# Strategic Misalignment, Corporate Governance, and HR Analytics Adoption: A Qualitative Study for Sustainable Organizations in the Airline Industry

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*Article*

# Strategic Misalignment, Corporate Governance, and HR Analytics Adoption: A Qualitative Study for Sustainable Organizations in the Airline Industry

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**Abstract**

Human Resource Analytics (HRA) promises to improve decision-making, workforce planning, and organisational performance through data-driven insights (Isson & Harriott, 2016; Marler & Boudreau, 2017; Minbaeva, 2021; McCartney & Fu, 2022a). Yet, despite growing interest in people analytics, many organisations still struggle to embed HRA into strategic and operational decision processes in ways that support innovation, effective governance, and long-term organisational sustainability. This article examines strategic misalignment as a critical but underexplored barrier to the adoption of HRA in the airline industry. Drawing on a qualitative study based on semi-structured interviews with 15 professionals connected to Portugal's commercial aviation sector—including Experts in AI (n = 5), HR/Airline Professionals (n = 4), and HR/Airline Executives (n = 6)—the paper shows that HRA is constrained not merely by technical limitations but by the weak strategic positioning of HR itself and by governance arrangements that fail to integrate people-related evidence into executive decision-making. The findings indicate three interrelated barriers: the marginal role of HR in strategic decision-making, fragmented data and cross-functional silos, and inconsistent executive sponsorship for analytics-driven people management. These barriers reduce the practical value of analytics initiatives, weaken the governance of workforce-related decisions, and confine HRA to descriptive reporting rather than strategic intervention. The study contributes to the literature by reframing strategic alignment not as a secondary success factor, but as a prerequisite for meaningful HRA implementation and for building sustainable organisations able to connect workforce capability, operational resilience, and business value. Practical implications are discussed for organisations seeking to strengthen digital HR transformation in highly regulated and operationally complex sectors.

**Keywords:** human resource analytics; strategic alignment; corporate governance; sustainable organizations; people analytics; digital transformation; airline industry; qualitative research

## 1. Introduction

Human Resource Analytics (HRA) has gained increasing visibility in both academic and practitioner debates as organisations seek to improve workforce decisions through evidence-based management. Across the literature, HRA is associated with enhanced workforce planning, retention management, recruitment optimisation, and performance improvement. However, the expansion of HRA discourse has not been matched by equally robust evidence of effective implementation in organisational settings. Recent reviews continue to argue that the field is conceptually rich but empirically uneven, particularly with respect to qualitative studies that examine HRA in practice

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rather than in principle (Arora et al., 2022; Espegren & Hugosson, 2023; Margherita, 2022; Wang et al., 2024).

This gap is especially relevant in sectors characterised by operational complexity, safety sensitivity, strong regulation, and high human capital dependency. The airline industry provides an appropriate context in which to examine these dynamics. Commercial aviation depends on highly qualified labour, continuous training, tight coordination between business units, and a strong alignment between people management and operational performance. In such a context, one might expect HRA to play a strategic role. Yet the evidence gathered in this study suggests the opposite: HRA adoption remains limited because HR itself is insufficiently integrated into the strategic core of the organisation.

This article therefore examines a central question: how does strategic misalignment between HR and the business constrain the adoption and usefulness of HRA? Rather than treating alignment as one success factor among many, the paper argues that it is a foundational precondition for analytics to matter. Where HR is perceived as an administrative or reactive function, analytics tends to remain peripheral, descriptive, and weakly connected to core business problems. In that sense, the article treats HRA adoption not only as a technical or HRM issue, but also as a question of corporate governance: who has voice in strategic decisions, what evidence is considered legitimate, and how organisations build sustainable capability over time.

The article draws on qualitative evidence from interviews with senior professionals linked to Portugal's airline sector, including HR leaders, HR professionals, airline executives, and artificial intelligence specialists. The analysis reveals that the main obstacles to HRA adoption are not primarily technological, which is consistent with scholarship stressing organisational, managerial, and governance barriers to HRA adoption (Fernandez & Gallardo-Gallardo, 2021; McCartney & Fu, 2022a; Peeters, Paauwe, & Van De Voorde, 2020; Shet et al., 2021). Instead, they stem from organisational structure, the limited strategic influence of HR, executive ambivalence, and fragmented information practices. By foregrounding these barriers, the study contributes to the literature on digital HR transformation, strategic HRM, corporate governance, and the organisational conditions required to sustain analytics-enabled innovation.

The remainder of the article is organised as follows. First, the literature review discusses the state of research on HRA, implementation effectiveness, and the role of strategic alignment. Second, the methodology section outlines the qualitative research design and analytical approach. Third, the findings present the key themes emerging from the interviews. Finally, the discussion, implications, limitations, and conclusion synthesize the study's contribution.

## 2. Literature Review

The literature reviewed for this article suggests that HRA should be understood as a multidisciplinary field located at the intersection of strategic human resource management, information systems, business analytics, and organisational decision-making (Marler & Boudreau, 2017; Margherita, 2022; Minbaeva, 2021). Its development has been shaped by several adjacent debates: the rise of evidence-based management, the digital transformation of HR functions, the spread of predictive analytics in business settings, and the pressure on HR departments to demonstrate measurable value creation. Although the labels vary—people analytics, workforce analytics, talent analytics, or HR analytics—the underlying aspiration is similar: to use data systematically in order to improve decisions about people and work.

A major tension in this literature concerns maturity, particularly the distance between the promise of advanced analytics and the limited maturity of many organisational practices (Deloitte Consulting LLP, 2023; Lesser et al., 2024; NTT Data, 2023; Sierra-Cedar, 2018). On the one hand, organisations are encouraged to progress from descriptive reporting toward predictive and even prescriptive analytics. On the other hand, many organisations remain stuck at relatively basic stages, using data primarily for compliance reporting, headcount monitoring, absenteeism tracking, or retrospective performance summaries. This tension is important because it helps explain why HRA

 doi:10.20944/preprints202605.0238.v1



is often celebrated rhetorically yet underwhelming in practice. The gap between aspiration and execution is therefore not an incidental problem but one of the defining characteristics of the field.

In addition, the literature reveals a second tension between technical and organisational explanations of success. Some accounts focus on tools, software, data architecture, and analytical competencies. Others stress organisational legitimacy, stakeholder trust, leadership commitment, and business relevance. This article builds on the latter perspective while not dismissing the former. The core claim is that technical progress in HRA remains fragile when the organisational position of HR is weak. For that reason, it is necessary to review the literature not only around analytics capability but also around strategic integration.

Recent high-quality reviews and conceptual contributions sharpen this point further. The newest literature increasingly treats HRA effectiveness not simply as a function of tools or analytical sophistication, but as the outcome of implementation conditions, role configurations, and the capacity to move from insight to organisational impact. Wang et al. (2024), for example, synthesise a broad body of evidence on determinants of effective HRA implementation and argue for a dynamic view in which technical, organisational, and managerial factors interact over time. In parallel, Rasmussen, Ulrich, and Ulrich (2024) argue that people analytics creates value only when it is translated into interventions and decisions that matter to stakeholders, rather than remaining confined to descriptive reporting or isolated predictive exercises. Process-oriented work likewise emphasises that implementation depends on how HR analytics actors, HR business partners, managers, and decision-makers coordinate in practice (Wirges & Neyer, 2023). These recent contributions reinforce the central premise of the present article: HRA success is organisational before it is technological.

### *2.1. Human Resource Analytics and the Implementation Gap*

The literature increasingly presents HRA as a transformative capability within contemporary human resource management (Arora et al., 2022; Isson & Harriott, 2016; Margherita, 2022; McCartney & Fu, 2022b). It promises to move HR from intuition-driven judgments toward more systematic, datasupported decisions about recruitment, retention, performance, capability development, and employee well-being. At a conceptual level, HRA is often linked to evidence-based management and to the broader digitalisation of HR functions.

At the same time, a recurring theme across the literature is the persistence of an implementation gap. While organisations often invest in dashboards, digital HR systems, and measurement infrastructures, fewer succeed in translating data into meaningful managerial action. Reviews consistently note that HRA is marked by strong enthusiasm but weaker evidence regarding organisational impact. This is particularly evident where analytics remains concentrated in descriptive reporting, with limited progress toward predictive or prescriptive use.

Several explanations have been proposed in the literature, including capability gaps, fragmented infrastructures, poor data governance, limited strategic vision, and insufficient managerial support (Fernandez & Gallardo-Gallardo, 2021; Marler & Boudreau, 2016; Minbaeva, 2017, 2021; Peeters et al., 2020). Common barriers include low data quality, fragmented systems, insufficient analytical skills, weak governance, privacy concerns, and limited managerial understanding of analytics. Yet these factors, while relevant, may obscure a more fundamental issue: many HRA initiatives fail because they are insufficiently connected to the strategic priorities of the organisation. In other words, the problem is often not whether analytics exists, but how and where it is positioned.

The implementation gap is also reinforced by conceptual ambiguity. In many organisational settings, HRA is still conflated with traditional HR metrics, dashboarding, or administrative reporting. Interviewbased studies and practitioner surveys alike suggest that managers frequently use the term “analytics” to describe any quantified HR activity, even when the work does not involve explanatory, predictive, or decision-oriented analysis. This ambiguity matters because it can generate inflated expectations. Organisations may believe they have “adopted” HRA when they have merely digitised existing reporting routines.

 doi:10.20944/preprints202605.0238.v1



Another theme in the literature concerns the absence of contextualisation. Many proposed HRA models are presented in generic terms, as though people analytics can be transferred seamlessly across industries. Yet the value of analytics is often sector-specific. Workforce risks, labour market conditions, operational constraints, regulatory requirements, and organisational routines all shape which questions matter, what data is available, and which decisions can be influenced. This is one reason why sector-focused qualitative studies remain important. They help show not only whether analytics is present, but how local realities affect its relevance (Espegren & Hugosson, 2023; Margherita, 2022; Rasmussen & Ulrich, 2015; Wang et al., 2024).

For the airline sector, this contextual issue is especially pronounced. Airlines are labour-intensive service systems that combine commercial pressures with strict safety obligations. They depend on multiple occupational groups with different qualifications, work rhythms, and regulatory demands. Turnover, training, certification, fatigue, engagement, and coordination can all have immediate operational consequences. In such a setting, the implementation gap surrounding HRA becomes more than an HR problem; it becomes a question of organisational capability and strategic coherence.

### *2.2. What Effective HRA Requires*

Studies on HRA effectiveness converge around a number of enabling conditions (Green, 2017; McCartney & Fu, 2022a; Peeters et al., 2020). Best-practice frameworks emphasise business orientation, executive sponsorship, methodological clarity, strong data governance, multidisciplinary capabilities, and the ability to communicate insights persuasively. Green's influential account of people analytics highlights the need to focus on business problems, involve a highly engaged CHRO, secure balanced team capabilities, and embed analytics into organisational culture. Similarly, the People Analytics Effectiveness Wheel underscores four broad dimensions: enablers, deliveries, governance, and stakeholder management.

These frameworks are useful because they move beyond technical infrastructure and recognise that analytics capability depends on organisational relationships, legitimacy, and leadership. They also suggest that HR analytics cannot be successful if it remains isolated within a narrow technical or reporting function. Effective analytics requires collaboration with operations, finance, commercial teams, and senior leadership. It must be linked to significant business challenges rather than to isolated HR reporting exercises.

This logic is also consistent with the CRISP-DM tradition in data science, which starts with business understanding rather than modelling (Quinn, 2020; Rasmussen & Ulrich, 2015; Shearer, 2000). From this perspective, analytics begins with a clear problem definition, followed by data understanding, preparation, modelling, evaluation, and deployment. Applied to HR, this means that analytics must begin with organisational priorities and strategic pain points. Where this business understanding is absent, analytics risks becoming methodologically sophisticated but strategically irrelevant.

The literature on HRA effectiveness also emphasises the importance of balanced skill sets and multidisciplinary team composition (Green, 2017; Guenole et al., 2017; Van den Heuvel & Bondarouk, 2017). Effective analytics teams rarely consist only of technical specialists. They require a combination of business understanding, HR domain knowledge, data engineering capability, statistical reasoning, and storytelling capacity. This multidisciplinary requirement is repeatedly highlighted in both practitioneroriented and academic contributions. A technically skilled team may still fail if it cannot formulate relevant questions, navigate organisational politics, or translate insights into action for decision-makers.

Relatedly, research on HRA maturity often shows that executive sponsorship is most effective when it is active rather than symbolic. Passive approval or generic enthusiasm is not enough. Senior leaders need to legitimise the function, allocate resources, create cross-functional access to data, and ensure that analytics findings inform strategic forums. Without these organisational mechanisms, HRA remains vulnerable to marginalisation. This point is particularly relevant in settings where HR

 doi:10.20944/preprints202605.0238.v1



is already struggling to secure strategic legitimacy (Green, 2017; Peeters et al., 2020; Rasmussen, Ulrich, & Ulrich, 2024; Wang et al., 2024).

The same literature also points to the importance of communication and narrative. Analytics does not create value simply by producing technically correct outputs. It must be able to persuade stakeholders, support action, and fit into existing decision cycles. In this regard, storytelling and visualisation are often presented as crucial complements to modelling. These elements are not cosmetic additions; they are part of the process through which analytics becomes organisationally meaningful (Green, 2017; McCartney & Fu, 2022a; Rasmussen, Ulrich, & Ulrich, 2024).

### *2.3. Airline-Specific Relevance of HRA*

The airline industry intensifies many of the issues discussed above, particularly because training, retention, safety, and workforce planning are tightly intertwined in this sector (Ergle, Ludviga, & Kalvina, 2017; Hazarika et al., 2019; IATA, 2018, 2023). First, the sector operates under a high-compliance regime. Qualifications, certifications, recurrent training, safety checks, and fitness requirements create a dense informational environment in which workforce data is operationally significant. Second, the sector is highly exposed to external shocks—economic downturns, fuel price volatility, geopolitical disruption, public health crises, and fluctuations in travel demand—which increase the strategic importance of workforce planning and adaptability. Third, airlines depend on close coordination among occupational groups whose work is interdependent but not identical, including pilots, cabin crew, mechanics, dispatchers, trainers, and administrative personnel.

These characteristics make the promise of HRA especially attractive. Analytics could, in principle, support recruitment planning, retention forecasting, training optimisation, fatigue and well-being monitoring, engagement analysis, and better matching between labour supply and operational demand. It could also help connect people management to commercial and operational outcomes, such as punctuality, service quality, safety performance, and customer experience. In other words, airlines offer a setting in which HRA should be strategically consequential.

At the same time, the sector makes implementation difficult. Unionisation, politicisation of labour relations, legacy structures, fragmented systems, and the historical dominance of operational and commercial functions can all limit the strategic role of HR. This combination of high potential and high organisational friction makes the airline industry a valuable context for examining why HRA adoption remains uneven.

### *2.4. Strategic Alignment as a Neglected Condition*

Despite its importance, strategic alignment remains relatively underexamined in empirical HRA research, even though adjacent work in strategic HRM and people analytics implies its relevance (Fernandez & Gallardo-Gallardo, 2021; Peeters et al., 2020; Rasmussen & Ulrich, 2015). Strategic alignment can be understood here as the degree to which HR priorities, capabilities, and decisions are integrated with organisational strategy and operational realities. In strategic HRM, alignment has long been recognised as critical to value creation. However, in the HRA literature it is often treated implicitly, folded into broader ideas such as executive support or stakeholder management.

This article argues that strategic alignment should be treated more explicitly. If HR is excluded from central business decisions, then HRA is unlikely to influence workforce planning, capability investment, or organisational design in meaningful ways. Analytics may still exist, but it is likely to remain descriptive, fragmented, or reactive. Conversely, when HR is positioned as a strategic partner, analytics has a clearer pathway to impact because it can engage with the problems that matter most to the business.

The airline sector provides a particularly revealing setting for this argument. Airlines operate under strict regulatory requirements, strong operational interdependencies, and substantial risks associated with human error. Training, recruitment, safety, retention, and employee well-being are not peripheral concerns; they are integral to operational continuity and customer experience. If HR

 doi:10.20944/preprints202605.0238.v1



is not aligned with business strategy in such a context, the consequences for HRA are especially significant.

A final observation emerging from the literature is that alignment should be examined at multiple levels. It is not only about whether the formal HR strategy mirrors the corporate strategy. It also concerns whether HR leaders participate in strategic forums, whether analytics questions are derived from business problems, whether data systems can connect people metrics to business performance, and whether operational managers see HR as a partner rather than a support function. This broader conception of alignment is adopted in the present study (Fernandez & Gallardo-Gallardo, 2021; Peeters et al., 2020; Rasmussen & Ulrich, 2015; Wang et al., 2024).

Taken together, the literature suggests a conceptual proposition that guides the article: HRA adoption is more likely to become meaningful when HR is strategically embedded, cross-functional collaboration is institutionally supported, and analytics initiatives are built around concrete business problems. When these conditions are absent, technical investments alone are unlikely to generate substantial impact.

## 3. Materials and Methods

### *3.1. Research Design*

This study adopts a qualitative case-study approach to explore how HRA is understood, positioned, and applied in the context of Portugal's commercial airline sector, following calls for more qualitative and case-based evidence in the field (Bryman, 2012; Espegren & Hugosson, 2023; Flick, 2005; Margherita, 2022). A qualitative design was appropriate because the objective was not simply to test established hypotheses, but to investigate how professionals make sense of HRA in practice, how they describe organisational barriers, and how strategic dynamics shape analytics adoption.

Semi-structured expert interviews were selected as the primary data collection method. This format allowed the study to combine comparability across respondents with flexibility to probe sector-specific experiences and perceptions. Expert interviews were particularly suitable because the respondents were approached not as private individuals but as knowledgeable actors able to speak from positions of professional experience in HR, aviation management, and analytics (Bryman, 2012; Flick, 2005).

The methodological choice also responds to a gap identified in the HRA literature itself, namely the relative scarcity of qualitative studies that capture HRA as practice rather than aspiration (Espegren & Hugosson, 2023; Wang et al., 2024). Much of the existing research is conceptual, survey-based, or centred on best-practice models. Fewer studies investigate how HRA is actually interpreted by actors working within sector-specific organisational environments. A qualitative design is therefore especially useful for identifying how meanings, expectations, and barriers are constructed in practice. In this sense, the study is exploratory and interpretive: it seeks to reveal how strategic misalignment is experienced and narrated by professionals rather than to measure it through predefined scales.

The case-study logic is appropriate for another reason. HRA adoption is not merely a technical phenomenon but an organisational process shaped by historical arrangements, power relations, governance structures, and local decision routines. These dimensions are difficult to observe through decontextualised instruments alone. The airline setting, with its combination of operational intensity and humandependence, offers a fertile context for this form of inquiry.

### *3.2. Participants and Data Collection*

The broader qualitative phase of the project involved interviews with professionals from three groups: Experts in AI (n=5), HR/Airline Professionals (n=4), and HR/Airline Executives (n=6), for a total of 15 interviewees. For the purposes of this article, the analysis focuses on the interviews most directly related to HRA adoption and strategic alignment in Portugal's commercial airline industry.

 doi:10.20944/preprints202605.0238.v1



Participants held senior or expert roles in HR, training, people analytics, aviation operations, association leadership, consulting, and artificial intelligence.

The interviews were conducted between January and March 2023, either in person or by videoconference, in line with semi-structured expert interview practice in qualitative management research (Bryman, 2012; Flick, 2005). The interviews were recorded after obtaining written consent from the participants in the form of informed consent and final authorization from the ethics committee of ISCTE-IUL (No. 79/2023). Anonymity and confidentiality were guaranteed throughout the research process. The interview guides were designed around two overarching objectives: understanding the main HR challenges in the airline sector, and understanding how HRA could support decision-making in that context.

The participant profile was intentionally heterogeneous in order to capture multiple vantage points on the same phenomenon. The five Experts in AI contributed insight into modelling logic, data requirements, and the conditions necessary for analytics to move beyond descriptive reporting. The four HR/Airline Professionals were able to discuss the day-to-day realities of people management, compliance, recruitment, and training in airline settings. The six HR/Airline Executives added a broader perspective on business priorities, sector constraints, and the strategic status of HR. Bringing these profiles together allowed the study to compare not only what participants knew about HRA, but also how their professional location shaped that knowledge.

The interview guides were adapted to each cluster of respondents, but shared a common orientation. Questions explored definitions of HRA, examples of current or possible applications, major HR problems in aviation, business needs in the airline sector, relevant indicators, and the degree of alignment between HR and strategy. This semi-structured design made it possible to retain thematic coherence while allowing respondents to emphasise what they considered most salient.

### *3.3. Data Analysis*

The interviews were transcribed and analysed using thematic content analysis (Bardin, 2011; Braun & Clarke, 2006). The process combined semantic segmentation with inductive coding in order to identify recurring themes, subthemes, and interpretive patterns across responses (Fereday & Muir-Cochrane, 2006; Ghiglione & Matalon, 2005). The analytical logic followed a sequence of data collection, condensation, display, and conclusion drawing. Rather than imposing rigid predefined categories, the analysis allowed categories to emerge from the material while remaining guided by the study's research questions.

Particular attention was paid to three dimensions: the perceived role of HR in airlines, the perceived usefulness and maturity of HRA, and the organisational conditions that facilitate or block adoption. Coding also captured how interviewees connected HR issues to wider business problems such as retention, service quality, safety, operational performance, and workforce planning. Frequencies were used descriptively to identify recurring patterns, but the emphasis remained interpretive rather than statistical.

The analytical process unfolded iteratively. Initial coding produced a broad set of recurrent ideas related to HR roles, barriers to analytics, sector-specific challenges, and strategic relationships. These codes were then grouped into higher-order categories that reflected the core analytical concerns of the paper. During this stage, the issue of strategic misalignment became increasingly central, not because it had been imposed in advance as the sole explanation, but because it repeatedly appeared as the condition linking otherwise separate problems: weak HR influence, fragmented data, limited sponsorship, and underdeveloped HRA practices.

This iterative procedure also made it possible to move from descriptive listing to interpretive synthesis. Instead of simply reporting that respondents mentioned training, turnover, or data quality, the analysis examined how these concerns related to one another and what they revealed about the organisational positioning of HR. In that sense, the final themes are not isolated topics but interconnected dimensions of a broader organisational pattern.

 doi:10.20944/preprints202605.0238.v1



## 4. Results

The analysis revealed three overarching themes that help explain why HRA adoption remains limited in the airline context studied: structural disconnect between HR and the business, executive ambivalence toward analytics-led people management, and siloed data practices that limit organisational learning. Together, these themes point to a deeper problem of strategic misalignment.

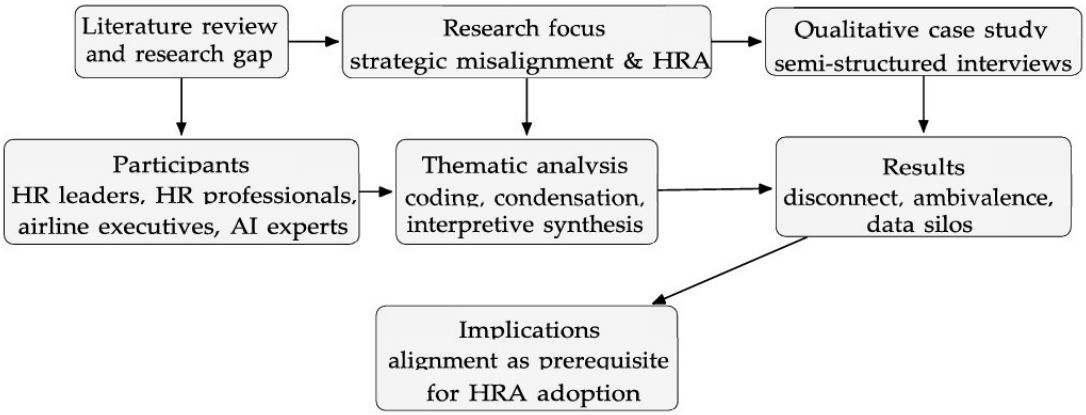


**Figure 1.** Research design model linking the literature gap, qualitative inquiry, thematic analysis, and study implications.

At a more granular level, the findings also show that respondents do not speak about HRA in isolation. They connect it to concrete sectoral concerns such as retention of scarce talent, training costs, safety, service quality, employee adaptability, and labour relations. This is important because it suggests that the practical relevance of HRA depends on whether it is framed around the lived problems of the industry. Where analytics is discussed abstractly, it remains remote. Where it is linked to urgent business challenges, its potential becomes clearer.

The findings are presented below in a way that combines thematic synthesis with material drawn from the broader empirical draft provided for this article. This permits a more textured understanding of how interviewees perceive HR, business needs, AI, and the possibilities of people analytics in the airline environment.

### *4.1. Structural Disconnect: HR Remains Reactive Rather than Strategic*

Interviewees consistently described HR in airlines as operationally necessary but strategically marginal. HR was seen as central to training, compliance, recruitment, labour relations, and employee administration, yet not fully integrated into the strategic centres where business priorities are defined. This was especially striking given that participants also emphasised that airlines depend heavily on human capabilities, regulatory compliance, and service quality—all areas in which HR should be structurally relevant.

Training emerged as the most prominent HR responsibility, which aligns with prior aviation-focused evidence on the centrality of training and development in airline HR management (IATA, 2018, 2023). Respondents stressed the importance of qualifications, certifications, reskilling, and upskilling in a sector where competence is tightly regulated and operational errors can have severe consequences. Recruitment and selection were also described as crucial, particularly because aviation requires both technical competence and strong behavioural qualities such as adaptability, resilience, communication, and discipline.

At the same time, HR was rarely portrayed as a decisive voice in business planning.

This disconnect became most explicit in the discussion of strategic alignment. The executives interviewed unanimously indicated that alignment between HR strategy and business strategy was either absent or severely underdeveloped. HR was described as lacking influence, not speaking the

 doi:10.20944/preprints202605.0238.v1



language of the business, and being called upon mainly to respond to operational requests rather than to help shape organisational direction. In effect, HR was positioned downstream from strategy rather than inside it.

This finding is central to the article's argument. If HR is not meaningfully involved in defining business priorities, HRA is unlikely to evolve into a strategic capability. Instead, it will tend to serve reporting or administrative functions, disconnected from the real drivers of organisational performance.

The interview material also makes clear that this structural disconnect has sector-specific consequences. In airlines, HR is not merely responsible for generic personnel administration. It is deeply implicated in qualification management, recurrent training, regulatory compliance, recruitment for safety-critical roles, and labour relations in highly unionised environments. Respondents repeatedly described commercial aviation as a setting where error management, certification, and people readiness are central to organisational survival. Yet even under these conditions, HR was often portrayed as receiving requests from operations rather than helping define the strategic agenda.

Another point that emerged strongly concerns the difference between generalist HR and airline HR, especially with respect to compliance, certification, safety-critical recruitment, and error management (Kharoufah et al., 2018). Participants emphasised that aviation HR must cope with stricter compliance requirements, higher training costs, stronger union influence, and a greater need for critical soft skills such as adaptability, resilience, communication, and self-regulation. Recruitment was described as especially consequential because errors in selection may affect not only efficiency but also safety. These insights reinforce the paradox identified by the study: the more consequential the people dimension becomes, the more problematic it is that HR lacks strategic voice.

This helps explain why respondents simultaneously viewed HR as indispensable and insufficiently empowered. They recognised the importance of HR tasks, but they did not see HR as fully authorised to shape wider business choices. That contradiction lies at the heart of the article's notion of strategic misalignment.

### *4.2. Executive Ambivalence: Recognition Without Sponsorship*

A second theme concerns the paradoxical way interviewees spoke about HRA. On the one hand, many respondents recognised that analytics could help improve decision-making in areas such as turnover, recruitment, training allocation, employee development, and operational planning. Predictive models for employee churn and candidate selection were frequently cited as especially useful. Participants also saw potential in linking people data to broader concerns such as customer service, workforce capacity, safety, and cost efficiency.

On the other hand, this recognition rarely translated into clear sponsorship or established organisational practice. Several respondents acknowledged that formal HRA structures were absent, weak, or outsourced. In some cases, analytics was described as an informal or fragmented activity rather than as a sustained organisational capability. Even where the value of HRA was accepted in principle, there was limited evidence that leaders had institutionalised it through dedicated teams, integrated governance, or strategic mandates.

 doi:10.20944/preprints202605.0238.v1



**Table 1.** Summary of key findings on HR roles and misalignment in airlines.

| Dimension | Main evidence from Interviews | Interpretive Implication |
|---|---|---|
| HR core roles | Training, qualifications, compliance, recruitment, labour relations, and employee administration were repeatedly identified as central HR responsibilities. | HR is operationally indispensable in aviation. |
| Strategic positioning | HR was described as reactive, weakly represented in strategic forums, and insufficiently involved in business planning. | HR lacks the strategic legitimacy required for HRA impact. |
| Airline-specific pressures | Respondents stressed certifications, safety-sensitive recruitment, unionisation, and high training costs as sector-specific realities. | Airline HR is more consequential and more constrained than generalist HR. |
| Alignment with business strategy | Executives indicated that HR strategy and business strategy were poorly aligned or not aligned at all. | Misalignment is a structural barrier rather than an isolated implementation issue. |

This ambivalence reflects a broader tension. Executives appear willing to endorse analytics rhetorically, but less willing to reposition HR as a strategic actor or to invest in the organisational conditions that make analytics consequential. The result is a form of symbolic support without structural commitment. In such an environment, analytics struggles to move beyond experimentation, and HR professionals have limited authority to translate insights into action.

The interviews also revealed uneven understandings of what HRA actually is. Some participants defined it narrowly as the production of metrics, averages, or performance indicators. Others, especially those with technical backgrounds, described it more expansively as strategic data analysis capable of identifying patterns, supporting forecasts, and informing interventions. This divergence is analytically important. It shows that the maturity of HRA in the sector is constrained not only by implementation deficits but also by conceptual fragmentation. Where HRA is understood mainly as measurement, it is unlikely to receive the mandate or resources associated with advanced analytics.

In addition, respondents' examples of possible analytics use were revealing. Employee churn prediction and recruitment forecasting were among the most frequently cited applications, echoing established uses of HRA in practice and in the literature (Isson & Harriott, 2016; Srivastava & Eachempati, 2021; Yahia, Hlel, & Colomo-Palacios, 2021). Both are highly consistent with the business realities of aviation, where turnover can be costly and hiring mistakes are difficult to absorb. Participants also mentioned the potential of analytics to support training planning, employee lifetime value estimation, skill-gap identification, stress monitoring, and better alignment between staffing needs and market demand. These examples show that the sector does not lack analytically meaningful problems; what it lacks is the institutional setup to address them systematically.

### *4.3. Siloed Data Practices: Fragmented Systems, Fragmented Decisions*

The third major theme concerns data fragmentation. Across interviews, respondents repeatedly noted that data quality, accessibility, and governance are essential for any serious analytics initiative. However, they also described a reality in which information is dispersed across systems, incompletely structured, and difficult to integrate. This problem is not unique to HR, but it has particular consequences for HRA because workforce issues often span multiple functions and data sources.

AI experts were especially clear that the central challenge is not the algorithm itself but the surrounding data environment, a point repeatedly emphasised in the HRA and data-mining literature (Boudreau & Cascio, 2017; King, 2016; Levenson & Fink, 2017; Minbaeva, 2018; Shet et al., 2021). Interviewees referred to the need for problem formulation, reliable datasets, clear governance, and iterative methodologies such as CRISP-DM. They mentioned tools ranging from Excel and SPSS

 doi:10.20944/preprints202605.0238.v1



to Python, R, and cloud-based AI platforms, but consistently emphasised that software is secondary to data quality and organisational readiness.

The practical effect of siloed data is that analytics remains partial and difficult to operationalise. If HR data is disconnected from operational, financial, and customer-related data, then the organisation cannot easily examine how people-related variables affect business outcomes. This reinforces the marginalisation of HR because the evidence needed to demonstrate its strategic value remains weak or unavailable. In turn, weak strategic status reduces investment in better data integration. The cycle becomes selfreinforcing.

The empirical material further suggests that what counts as a relevant indicator in the airline sector extends beyond conventional HR reporting. Respondents referred not only to turnover, absenteeism, training volume, onboarding quality, and employee satisfaction, but also to punctuality, service quality, accident and incident rates, check-in times, operational efficiency, and customer satisfaction. These are not always "HR indicators" in a narrow sense, yet participants repeatedly linked them to workforce capability and people management decisions. This is a significant insight. It suggests that in practice, the boundary between HRA and broader business analytics is porous.

Several dimensions of indicators were especially salient. One cluster concerns operational performance and efficiency, including numbers of flights, route planning, turnaround time, incidents, and error rates. A second concerns customer experience, including service quality and satisfaction. A third involves more familiar HR measures such as turnover, absenteeism, training actions, person-job fit, recruitment timing, retention after hiring, and employee motivation. A fourth concerns employee competencies and development, particularly soft skills, adaptability, business literacy, communication, leadership, and learning capacity. A fifth concerns health and well-being, including stress, fatigue, rest, and sense of belonging. Taken together, these dimensions suggest that a strategically relevant HRA agenda in airlines must be broader than conventional HR dashboards.

This observation reinforces the article's core argument. If analytics is to demonstrate value in airlines, it must connect people variables to operational and commercial outcomes. But that kind of integration is precisely what strategic misalignment makes difficult. When HR is peripheral, it is less able to access shared data, collaborate across functions, and frame workforce questions in business terms. Siloed data practices are therefore both a symptom and a consequence of weak strategic alignment.

**Table 2.** Illustrative HRA dimensions emerging from the qualitative findings.

| Dimension | Examples Mentioned by Participants | Strategic Relevance |
|---|---|---|
| Operational performance | Flights, turnaround time, incidents, error rates, capacity-demand matching. | Links workforce capability to safety and efficiency. |
| Customer experience | Service quality, punctuality, check-in time, customer satisfaction. | Shows how people management shapes commercial outcomes. |
| HR management & recruitment | Turnover, absenteeism, training hours, onboarding, person-job fit, recruitment timing. | Supports retention, staffing continuity, and talent acquisition. |
| Competencies & development | Adaptability, resilience, communication, leadership, learning capacity, business literacy. | Captures the strategic value of soft and technical skills. |
| Health and well-being | Stress, fatigue, rest periods, mental health, and sense of belonging. | Connects employee condition to safety-critical performance. |

### *4.4. Strategic Misalignment as the Underlying Barrier*

When read together, the findings suggest that the greatest barrier to HRA adoption is not simply a lack of tools, talent, or awareness. It is the strategic misalignment that prevents HR from being treated as a central business function. This misalignment is visible in the low influence of HR, the

 doi:10.20944/preprints202605.0238.v1



absence of alignment between HR strategy and business strategy, fragmented data ownership, and the absence of sustained executive sponsorship.

In practice, this means that HRA is often expected to generate value without first securing the organisational conditions required for it to matter. Analytics is introduced into an environment where HR lacks voice, data flows are siloed, and senior leadership does not consistently integrate people insights into strategic choices. Under these conditions, HRA cannot move beyond limited descriptive use. Strategic misalignment therefore operates as a prior barrier that shapes the impact of all other barriers.

The qualitative material supports an interpretation of misalignment as a systemic condition rather than a one-off failure. It is visible in organisational charts, reporting lines, decision routines, language, and the kinds of questions that are considered legitimate. If HR is primarily expected to process hiring requests, manage compliance, or respond to labour issues, then analytics will tend to be evaluated according to those restricted expectations. This does not mean that descriptive metrics are useless. Rather, it means that they are insufficient to reposition HR strategically unless the surrounding governance structure changes.

This systemic perspective also helps explain why respondents repeatedly moved from talking about HRA to talking about business needs. They referred to customer service, cost control, capacity-demand matching, flight safety, financial strength, and operational readiness as key concerns of airlines. Yet they also noted that people are central to achieving these goals. The persistent difficulty, therefore, is not recognising that people matter. It is institutionalising that recognition through a strategic role for HR and a cross-functional role for analytics.

## 5. Discussion

The findings support prior literature showing that HRA depends on more than technical sophistication (Fernandez & Gallardo-Gallardo, 2021; McCartney & Fu, 2022a; Peeters et al., 2020). They also extend that literature by demonstrating that strategic alignment should not be treated merely as a facilitating variable or a desirable outcome. In the context studied, it is better understood as a precondition for analytics adoption with organisational impact. This argument is also consistent with the latest literature, which increasingly shifts attention from analytics generation to analytics use. Recent scholarship stresses that the key question is no longer whether organisations can produce HR insights, but whether they can embed those insights in decision processes, cross-functional routines, and stakeholder-relevant interventions (Rasmussen et al., 2024; Wang et al., 2024). From that perspective, strategic misalignment is not a peripheral weakness but a mechanism that interrupts the path from evidence to action. Read in this way, HRA adoption is also a governance issue: it depends on whether decision rights, accountability structures, and information flows allow workforce evidence to shape organisational priorities and support more sustainable patterns of performance.

This reframing matters theoretically. Much of the HRA literature identifies factors such as data quality, analytical capability, executive support, and governance as ingredients of success. The present study does not dispute their importance. Instead, it shows that these factors are themselves shaped by the strategic position of HR. Where HR is peripheral, executive sponsorship is likely to be weak, data integration limited, and analytics priorities disconnected from core business concerns. Conversely, where HR is strategically embedded, these enabling conditions are more likely to emerge and persist. This also links the study to broader debates on corporate governance, because the organisational value of analytics depends on how authority, accountability, and cross-functional coordination are structured.

The findings also resonate with broader debates in strategic HRM and with arguments that analytics should begin with business problems rather than isolated HR measurement exercises (Davenport, 2013; Rasmussen & Ulrich, 2015; Roy et al., 2022). For decades, scholars have argued that HR creates greater value when aligned with strategy. The present study suggests that the digital turn in HR does not replace this logic; it intensifies it. HRA cannot compensate for a weak strategic role of

 doi:10.20944/preprints202605.0238.v1



HR. Rather, analytics amplifies the consequences of that weakness. If HR is structurally marginal, analytics becomes another peripheral function. If HR is strategically central, analytics can help translate people-related evidence into organisational action.

The airline context makes these insights particularly visible. Airlines are people-intensive systems in which safety, service quality, compliance, and operational continuity are inseparable from workforce capability. In principle, this should make HRA especially relevant. Yet the study shows that even in such a setting, HR may remain strategically undervalued. This underscores the importance of organisational politics and governance in understanding analytics adoption. It also highlights the link between analytics and sustainable organisations: where workforce evidence is integrated into strategic and operational decisions, firms are better positioned to sustain resilience, service quality, and long-term capability under conditions of complexity and regulation.

The study also contributes to ongoing debates about whether HRA should remain within the HR department or be organised as a broader cross-functional capability. The findings suggest that this is the wrong question if posed too narrowly. What matters is not only organisational location, but also strategic legitimacy, access to decision-makers, and the ability to connect people data to wider business performance. In some settings, locating analytics partly outside HR may strengthen business integration. In others, strengthening the strategic power of HR itself may be the more important move. The common requirement is that HRA must not be isolated from the business problems it is supposed to illuminate. This resonates with recent process-oriented accounts of HRA implementation, which show that success depends not only on analytical capability but also on how roles are distributed and coordinated across the organisation (Wirges & Neyer, 2023).

Another theoretical implication concerns the relationship between descriptive and predictive analytics. The findings do not suggest that organisations should abandon descriptive metrics and immediately pursue sophisticated models. Rather, they indicate that the transition from descriptive to predictive use is most valuable when driven by concrete business priorities. Predictive models for churn, recruitment, training demand, or fatigue are likely to be meaningful only when the organisation has already decided that these problems are strategically important and is prepared to act on the results.

## 6. Practical and Theoretical Implications

The study offers several implications for practice. First, organisations seeking to implement HRA should begin by addressing strategic positioning rather than only technical architecture. If HR is not involved in business planning and cross-functional decision-making, analytics initiatives are unlikely to generate sustained value. Second, HRA projects should be framed around business-critical problems, such as retention of scarce talent, workforce readiness, training effectiveness, operational reliability, and customer-facing service quality. Third, firms should invest in integrated governance structures that connect HR, operations, finance, and data teams. Cross-functional collaboration is not an optional enhancement; it is central to making people analytics actionable.

Leadership development is also essential. Senior managers need to understand not only what analytics can do, but also how HR can contribute strategically when supported by evidence. In practical terms, this means strengthening the role of HR leaders in strategic forums, improving the business literacy of HR teams, and creating accountability for the use of people-related evidence in decision-making.

From a theoretical standpoint, the study contributes to HRA research by foregrounding strategic alignment as a core explanatory variable in adoption. Rather than subsuming alignment under generic management support, future models of HRA maturity and implementation should treat it as a distinct construct. Doing so would improve understanding of why technically capable organisations still fail to derive value from people analytics. More broadly, the study suggests that research on analytics adoption can benefit from stronger dialogue with corporate-governance and sustainability scholarship, especially where organisations seek to align innovation with durable organisational performance.

 doi:10.20944/preprints202605.0238.v1



A further practical implication concerns metrics design. Organisations in aviation should resist the temptation to treat HRA as a narrow HR scorecard disconnected from operations. The interviews suggest that strategically useful analytics in this sector must connect workforce issues to safety, service, efficiency, and business resilience. This does not mean collapsing HR into operations, but rather recognising that people-related measures become more persuasive when linked to outcomes that senior decision-makers already prioritise. A mature HRA agenda in airlines would therefore combine core HR metrics with cross-functional indicators that illuminate how workforce conditions affect organisational performance.

A useful way to interpret this is through a staged logic of HRA development. In a first stage, organisations consolidate data quality, compliance reporting, and shared metrics definitions. In a second stage, they connect those metrics to priority business questions such as retention, hiring bottlenecks, training effectiveness, and operational readiness. In a third stage, they deploy more advanced predictive and prescriptive models supported by stronger governance and clearer leadership sponsorship. The study suggests that many organisations attempt to jump prematurely to the third stage without fully securing the first two. Strategic alignment is what enables progression across these stages rather than leaving analytics trapped in fragmented experimentation.

### *6.1. Toward an Implementation Model for HRA in Airlines*

Based on the evidence analysed, a practical implementation model for HRA in airlines can be outlined in four linked moves. The first move is strategic recognition: senior leadership must explicitly acknowledge that workforce capability, retention, training readiness, and employee well-being are not peripheral HR topics but business variables with consequences for safety, punctuality, service quality, and cost control. The second move is organisational integration: HR, operations, finance, commercial teams, and analytics specialists need shared governance arrangements through which business problems are translated into answerable people-analytics questions. The third move is analytical consolidation: organisations must improve data quality, definitions, interoperability, and access before expecting predictive models to produce credible value. The fourth move is managerial activation: analytics outputs must be discussed in strategic and operational forums where decisions can be taken, reviewed, and adjusted over time.

What this model emphasises is sequence. The data project should not come first in isolation from the strategic problem, and the predictive model should not come first in isolation from governance. In airline settings, where labour decisions affect both commercial performance and safety-sensitive operations, the order of implementation matters greatly. If organisations begin with software acquisition or isolated dashboards, they may create activity without capability. If, instead, they begin with business questions and strategic alignment, HRA is more likely to evolve into a decision-support function that is credible across departments.

This proposed model also helps explain why the findings of the present study are relevant beyond the specific case under investigation. Although the Portuguese airline context has its own institutional particularities, the broader challenge of connecting HR analytics to business strategy is likely to resonate in other complex service industries, especially those marked by regulation, talent scarcity, and high operational interdependence. The model therefore offers a bridge between the case findings and a wider research agenda on the organisational preconditions of analytics adoption.

## 7. Limitations and Future Research

This study is context-specific and has several limitations, as is typical of exploratory qualitative casestudy research (Bryman, 2012; Flick, 2005). First, it focuses on the Portuguese commercial airline sector, which means the findings should not be generalised mechanically to other countries or industries. The airline industry has distinctive features, including strong regulation, safety sensitivity, union influence, and high training intensity. These features make it a valuable case for theory building, but also a bounded one.

 doi:10.20944/preprints202605.0238.v1



Second, the study relies on a qualitative design and a relatively small number of expert interviews. This was appropriate for exploring perceptions, organisational dynamics, and contextual barriers, but it does not allow causal inference in a statistical sense. Third, the evidence reflects the period in which the interviews were conducted and may not capture subsequent organisational changes in the sector.

Future research could address these limitations in several ways. Comparative studies across sectors could test whether strategic misalignment plays a similar role in industries with different institutional and operational conditions. Quantitative research could examine whether alignment predicts HRA maturity, adoption intensity, or business impact. Longitudinal studies could explore how changes in leadership, governance, or digital capabilities alter the relationship between HR and analytics over time. Further qualitative work could also investigate how specific interventions—such as the creation of crossfunctional analytics teams or the elevation of HR leaders into strategic committees—change the practical relevance of HRA.

## 8. Conclusions

This article set out to examine why HRA adoption remains limited despite widespread recognition of its potential. Based on qualitative evidence from Portugal's airline sector, it argues that strategic misalignment between HR and the business is a critical barrier. The main obstacles to HRA are not simply technical. They are organisational and political: HR is often excluded from strategy, executive support is inconsistent, and data practices remain siloed.

The central contribution of the study is to show that strategic alignment should be understood not merely as a success factor for HRA, but as a prerequisite for meaningful implementation. Without alignment, analytics risks becoming a peripheral reporting exercise. With alignment, it can become a mechanism through which HR contributes directly to organisational performance, workforce resilience, business value, and the broader governance capacity required for sustainable organisations.

In this sense, the study reframes the challenge of HRA adoption. The question is not only whether organisations have the tools, data, or models. It is whether they are prepared to position HR as a strategic actor capable of using analytics to address the problems that matter most.

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