible labour demands. This balance suggests the company's strategy to manage labour costs while maintaining operational flexibility.

### Ikä?

Vastaajien määrä: 51



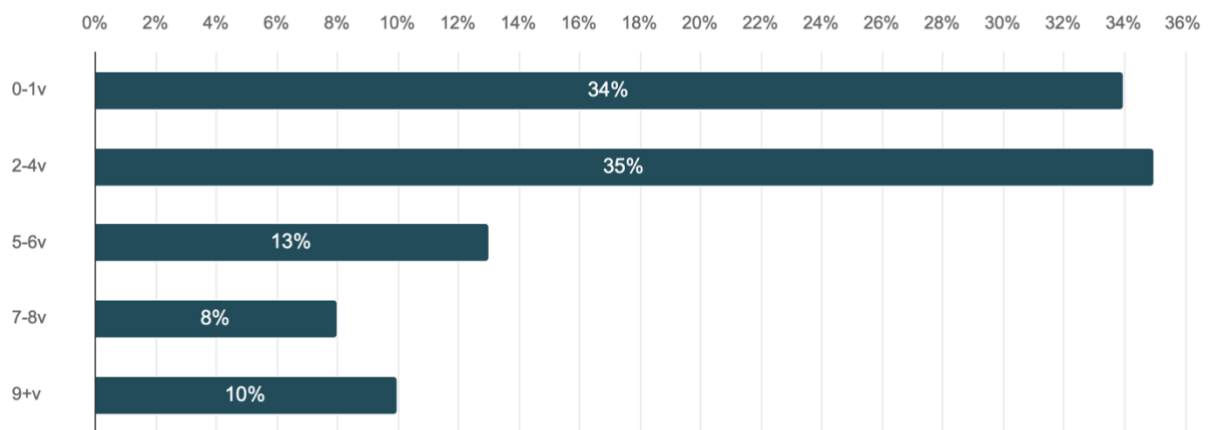
|       | n  | Prosentti |
|-------|----|-----------|
| 18-25 | 12 | 23,5%     |
| 26-35 | 14 | 27,5%     |
| 36-45 | 13 | 25,5%     |
| 46-55 | 7  | 13,7%     |
| 55+   | 5  | 9,8%      |

Figure 3, Age presentation (N=51)

Figure 3 shows respondents are relatively well distributed across various age groups, with a slight predominance in the 26-35 (27.5%) and 36-45 (25.5%) age ranges, suggesting a workforce that is primarily in the mid-stages of their careers. The age distribution highlights a workforce primarily in the mid-career phase, which can be an asset in terms of experience and reliability. However, it also emphasises the need for proactive succession planning and the introduction of training programs aimed at younger employees to ensure a pipeline of talent and the transfer of knowledge.

#### Kauanko olet työskennellyt Finavialla?

Vastaajien määrä: 52



|      | n  | Prosentti |
|------|----|-----------|
| 0-1v | 18 | 34,6%     |
| 2-4v | 18 | 34,6%     |
| 5-6v | 7  | 13,5%     |
| 7-8v | 4  | 7,7%      |
| 9+v  | 5  | 9,6%      |

Figure 4 Duration of employment (N=52)

Figure 4 shows that the data reflects a balanced mix of relatively new and moderately experienced employees, with 34.6% having worked at the company for 0-1 years and an equal percentage for 2-4 years, showcasing a dynamic workforce with ongoing fresh inputs and some degree of turnover. For long-term stability and to foster a deep sense of loyalty and culture, the company might consider strategies for career development and incentives for longer tenure.

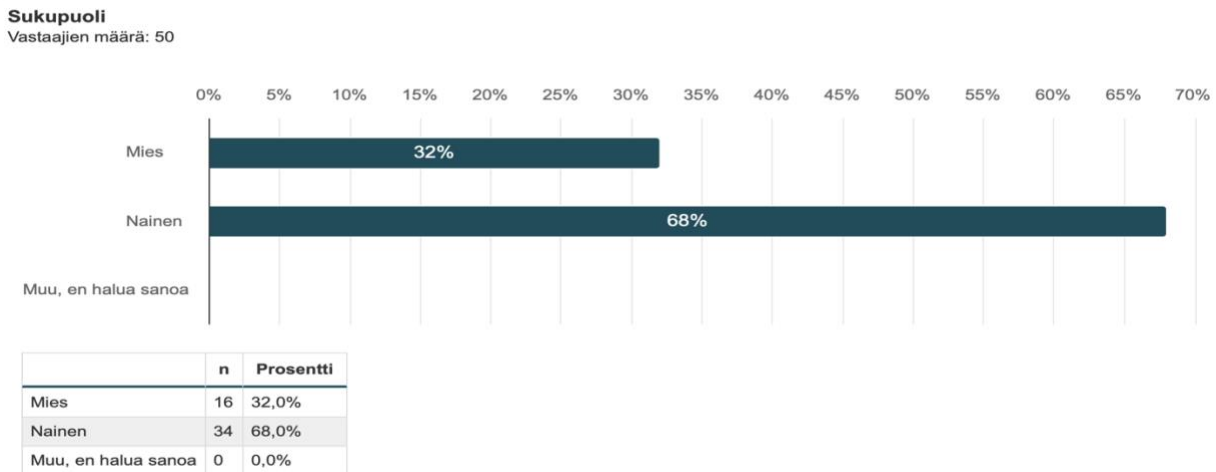


Figure 5: Gender distribution (N=50)

Figure 5 shows that female respondents dominate the survey results, making up 68% of the total, compared to 32% of male respondents, pointing towards a significant gender imbalance within the workforce. The predominance of female respondents suggests that the workforce might be skewed towards sectors or roles traditionally dominated by women or that there is an uneven gender balance that could benefit from diversity initiatives.

## 5.2 Shift scheduling and employee satisfaction

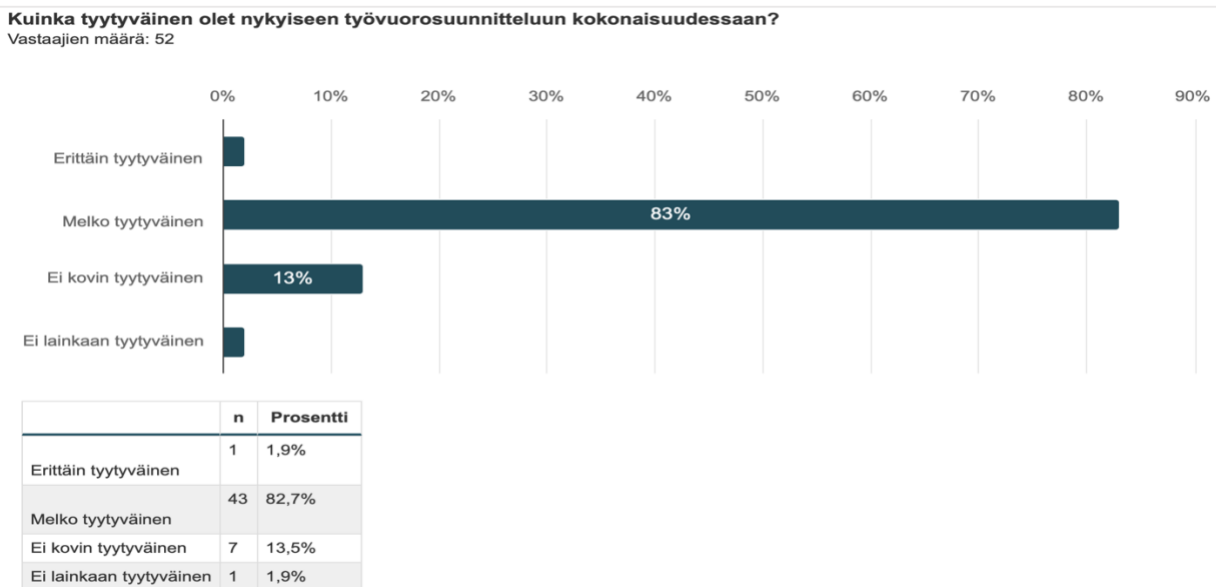


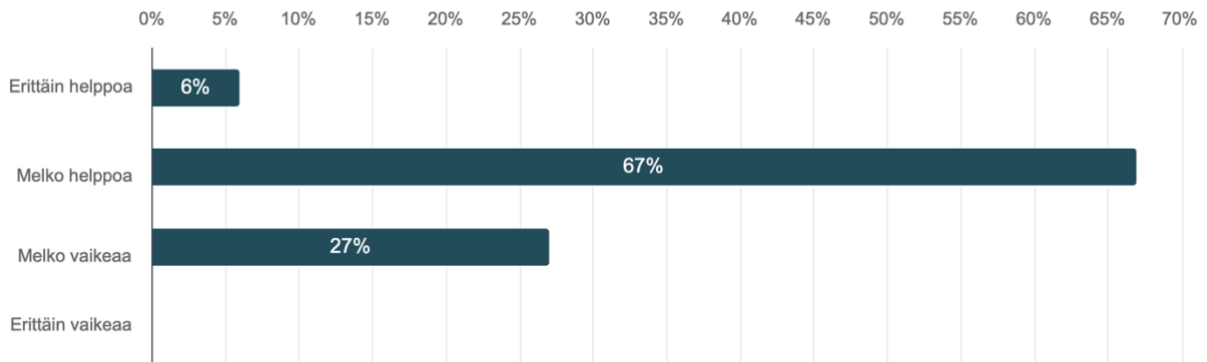
Figure 6: Satisfaction with roster planning (N=52)

Figure 6 shows that most employees report satisfaction (82.7% are somewhat to delighted), a positive indicator of the current scheduling system's efficacy. However, the dissatisfaction noted by

15.4% of the workforce suggests room for improvement, particularly in addressing specific grievances that could enhance overall satisfaction.

#### Kuinka helppoa tai vaikeaa on järjestää vuoronvaihto?

Vastaajien määrä: 52



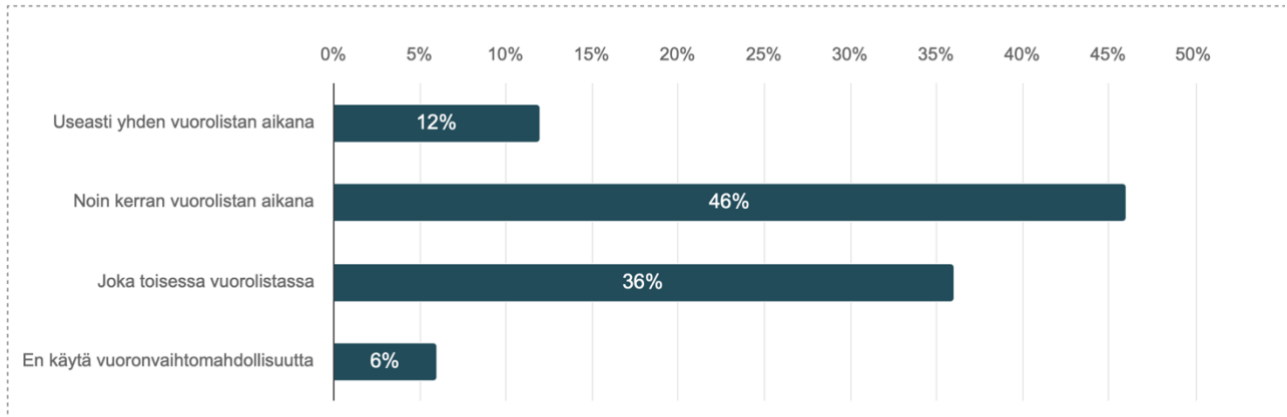
|                  | n  | Prosentti |
|------------------|----|-----------|
| Erittäin helppoa | 3  | 5,8%      |
| Melko helppoa    | 35 | 67,3%     |
| Melko vaikeaa    | 14 | 26,9%     |
| Erittäin vaikeaa | 0  | 0,0%      |

Figure 7: Ease of shift swapping (N=52)

Figure 7 shows that while a majority find shift swapping easy (67.3%), the significant minority who find it difficult (26.9%) points to potential obstacles in the shift-swapping process. Enhancing the ease of shift swapping through better policy communication or technological solutions could further improve operational flexibility and employee satisfaction.

### Miten usein käytät vuorovaihtomahdollisuutta?

Vastaajien määrä: 52



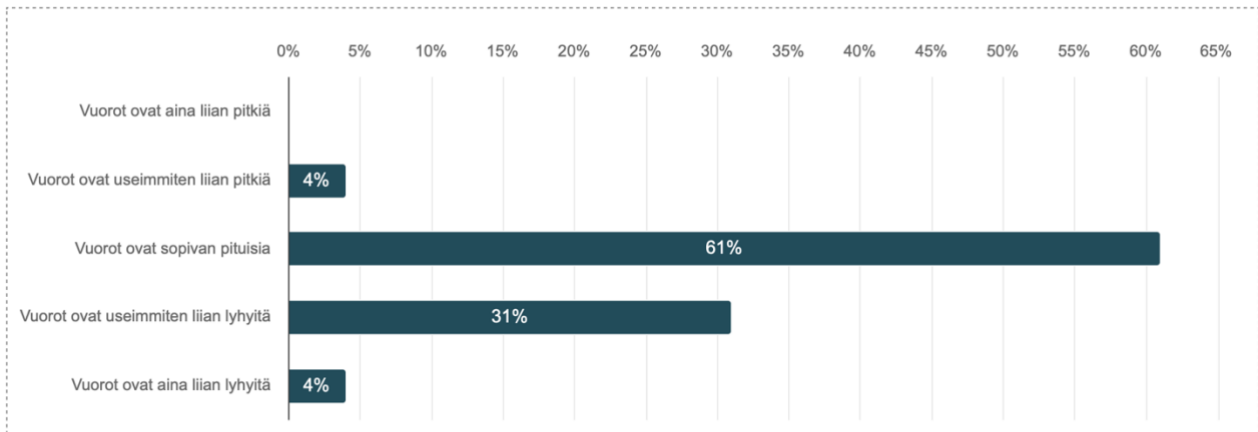
|                                    | n  | Prosentti |
|------------------------------------|----|-----------|
| Useasti yhden vuorolistan aikana   | 6  | 11,5%     |
| Noin kerran vuorolistan aikana     | 24 | 46,2%     |
| Joka toisessa vuorolistassa        | 19 | 36,5%     |
| En käytä vuorovaihtomahdollisuutta | 3  | 5,8%      |

Figure 8: How often employees swap shifts (N=52)

Figure 8 shows that the responses to this question indicate that many employees take advantage of the flexibility offered by the shift swapping system. Specifically, 46.2% of respondents use shift swapping approximately once per scheduling period, and another 36.5% swap shifts in every other shift list. This pattern highlights that a significant majority of employees rely on this option occasionally or moderately to better align their work schedules with personal needs and commitments. However, 5.8% of respondents stated that they do not use shift swapping at all, and 11.5% of employees swap shifts frequently within one scheduling period, emphasizing a small group with high needs for flexibility. Improvements could be made to address the needs of those who don't use the system or rely on it very frequently, possibly by offering better communication about the process, reducing obstacles in finding suitable partners, or providing more intuitive technological tools.

### Kuinka sopiviksi koet työvuorojesi pituudet?

Vastaajien määrä: 52



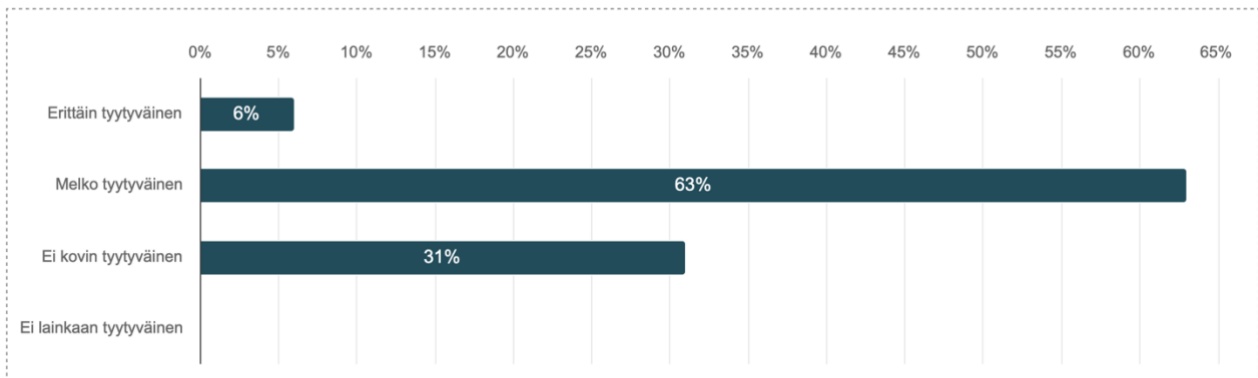
|                                      | n  | Prosentti |
|--------------------------------------|----|-----------|
| Vuorot ovat aina liian pitkiä        | 0  | 0,0%      |
| Vuorot ovat useimmiten liian pitkiä  | 2  | 3,9%      |
| Vuorot ovat sopivan pituisia         | 32 | 61,5%     |
| Vuorot ovat useimmiten liian lyhyitä | 16 | 30,8%     |
| Vuorot ovat aina liian lyhyitä       | 2  | 3,8%      |

Figure 9: Shift length (N=52)

Figure 9 shows that the majority (61.5%) of respondents are content with the duration of their shifts, finding them to be appropriately long, while nearly a third feel that the shifts are often too short, suggesting that a reevaluation of shift length could align more closely with employee preferences and workload demands. Some employees' desire for longer shifts suggests an opportunity to offer varied shift lengths that could accommodate different lifestyle needs and personal preferences, thereby increasing job satisfaction and work-life balance.

### Kuinka tyytyväinen olet työvuorojesi joustavuuteen?

Vastaajien määrä: 52



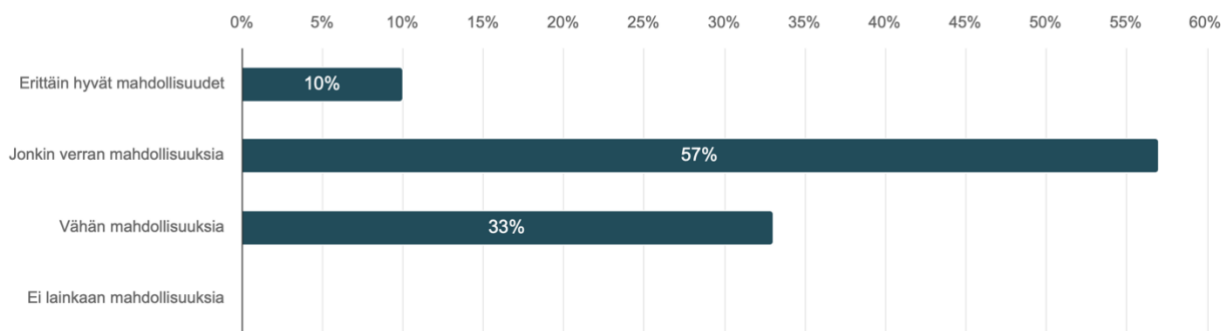
|                         | n  | Prosentti |
|-------------------------|----|-----------|
| Erittäin tyytyväinen    | 3  | 5,8%      |
| Melko tyytyväinen       | 33 | 63,4%     |
| Ei kovin tyytyväinen    | 16 | 30,8%     |
| Ei lainkaan tyytyväinen | 0  | 0,0%      |

Figure 10: Flexibility of work shifts (N=52)

Figure 10 shows that about two-thirds of the respondents appreciate the flexibility of their work shifts. However, 30.8% of the workforce feels that the flexibility could be improved, pointing to the necessity for more adaptive scheduling practices. The satisfaction with the flexibility of shifts indicates good policy foundations. However, continuous feedback and regular reviews of flexible working arrangements could further enhance this aspect, particularly for those still facing challenges.

**Miten arvioisit mahdollisuuttasi vaikuttaa omaan työvuorosunnitteluun?**

Vastaajien määrä: 51



|                               | n  | Prosentti |
|-------------------------------|----|-----------|
| Erittäin hyvät mahdollisuudet | 5  | 9,8%      |
| Jonkin verran mahdollisuuksia | 29 | 56,9%     |
| Vähän mahdollisuuksia         | 17 | 33,3%     |
| Ei lainkaan mahdollisuuksia   | 0  | 0,0%      |

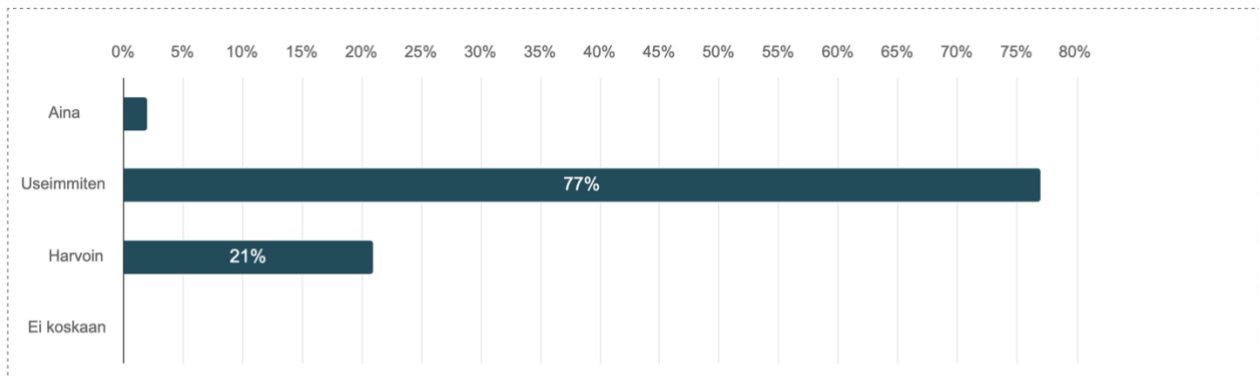
Figure 11: Influence of shift planning (N=51)

Figure 11 shows that a significant majority feel empowered to influence their shift schedules, with 56.9% stating they have some opportunity and 9.8% feeling they have substantial influence, although one-third of the workforce feels underrepresented in shift planning decisions. The feeling of influencing shift planning is crucial for employee empowerment. Increasing transparency in how shifts are assigned and possibly integrating a more democratic or participative approach in shift scheduling could improve employee perceptions of fairness and control.



### 5.3 Work-life balance and health concerns

**Täyttävätkö työvuorosi työn vaatimukset ja henkilökohtaiset tarpeesi?**  
Vastaajien määrä: 52

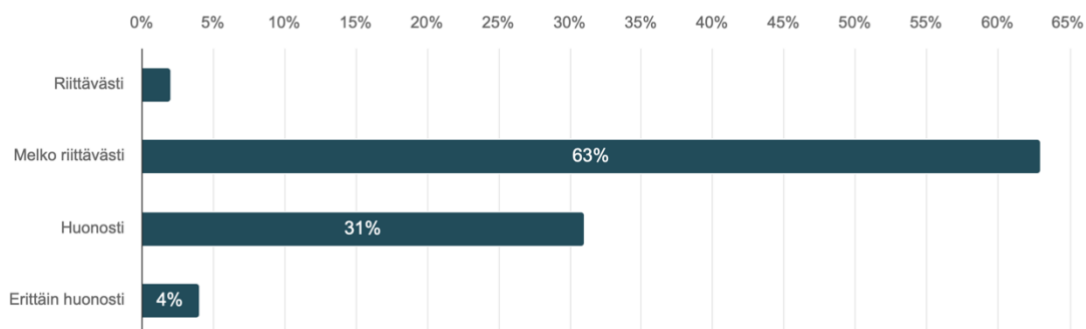


|            | n  | Prosentti |
|------------|----|-----------|
| Aina       | 1  | 1,9%      |
| Useimmiten | 40 | 76,9%     |
| Harvoin    | 11 | 21,2%     |
| Ei koskaan | 0  | 0,0%      |

Figure 12: Shift Suitability for Personal Needs and Requirements (N=52)

Figure 12 shows that a substantial majority (76.9%) feels that their shifts generally meet both job requirements and personal needs, which suggests that the scheduling system is mainly effective but may benefit from further refinements to address the needs of the remaining employees who feel their requirements are not being adequately met.

**Koetko, että työvuorosi mahdollistavat riittävän palautumisen?**  
Vastaajien määrä: 52



|                   | n  | Prosentti |
|-------------------|----|-----------|
| Riittävästi       | 1  | 1,9%      |
| Melko riittävästi | 33 | 63,5%     |
| Huonosti          | 16 | 30,8%     |
| Erittäin huonosti | 2  | 3,8%      |

Figure 13: Adequate Recovery Time Between Shifts (N=52)

Figure 13 shows that a majority feel the recovery time is somewhat adequate (63.5%), but a significant portion feels it is poor (30.8%). The need for better recovery time between shifts is evident, mainly to prevent burnout and health issues. The company might consider more stringent policies on minimum rest periods and possibly rotating particularly strenuous shifts more effectively.

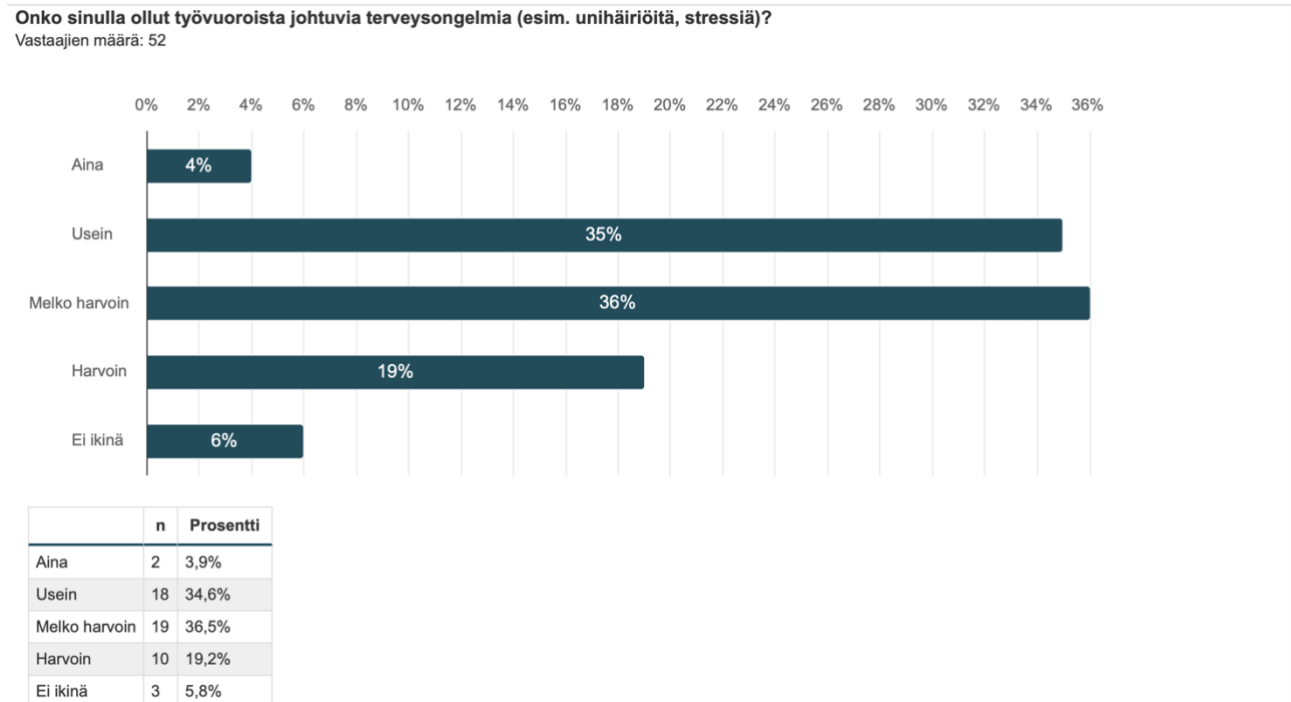
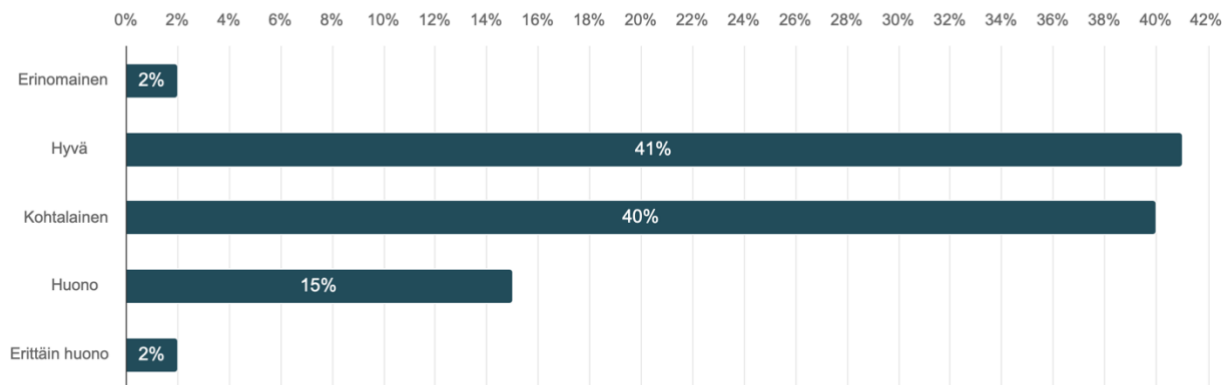


Figure 14: Health Issues Due to Shift Work (N=52)

Figure 14 shows that Many respondents frequently experience health issues related to their shifts, such as sleep disorders or stress, with 34.6% often and 36.5% occasionally facing such issues. The prevalence of health issues related to shift work is concerning. Introducing health and wellness programs tailored to shift workers, such as stress management workshops, fitness programs, and health screenings, could help mitigate these issues.

### Miten arvioisit työ- ja yksityiselämäsi tasapainoa?

Vastaajien määrä: 52



|                | n  | Prosentti |
|----------------|----|-----------|
| Erinomainen    | 1  | 1,9%      |
| Hyvä           | 21 | 40,4%     |
| Kohtalainen    | 21 | 40,4%     |
| Huono          | 8  | 15,4%     |
| Erittäin huono | 1  | 1,9%      |

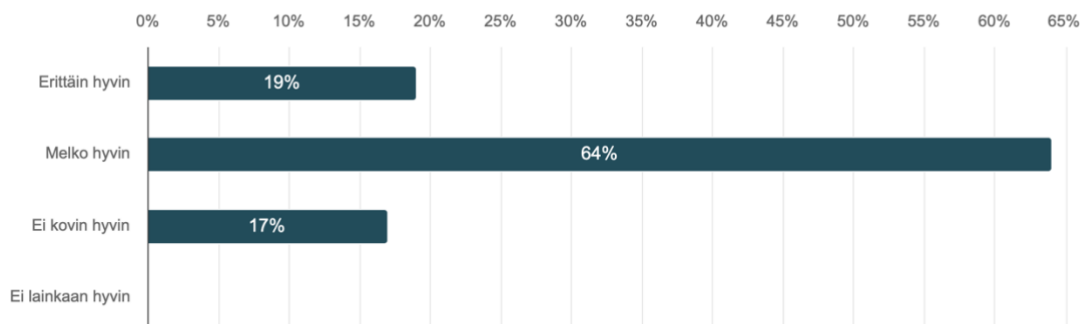
Figure 15: Work-Life Balance (N=52)

Figure 15 shows that respondents are almost equally split in their assessment of work-life balance, with 40.4% rating it as "good" and another 40.4% only as "moderate", indicating a significant portion of the workforce may be experiencing challenges in balancing professional responsibilities with personal life. The split opinions on work-life balance highlight an area for potential improvement.

## 5.4 Communication and fairness in shift planning

### Kuinka hyvin työvuorosuunnittelua koskevat muutokset kommunikoidaan sinulle?

Vastaajien määrä: 52



|                   | n  | Prosentti |
|-------------------|----|-----------|
| Erittäin hyvin    | 10 | 19,2%     |
| Melko hyvin       | 33 | 63,5%     |
| Ei kovin hyvin    | 9  | 17,3%     |
| Ei lainkaan hyvin | 0  | 0,0%      |

Figure 16: Communication about Shift Changes (N=52)

Figure 16 shows that Communication regarding shift changes is perceived as effective, with a majority (63.5%) rating it as good and 19.2% as excellent. However, there remains a minority (17.3%) that finds the communication lacking, which could affect their ability to plan personal and professional commitments. Effective communication regarding shift changes is vital for operational efficiency and employee satisfaction. Continuous improvement in communication methods, perhaps through better use of digital tools or regular meetings, could help reduce the dissatisfaction experienced by some employees.

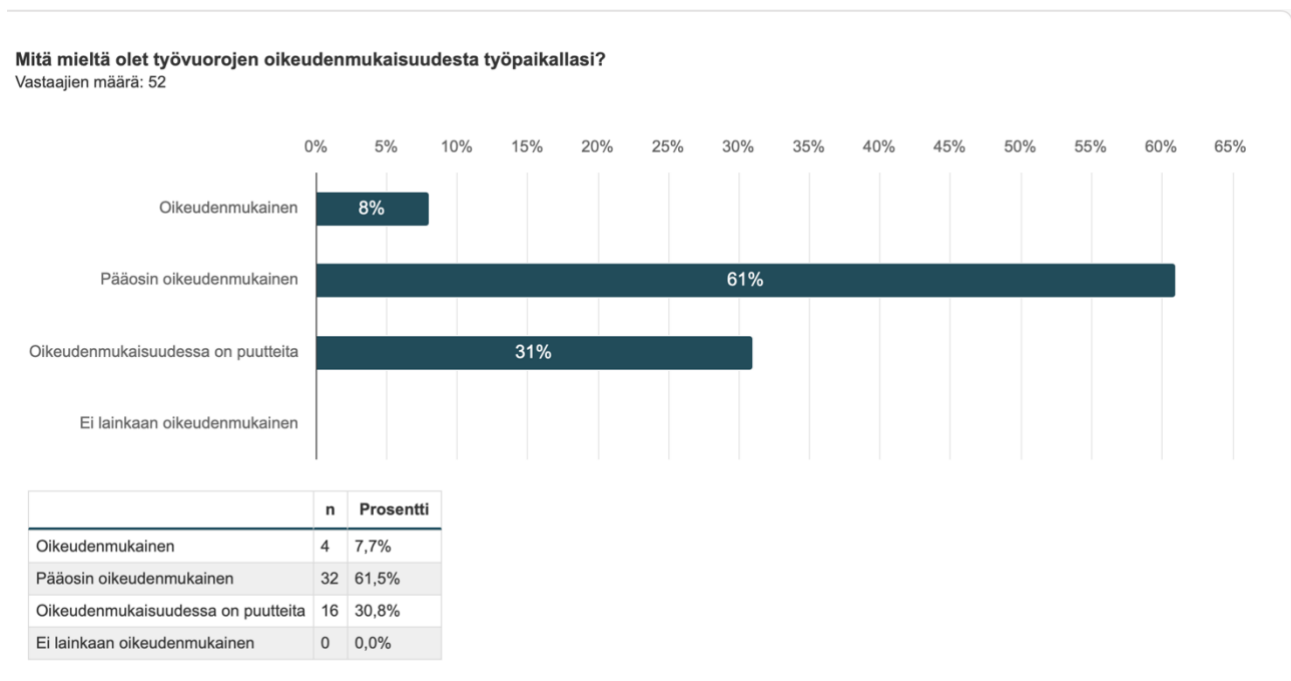


Figure 17: Fairness of Shift Distribution (N=52)

Figure 17 shows that the perception of fairness in shift distribution shows that a majority (61.5%) believe shifts are generally fair. However, nearly one-third of the respondents identify shortcomings in fairness, suggesting the need for a more equitable allocation of shifts. Perceptions of fairness in shift distribution are critical for morale. Implementing clear, consistent, and transparent criteria for shift assignments can help improve perceptions of fairness and reduce feelings of bias or favouritism.

## 5.5 Recommendations for improvement based on employee feedback

### Mitä parannuksia toivoisit työvuorosuunnitteluun?

Vastaajien määrä: 27

| Vastaukset  |
|---|
| Jonkin verran pitempiä vuoroja listalle, jolloin saisi enemmän vapaapäiviä, joiden aikana palautuminen on parempaa. Toki tämä taas vaikeuttaisi vuorojen vaihtoa.   |
| Tiukat käännöt aiheuttavat harmia. Nämä toki mahdollistavat pidemmät vapaat.  |
| Joustavuus.   |
| Osa-aikaisena, toivoisin pidempiä vuoroja, 5t 6t työpäivän vuoksi pitää olla yhtä paljon töissä kuin koko päivänen  |
| Säännöllisyyttä, mahdollisuuksien mukaan ilta - aamukääntöjä tulisi olla rajoitetusti. Yhden päivän vapaat olisi hyvä toteuttaa -aamuvuoro, vapaa, iltavuoro -yhdistelmällä.  |
| aamu / iltavuorojen viikon samanlaisuutta. siis aamuvuoroja putkeen ja sitten vapaat iltavuoroja putkeen sitten vapaata.  |
| Pidempi vuorot.   |
| Jos joku haluaisi olla täysin tekemättä öitä tai tehdä joko ilta- tai aamupainotteisesti töitä, olisi hyvinvoinnin kannalta parempi, että moisen valinnan voisi tehdä ja vuorosuunnittelu tukisi valintaa   |
| Yhden päivän vapaat kokonaan pois. Yhdessä päivässä ei aina ehdi palautua.  |
| -pidentävät vuorot (eli alkaa klo 6.00/8.00/10.00/ tai illalla klo. 14.00/16.00/20.00 ja sitä eteenpäin) -kahden vuoron kesken riittävästi palaustus aika - tasapainoisuus  |
| Pidemmät vuorot   |
| Ei tiukkoja aamuista iltoihin siirtymisiä eikä toisinpäin, ne kuormittavat työntekijää. Vuorotyö jo omalta osaltaan kuormittaa työntekijää paljon. Yhden päivän vapaat ei ole hyväksi palautumiseen   |
| Vuorojen vaihdot tasaisempia, esim ei tiukkoja kääntöjä   |
| Parempaa kommunikointia lisää resursseja suunnitteluun niin listatkin olisi parempi kun niihin voisi käyttää enemmän aikaa.   |
| Yhdessä työvuoroputkessa tulisi olla vain samankaltaisia vuoroja. Esimerkiksi x kpl aikaista aamua, vapaata, x kpl päivävuoroja, vapaata, x kpl aamuvuoroja, jne.   |
| Tasaisuutta vuoroihin ja työputkiin.  |
| 1kk vuorot 3vk sijaan.  |
| Yövuoroja tulisi saada tehdä enemmän jos niihin on halua. Yövuorojen osalta jako on hyvin selkeä; joko niistä pitää tai ei. Jos saisi olla vuoroissa, jotka sopii paremmin omaan ryhtiin olisi jaksaminen toisissa ja arjessa parempaa.   |
| Voisi toivoa joko aamu ja iltapainotteista työvuorolistaa. Tai edes toivoa enemmän aamu- tai iltavuoroja/yövuoroja.   |
| Kaikki työntekijät olisivat tasa-arvoisia ja saisivat kaikkia vuoroja tasapuolisesti.   |
| Ei liian pitkiä yövuoro putkia, ja pidemmät palautumiset yövuoro jakson jälkeen.  |
| Pidemmät lepoajat vuorojen välissä, ei aamusta yöhön tai yöstä aamuun   |
| Pidemmät lepoajat   |
| Enemmän kuunneltaisiin työntekijöitä. Tiukat kännöt pois.   |
| Työvuorosuunnittelu voisi enemmän huomioida työntekijöiden vuoro-toiveita. Esim.jos ei tykkää jostain vuorosta tai on haastellista sitä tehdä niin ei laitettaisi sitä joka listaan. Voisi vaikka olla jokaisen työntekijän kohdalla yksi ns.ei paras ja lempparivuoro mitä pyrittäisiin järjestämään mahd.mukaan. Kuitenkin löytyy niihin ääripään vuoroihin myös tekijöitä. |
| Tasaisesti kaikille aamu-, ilta-, yö-, ja viikonloppuvuoroja. Tai vaihtoehtoisesti voisi tehdä kyselyn, että millaisia vuoroja kukin mieluiten tekisi, ja osittain niiden pohjalta tekisi listan.   |
| iltavuorojen jakautumista tasaisemmin   |

Figure 18: What improvements would you like to see in shift scheduling? (N=27)

Figure 18 shows that employees strongly desire a more equitable distribution of shifts and more significant consideration of individual preferences. Many suggestions focused on ensuring that shift scheduling is more predictable and accommodating to personal needs, such as evenly distributing

shifts that cover mornings, evenings, and weekends among all staff. Respondents also suggested improvements in accounting for employee preferences in shift assignments, like avoiding assigning shifts that are consistently undesirable for specific individuals unless necessary. Another common theme was enhanced communication about scheduling decisions and the rationale behind them. Suggestions for more robust planning tools and resources to facilitate these improvements were also noted, which could help in creating more balanced and employee-friendly schedules.

**Miten työvuorosuunnittelun prosessi voisi paremmin tukea työntekijöiden hyvinvointia?**

Vastaajien määrä: 24

| Vastaukset   |
|--|
| En ymmärrä, miksi aika usein on kaksi vapaata, kaksi töitä kaksi vapaata, sitten pitkiä työputkia. Viisi töitä, yksi vapaa ja viisi töitä tyypisesti.  |
| Listat voisivat olla tasaisempia.  |
| Joustavuus.  |
| Aamu-ilta painotteisia voisi valita tai ainakin voisi toivoa   |
| Jos työntekijällä on esim. 4 iltavuoroa ja 2 vapaata, voisi seuraavat 4 työpäivää olla myös iltavuroja. Usein on niin, että iltavuroista vapaiden jälkeen rytmi kääntyy aamuvuoroihin.   |
| aamuvuorosta vapaat alkamaan.  |
| Ei samaan kaltaiset tehtävät peräkkäin.  |
| Sama vastaus kuin edelliseen.  |
| Työryhmiä täällä on jo mutta mahdollisuutta henkilökohtaisiin keskusteluihin esihenkilön ja alaisen kanssa voisi pohtia liittyen työvuorosuunnitteluun.  |
| - työntekijöiden jakautuminen vuorotoiveiden mukaan (esim. jos joku haluaa aamuvuoroja, niin otamme sen huomioon) -työvuorosuunnittelussa otetaan joku PaSe:n työntekijä kenellä on kokemusta yksikön työtehtävistä (esimies/vv kuka oli viimeaikoina työntekijän roolissa) -vuoron julkaisu vähintään kaksi viikkoa aikaisemmin |
| Selkeä aamu/ilta viikot, eikä kaikkea sekaisin   |
| Työvuorot olisi hyvä saada pidemmäksi ajaksi, kun vain 3 vk eteenpäin. Näin oman elämän hallinta ja työvuorojen vaihtaminen olisi helpompaa. Työvuorojen suunnittelu on ilmeisen kuormittavaa myös listantekijälle. Olisiko joku suunnittelu ohjelma, joka auttaisi?   |
| Maksimoidaan vapaa-aika, vältetään ykkösen vapaita viimeiseen asti.  |
| Työvuorojen tasainen vaihtelu sekä vuorotehtävien vaihtelua  |
| Kun pyritäisiin TES suosituksen mukaiseen 11 tuntiin ja VAIN hyvin harvoin laitettaisiin 9-10 h kääntöjä mitkä ovat sallittuja, saisi työntekijät aikaa palautua ja nukkua vuorojen välissä.   |
| Kuuntelemalla työntekijöitä.   |
| Vuorojen aloitusajankohta olisi viikon aikana suunnilleen sama.  |
| Työvuorojen tasaisuus. Esim. aina 2 vapaata. Aamuviiiko ja iltaviikko.   |
| Kaikki saa tarpeeksi vapaapäiviä.  |
| 11-12 lepo vuorojen välillä käy todella uuvuttavaksi, kun "normisti" lepoaika on 16h. Välillä saattaa olla alle 11h ja monella työmatkoihin menee jo 30-45min suunta, jolloin "lepoaika" on n. 9.5h.   |
| Tasaisemmat käännöt  |
| Mahdollisuus vaikuttaa ja testata erilaisia suunnittelumalleja, mitä työntekijät toivovat.   |
| Huomioimalla juuri ne vuorotoiveet.  |
| Mielestäni nykyinen vuorosuunnittelumalli tukee työntekijöiden hyvinvointia, sillä vapaa-aika on maksimoitu. Toki sitten on välillä tiukempia kääntöjä, mutta kaikkea ei voi luonnollisesti saada.   |

Figure 19: How could the shift planning process better support employee well-being? (N=24)

Figure 19 shows that responses highlighted the need for shift planning processes that actively incorporate employee feedback and provide opportunities to request specific shifts that align better with personal life and health needs. Employees appreciated when their well-being was considered in the planning process, suggesting that shift planning should allow for sufficient rest periods, especially after night shifts, and avoid rapid turnarounds. Some respondents noted that a standard minimum rest period between shifts could be enforced more consistently to ensure adequate recovery time. There was a call for more flexible shift-swapping options to accommodate personal emergencies and health issues without penalty.

**Onko sinulla muita huomioita tai palautetta, jota haluaisit jakaa työvuorosuunnittelusta?**

Vastaajien määrä: 16

| Vastaukset   |
|--|
| Joustavuus.  |
| pyhätyötuntien tasapuolisuutta työntekijöiden kesken.  |
| Ei   |
| Itselleni tärkeintä on, että toiveet menevät läpi. Työn luonne kun on se, että vapaa-aikaa ei tuhattomasti ole, olen tyytyväinen, että toiveet toteutuvat omalla kohdallani yleensä 100%   |
| Joskus oman sisäisen kellon käänntö yörytmistä aamurytmiin on haastavaa vaikka onkin vapaapäiviä alla ennen. Sitä voisi pohtia miten niitä saataisiin vähennettyä.   |
| Työvuoron julkaisupäivä olisi hyvä vähintään 2 viikkoa aikaisemmin tai jopa 4 viikkoa aikaisemmin, se tuottaa paljon tasapainoa työntekijöiden elämään, he psytyvät suunnitella omaa elämänsä paljon paremmin ja tämän ansiostatyöntekijöiden hyvinvointi paranevat. Useimmilla talon yrityksillä on samanlaiset määräykset työvuoron julkaisupäivämäärästä, esim Finnair. |
| Yhden päivän vapaat eivät riitä palautumiseen. Nyt turhia siirtymiä illan ja aamun välillä on samalla viikolla. Ne kuormittavat turhaan työntekijää  |
| Ei.  |
| Ei.  |
| Plussaa siitä että vuoroiveet aina toteutuvat!   |
| -  |
| TTK-sopimuksella työskenteleville työntekijöille työvuorosuunnittelu toimii mielestäni hyvin. On tietysti aina epävarmuus vuorojen saamisesta, välillä niitä tulee todella paljon, ja välillä ei lähes ollenkaan.  |
| Ei   |
| Tasapuolisesti kaikille kaikkea  |
| Toiveena olisi enemmän pitkiä vuoroja, jos mahdollista.  |
| Mielestäni voisi kokeilla (palvelupisteellä) pidempiä päiviä (~10h), mikä mahdollistaisi pidemmät vapaat ja palautumisen vuorojen välissä.   |

Figure 20: Do you have any other observations or feedback you would like to share about shift scheduling? (N=16)

In this section, many employees took the opportunity to express broader concerns and appreciation about the current shift scheduling system. While some praised the flexibility and the ability to balance work with personal commitments, others pointed out inconsistencies in how shifts are assigned, which sometimes lead to perceptions of unfairness or favouritism. A common suggestion was for more transparent and democratic methods in shift scheduling, where employees could have more say in their schedules through a bidding system or a rotating priority

system for shift preferences. Employees also mentioned the importance of recognising and accommodating workers' different life stages and health conditions, suggesting that more tailored approaches could enhance job satisfaction and overall workplace morale.

## **5.6 Key findings**

This chapter synthesises the main findings from the questionnaire analysis on shift scheduling at the company, encapsulating the diverse perspectives and insights employees provide. The comprehensive analysis offers a deeper understanding of the existing challenges, the employees' overall satisfaction, their needs and preferences, and their suggestions for improvements. These findings will play a crucial role in shaping future policies and practices related to shift work at the company.

Most of the workforce expressed satisfaction with the current shift scheduling system. Notably, 82.7% of respondents reported being somewhat satisfied with their schedules, indicating a solid foundational system generally meeting employee needs. However, there remains a notable minority (15.4%) who are dissatisfied, highlighting areas that could be further refined. The satisfaction largely stems from the perceived flexibility and the ability to swap shifts relatively quickly, which many appreciate as an essential aspect of their work-life balance.

Despite the general satisfaction with the flexibility of the shift system, approximately 26.9% of employees reported difficulties in swapping shifts. This indicates potential obstacles within the shift management system that may prevent it from fully supporting all employees' needs. Issues such as rigid scheduling software, lack of available partners for shift exchanges, and short notice periods could need addressing.

The survey responses indicate a split perception regarding work-life balance, with 40.4% of employees rating it as good, but another 40.4% only finding it moderate. This suggests that while half of the workforce manages to balance their personal and professional lives effectively, a significant portion struggles due to inflexible shifts or scheduling that does not align well with their personal responsibilities or health needs. This area is especially critical as it directly affects employee morale and retention.

Health concerns associated with shift work were frequently noted, with many employees reporting sleep disturbances, stress, and other health issues as directly linked to their work schedules. Approximately 34.6% of the workforce described these health issues as frequent, indicating that current shift scheduling may contribute to adverse health outcomes. This finding underscores the need for a health-centric approach to shift scheduling that prioritises sufficient rest and recovery time between shifts.

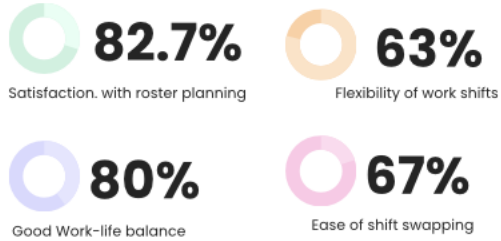


While the majority of employees felt well-informed about shift changes and scheduling decisions, there remains a significant minority who perceive the communication and the distribution of shifts as lacking. About 17.3% of employees criticised communication effectiveness regarding shift planning changes. Additionally, nearly one-third of the workforce perceived the distribution of shifts as somewhat unfair, pointing to potential improvements in how shifts are allocated and communicated.

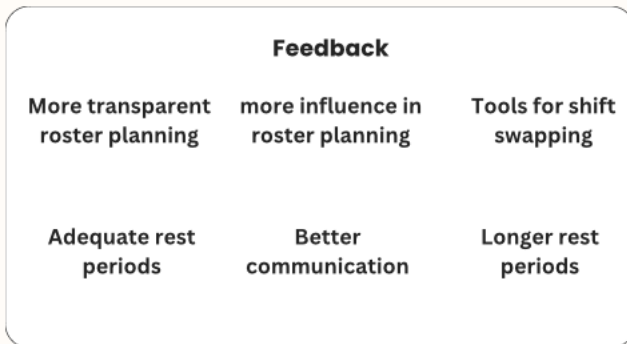
Feedback from open-ended questions revealed an intense desire among employees for improvements in several key areas:

Employees suggested that shift distribution could be more equitable and transparent, with shifts and schedules being assigned in a manner that all employees perceive as fair. Many employees wished for more autonomy in influencing their shifts and more significant consideration of their preferences and external commitments. There is a clear call for structured policies to ensure adequate rest periods between shifts, mainly to avoid quick turnarounds that do not allow sufficient recovery. Improved the need for better tools and platforms that facilitate more transparent and more timely communication between shift managers and employees was highlighted.

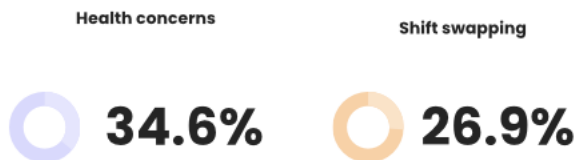
**+ Key findings**



Feedback from the open-ended questions highlighted a strong desire among employees for more equitable and transparent shift distribution, greater autonomy in influencing their schedules, and better consideration of personal preferences.



Despite the general satisfaction with the flexibility of the shift system, approximately 26.9% of employees reported difficulties in swapping shifts. Health concerns associated with shift work were frequently noted, with many employees reporting sleep disturbances, stress, and other health issues as directly linked to their work schedules. Approximately 34.6% of the workforce described these health issues as frequent



Picture 4: Visual summary of survey results

## 5.7 Development ideas

In response to evolving workforce needs and the continuous pursuit of operational excellence, this chapter proposes a series of developmental initiatives to refine roster planning at Finavia. These initiatives are designed to test new scheduling models, enhance transition periods between shifts, introduce flexible shift lengths, implement a sophisticated shift swap system, and establish robust feedback mechanisms.

Research suggests that extended shifts, ranging from 10-12 hours, could potentially reduce the number of workdays per week, thus offering better work-life balance (Kundi, 2015). A pilot program is proposed to explore the viability of these shifts at Finavia, targeting employees who might benefit from longer but fewer workdays, particularly those residing far from the airport. The program will assess impacts on employee satisfaction, productivity, and operational efficiency to determine the feasibility of broader implementation.

It is proposed to introduce longer and more structured orientation periods to address the complexities associated with night shifts and other demanding shift transitions. These periods would not only provide a crucial buffer to minimise fatigue but also facilitate comprehensive handovers, briefings, and enhanced communication between shifts (Dawson & McCulloch, 2005). The goal is to ensure smoother transitions, maintain operational continuity, and reduce potential errors arising from inadequate shift handovers.

Reflecting modern workforce trends towards greater flexibility, it is suggested that Finavia offers a range of shift lengths—standard, extended, or compressed—allowing employees to select options that best suit their personal and professional circumstances. This flexibility would be managed through a dynamic scheduling system, accommodating periodic adjustments to meet changing employee needs and preferences (Harrington & Lee, 2015).

An advanced, user-friendly shift swap system accessible via mobile devices is recommended to enhance roster flexibility further. This system would enable employees to manage personal exigencies without compromising operational demands. It would feature intelligent algorithms to provide automatic shift suggestions based on operational requirements and individual preferences, thus optimising staffing levels continuously (Stone, 2017).

Regular feedback sessions coupled with real-time digital feedback tools should be established to ensure that scheduling practices continuously align with employee needs and operational demands. This system would allow for the ongoing refinement of scheduling practices, ensuring they remain adaptable and responsive to both employee welfare and the strategic goals of the organisation (Bryant & Allen, 2013).

The initiatives proposed in this chapter aim to further refine the roster planning processes at Finavia, focusing on flexibility, employee satisfaction, and operational efficiency. These proposals, once implemented, promise significant improvements in the overall functionality and employee satisfaction, positioning Finavia as a benchmark for effective roster planning in the global aviation sector.

## 6 Discussion

This thesis has investigated the roster planning practices at Finavia highlighting the significant impact of scheduling on both employee well-being and organisational effectiveness.

### 6.1 Conclusion

The culmination of this thesis, focused on enhancing roster planning within Finavia's passenger service operations, underscores the interplay between effective scheduling and overall organisational success. Throughout the research, it became evident that thoughtful and efficient roster planning is not merely a logistical necessity but a strategic imperative that significantly impacts employee satisfaction, operational efficiency, and the broader stakeholder experience.

Key findings from the survey reinforced that most employees appreciate the current scheduling system, with a significant majority expressing satisfaction with their shift arrangements. This satisfaction is critical for maintaining high morale and low turnover rates. However, challenges such as difficulties in shift swapping and the desire for more predictable and equitable schedules highlight areas for improvement. Addressing these issues through better communication tools, more transparent scheduling processes, and more significant consideration of employee preferences could further elevate the effectiveness of roster planning.

The research has also shed light on the importance of aligning shift schedules with both operational demands and employee well-being. Ensuring sufficient recovery time between shifts and accommodating personal needs can help mitigate health issues related to irregular work hours, such as sleep disturbances and stress. These findings suggest that a more employee-centric approach to roster planning, which incorporates flexibility and wellness considerations, is crucial for fostering a resilient and productive workforce.

Moreover, the study's implications extend beyond the organisational boundaries of Finavia. The insights gathered here can serve as valuable inputs for other companies in the aviation sector and similar industries where robust roster planning is essential. By adopting the best practices identified through this research, other organisations can enhance their operational efficiency and employee satisfaction, thereby improving their competitive edge in the market.

In conclusion, this thesis contributes to the academic field of workforce scheduling and provides Finavia with practical, data-driven recommendations to refine their roster planning processes. The implementation of these recommendations promises not only to enhance employee well-being and operational efficiency but also to elevate the overall passenger experience.

## **6.2 Thesis process and self-assessment**

My thesis project began in the autumn of 2023 when I finalised the topic. Selecting the topic was straightforward, and I was fortunate that the company was enthusiastic about my proposal. I had predetermined the method for my thesis based on my prior experience with a quantitative study during a course, knowing it would shape my approach to this research-type thesis.

The initial stage involved writing the literature review, which took unexpectedly long, especially as I was working simultaneously, which slowed down the project's progress. During this phase, I encountered challenges in sourcing reliable materials and noted a lack of available e-books compared to printed versions.

Once the literature review was complete, I set up the framework for a survey study, which I finished pretty quickly and managed to launch. With the survey active, I worked on writing the introduction and methodology sections of the thesis. I was pleased with how clear and effective the survey form was. Analysing the responses was particularly intriguing.

Overall, the thesis project was smaller than anticipated but as demanding as expected. I worked on it nearly every week and, fortunately, completed it on schedule by early May. The topic was well-chosen, and conducting the survey was engaging.

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## Appendices

### Appendix 1. cover letter

Hyvä Passenger servicen Väki!

Olen Henrik Heimo, Aviation busineksen opiskelija Haaga-Helia ammattikorkeakoulusta. Teen parhaillaan opinnäytetyötäni, jonka aiheena on työvuorosuunnittelun vaikutukset työntekijöiden hyvinvointiin ja työtyytyväisyyteen. Tämän tutkimuksen tarkoituksena on selvittää, miten työvuorosuunnittelu vaikuttaa työntekijöiden jaksamiseen ja heidän näkemyksiinsä työvuorojensa järjestelyistä. Tutkimuksen tulokset voivat tarjota arvokasta tietoa työvuorosuunnittelun kehittämiseksi organisaatiossa.

Olen laatinut kyselyn, jonka tavoitteena on kerätä tietoa työntekijöiltä. Kysely sisältää 20 kysymystä ja sen täyttäminen kestää noin 5-10 minuuttia. Toivoisin, että voisitte ystävällisesti osallistua tähän kyselyyn ja jakaa kokemuksenne aiheesta.

Kaikki kyselyssä kerätyt tiedot käsitellään luottamuksellisesti eikä yksittäisiä vastauksia voida yhdistää vastaajiin.

Voitte osallistua kyselyyn seuraavan linkin kautta: <https://link.webpolsurveys.com/S/BF533F4E96048979>

Kyselyn vastausaika päättyy 21.04.2024.

Arvostaisin suuresti, jos voisitte käyttää hieman aikaa ja jakaa näkemyksenne, sillä ne ovat olennaisen tärkeitä tutkimukseni onnistumiselle. Kiitos jo etukäteen osallistumisestanne ja ajastanne. Jos teillä on kysyttävää kyselystä tai tutkimuksesta, voitte ottaa yhteyttä minuun sähköpostitse henrik.heimo@finavia.fi

Lämpimin terveisin,

## Appendix 2 Qr-code

30 April 2024 at 19:51

Olen Henrik Heimo, Aviation busineksen opiskelija Haaga-Helia ammattikorkeakoulusta. Teen parhaillaan opinnäytetyötäni, jonka aiheena on työvuorosuunnittelun vaikutukset työntekijöiden hyvinvointiin ja työtyytyväisyyteen. Tämän tutkimuksen tarkoituksena on selvittää, miten työvuorosuunnittelu vaikuttaa työntekijöiden jaksamiseen ja heidän näkemyksiinsä työvuorojensa järjestelystä. Tutkimuksen tulokset voivat tarjota arvokasta tietoa työvuorosuunnittelun kehittämiseksi organisaatiossa.


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Linkki kyselyyn:



## Appendix 3 Questionnaire

Työvuorosunnittelun vaikutus työntekijöitten hyvinvointiin ja työtyytyväisyyteen

 Pakolliset kysymykset merkitty tähdellä (\*)

1. Mikä on työnimikkeesi?

- Moniosaaja
- Terminaaliopas
- Maaliikenneopas
- Kärryt

2.

Työskenteletkö osa-aikaisesti vai kokoaikaisesti?

- Kokoaikaisesti
- Osa-aikaisesti
- Tarvittaessa töihin kutsuttava

3. Kauanko olet työskennellyt Finavialla?

- 0-1v
- 2-4v
- 5-6v
- 7-8v
- 9+v

4. Sukupuoli

- Mies
- Nainen
- Muu, en halua sanoa

5. Ikä?

- 18-25
- 26-35
- 36-45
- 46-55
- 55+

**Seuraava**

1 / 4

6. Kuinka tyytyväinen olet nykyiseen työvuorosuunnitteluun kokonaisuudessaan? \*

- Erittäin tyytyväinen
- Melko tyytyväinen
- Ei kovin tyytyväinen
- Ei lainkaan tyytyväinen

7. Kuinka helppoa tai vaikeaa on järjestää vuoronvaihto? \*

- Erittäin helppoa
- Melko helppoa
- Melko vaikeaa
- Erittäin vaikeaa

8. Miten usein käytät vuoronvaihtomahdollisuutta? \*

- Useasti yhden vuorolistan aikana
- Noin kerran vuorolistan aikana
- Joka toisessa vuorolistassa
- En käytä vuoronvaihtomahdollisuutta

9. Kuinka sopiviksi koet työvuorojesi pituudet?

- Vuorot ovat aina liian pitkiä
- Vuorot ovat useimmiten liian pitkiä
- Vuorot ovat sopivan pituisia
- Vuorot ovat useimmiten liian lyhyitä
- Vuorot ovat aina liian lyhyitä

10. Kuinka tyytyväinen olet työvuorojesi joustavuuteen? \*

- Erittäin tyytyväinen
- Melko tyytyväinen
- Ei kovin tyytyväinen
- Ei lainkaan tyytyväinen

11. Miten arvioisit mahdollisuuttasi vaikuttaa omaan työvuorosuunnitteluun?

- Erittäin hyvät mahdollisuudet
- Jonkin verran mahdollisuuksia
- Vähän mahdollisuuksia
- Ei lainkaan mahdollisuuksia

Edellinen

Seuraava

12. Kuinka hyvin työvuorosuunnittelua koskevat muutokset kommunikoidaan sinulle? \*

- Erittäin hyvin
- Melko hyvin
- Ei kovin hyvin
- Ei lainkaan hyvin

13.

Täyttävätkö työvuorosi työn vaatimukset ja henkilökohtaiset tarpeesi? \*

- Aina
- Useimmiten
- Harvoin
- Ei koskaan

14.

Miten arvioisit työ- ja yksityiselämäsi tasapainoa? \*

- Erinomainen
- Hyvä
- Kohtalainen
- Huono
- Erittäin huono

15.

Mitä mieltä olet työvuorojen oikeudenmukaisuudesta työpaikallasi? \*

- Oikeudenmukainen
- Pääosin oikeudenmukainen
- Oikeudenmukaisuudessa on puutteita
- Ei lainkaan oikeudenmukainen

16.

Koetko, että työvuorosi mahdollistavat riittävän palautumisen? \*

- Riittävästi
- Melko riittävästi
- Huonosti
- Erittäin huonosti

17.


Onko sinulla ollut työvuoroista johtuvia terveysongelmia (esim. unihäiriöitä, stressiä)? \*

- Aina
- Usein
- Melko harvoin
- Harvoin
- Ei ikinä

Edellinen

Seuraava

## Työvuorosunnittelun vaikutus työntekijöitten hyvinvointiin ja työtyytyväisyyteen

 Pakolliset kysymykset merkitty tähdellä (\*)

18.

Mitä parannuksia toivoisit työvuorosunnitteluun?

19. Miten työvuorosunnittelun prosessi voisi paremmin tukea työntekijöiden hyvinvointia?

20. Onko sinulla muita huomioita tai palautetta, jota haluaisit jakaa työvuorosunnittelusta?

Edellinen

Lähetä