UIC SECURITY PLATFORM

Best practices to increase the feeling of security

June 2026

INTERNATIONAL UNION
OF RAILWAYS

Contents

Context of the work

The study and recommendations presented in this guidance document address the topic of feeling of security on railway premises. The work was conducted by the International Union of Railways (UIC) Security Department under the Security Platform – Human Factors Working Group. The work was supported by the UIC Passenger Department (Station Managers Global Group), the International Association of Public Transport (UITP), the European Forum for Urban Security (Efus) and the International Centre for the Prevention of Crime (ICPC).

This document aims to support railway and public transport stakeholders to improve the feeling of security of customers and staff.

Executive summary

The feeling of security has become a strategic priority for railway stakeholders worldwide. In this publication, it is addressed as a key dimension of railway security, closely linked to how security arrangements, environments, and daily operations are perceived and experienced by customers and staff.

In railway environments, characterised by open access, high passenger volumes, and strong interactions between users, staff, and public space, these dynamics are particularly salient. Security is therefore increasingly recognised as a multidimensional construct, encompassing a range of protective measures, whether human, environmental, technological or organisational, that together shape how security is implemented and experienced.

This guideline aims to support railway organisations in understanding, assessing, and improving the feeling of security for both customers and staff. It provides a structured and operational framework based on the combined experience of the UIC Human Factors Working Group, integrating existing UIC guidance, sector practices, and evidence from research. The document offers practical orientations and introduces a harmonised assessment approach, enabling organisations to address both objective security conditions and subjective perceptions in a coherent, human-centred, and sustainable way.

1

Introduction: What is the Feeling of Security

1.1. Key terms and working definitions

The concept of **feeling of security** is widely addressed in literature as a subjective dimension of security in transport and public-space environments. It relates to how security is experienced by individuals and groups and is often referred to as “sense of safety”, “security sentiment” or “feeling safe”. In this work, the term feeling of security is used specifically in relation to situations involving potential threats, malicious acts, or forms of harm, and not to accidental events associated with safety or hazards (Ceccato, 2013).

Research shows that this feeling is shaped by a combination of personal experience, environmental cues, social interactions, and confidence in institutional arrangements. Within this body of work, a well-established distinction is made between objective security and subjective security, which together frame how security is understood in railway environments (Nasar & Fisher, 1993).

Subjective security refers to individual perceptions of security, shaped by personal experiences, environmental factors, social interactions, and cultural context, as experienced by customers and staff. **Objective security** refers to the actual security conditions in a given context. This includes both the level of threat and risk, as well as the occurrence of security incidents (e.g. crime data), together with the measures implemented to prevent and mitigate these risks, whether at physical, technological, human, or organisational level.

Risk-perception research consistently shows that these two dimensions are not systematically aligned. Individuals may feel insecure in environments where objective risk is low, while reassurance may be achieved in contexts where risks exist but are perceived as visible, controlled, and effectively managed. This dissociation is particularly relevant in railway environments, which are characterised by open access, high passenger volumes, and continuous interaction between users, staff, and the surrounding public space. In such contexts, the feeling of security is influenced not only by the existence of risks or incidents, but by how security conditions are perceived and interpreted in everyday situations (Loukaitou-Sideris & Banerjee, 1994).

Both objective and subjective security concern all people using or working in the rail environment. This includes **customers,** understood as passengers, station users, members of the general public present in railway premises, and other actors related to railway activity such as retailers or service providers. It also includes **staff,** enclosing all categories of railway employees, including frontline personnel, maintenance workers, and security staff.

The implications of this distinction are significant for railway organisations. Persistent perceptions of insecurity can influence customer behaviour, particularly during evening or off-peak periods. For staff, sustained feelings of insecurity are associated with increased exposure to psychosocial risks, heightened stress, reduced confidence in managing situations, and cumulative occupational strain, which may in turn affect absenteeism, retention, and quality of interaction with customers. More broadly, the way security is perceived, by both customers and staff, contributes to institutional trust and to the legitimacy of the railway system as a safe, secure, reliable, and professionally managed mode of transport.

1.2. Feeling of Security drivers

The literature further shows that the feeling of security emerges from a set of interrelated factors that operate simultaneously in railway environments. These include the quality of social interactions and behaviours; the visibility, availability, and attitude of staff and security personnel; environmental characteristics such as lighting, cleanliness, and spatial legibility; access to information, help, and reporting mechanisms; and the perceived effectiveness, fairness, and consistency of institutional responses. Together, these factors confirm that the feeling of security is a multidimensional phenomenon, situated at the intersection of human experience, spatial design, organisational practice, and governance.

Within this framework, **human presence** plays a central role. Visible and approachable staff contribute to reassurance not only through deterrence, but also by providing guidance, assistance, and informal regulation of behaviour in shared spaces. Consistent with Crime Prevention Through Environmental Design (CPTED) and Routine Activity Theory, such presence reinforces guardianship and natural surveillance. In railway environments, staff presence therefore functions both as an operational security resource and as a signal of institutional care and authority that shapes how users interpret their surroundings (Bottoms & Wiles, 1997).

The **physical environment** constitutes a second key dimension. Lighting, cleanliness, visibility, spatial organisation, and the avoidance of hidden or degraded areas send implicit messages about control and order. Poorly maintained or unreadable spaces tend to increase uncertainty and perceived vulnerability, whereas legible, well-designed environments support situational awareness and reassurance. These mechanisms underpin the relevance of CPTED principles in railway stations and trains, particularly with regard to visibility, image management, and spatial coherence (Wilson & Kelling, 1982).

A third dimension concerns the **security measures themselves**. The literature consistently shows that security measures contribute to reassurance only when they are visible, intelligible, and understood by users. Measures that remain unnoticed or poorly communicated may have limited impact on perceived security, even if they are operationally effective. Conversely, clearly identifiable measures, such as staff presence, surveillance systems, or reporting tools, can reinforce perceptions of control and preparedness when they are perceived as legitimate and proportionate (Ceccato et al., 2022).

Closely related is the **sense of agency** experienced by users. The feeling of security is influenced by whether individuals perceive that they can act, obtain assistance, or influence their situation in case of concern (Rubens et al., 2011). Accessible help points, clear reporting mechanisms, responsive staff, and understandable procedures reduce uncertainty and support a perception of control, whereas environments that limit access to help or guidance tend to amplify insecurity.

Finally, these dimensions are mediated by **institutional trust and legitimacy**. Perceived security depends not only on the existence of measures, but on confidence in the capacity of organisations and authorities to manage situations in a competent, consistent, and fair manner. Transparency, clarity of roles, and cooperation between railway organisations, police, municipalities, and other stakeholders reinforce this trust and reflect a shared responsibility for security in open railway environments (UIC, 2017).

Rather than pointing to isolated causes, this body of literature highlights that variations in the feeling of security arise from how these elements are combined and experienced in specific contexts. This perspective helps explain why similar security conditions may produce different perceptions across places, time periods, and user groups.

2

UIC Survey on Feeling of Security

2.1. Methodology and respondents

The survey presented in this section forms part of a broader and cumulative work programme carried out within the UIC Security Platform Human Factors Working Group (HFWG). This work combined an extensive review of existing academic and grey literature (covering more than 80 documents), structured exchanges with security and human-factors experts, and progressive consolidation of insights through working sessions. Within this process, the survey was designed as a key empirical component, intended to capture a sector-wide snapshot of current practices and perceptions and to complement qualitative expert input given during working meetings with structured data.

The survey was conducted online between June and September 2025. The survey targeted senior security professionals and managers directly responsible for security strategies, governance, and operational implementation.

The main goal was to capture structured input from professionals with both decision-making and field-level insight, ensuring that results reflect operational reality rather than isolated abstract or theorical views. This expert-based sampling approach is consistent with UIC guidance and with methodological recommendations for assessing subjective security perceptions in complex transport environments, where experts' judgement and organisational experience are essential to interpret perception-related issues accurately.

The questionnaire comprised 21 questions combining closed and open formats, structured around five main areas. These included: respondent profile (country, organisation type and role); the importance attributed to the subjective feeling of security for both customers and staff; the identification of the main drivers of perceived insecurity in railway environments; the measures implemented to improve the feeling of security for customers and staff; and the methods used to quantify and monitor these perceptions. Additional questions explored the frequency, timing, tools, and indicators used for evaluation, as well as the interest of organisations in pursuing further collaboration on this topic within the UIC Security Platform, with a large majority of respondents expressing interest (46 out of 52).

From a methodological perspective, the survey design reflects the need to capture both structured patterns and contextual insight when assessing the feeling of security. Accordingly, the questionnaire integrated complementary question formats, combining Likert-type scales to assess importance and prevalence, ranking exercises to identify the main drivers of perceived insecurity, and open questions allowing respondents to contextualise their answers and share operational practices.

A total of 52 responses were collected, representing 26 countries across six UIC Regions. The sample includes strong participation from Europe (18 countries: Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Italy, Luxembourg, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, The Netherlands, and the United Kingdom), as well as representation from North America (Canada and the USA), Latin America (Chile), Asia-Pacific (India), the Middle East (Israel and Saudi Arabia), and Africa (Morocco and South Africa). Respondents were predominantly security managers or equivalent senior roles within railway undertakings and public transport authorities, providing a high level of sectoral representativeness and strategic relevance.

Respondent's Countries

2.2. Importance and scale of the problem

The survey first examined the importance attributed to subjective security perceptions, explicitly distinguishing between customers and staff.

As illustrated in *Figure 1*, the survey results show a strong consensus across responding organisations regarding the importance of customers' feeling of security. Out of a total of 52 responses, a large majority rated it as totally important, with almost all remaining respondents considering it rather important. Only a single respondent expressed uncertainty.

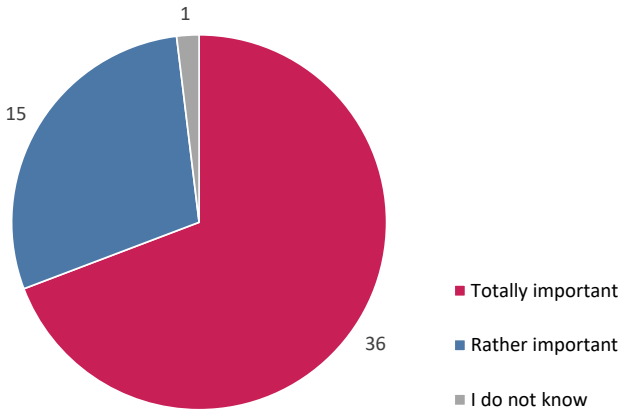


Figure 1 – Customer's subjective feeling of security

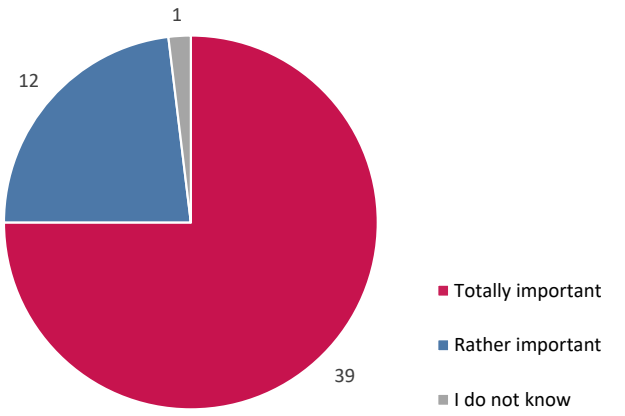


Figure 2 – Staff's subjective feeling of security

The importance attributed to staff's feeling of security is even more pronounced, as shown in *Figure 2*. A higher proportion of respondents rated staff security as totally important, with nearly all others considering it rather important and only one respondent expressing uncertainty.

A comparison of *Figures 1* and *2* reveals a consistent pattern: while both dimensions are rated as highly important, staff's feeling of security appears to be a slightly higher priority.

This reflects a growing recognition that staff are not only service providers, but also direct recipients of security risks, especially frontline employees exposed to aggression, harassment, and antisocial behaviour. From a human factors and organisational perspective, staff's feeling of security functions as a strategic enabler of operational resilience and customer reassurance: staff who feel secure are more likely to intervene appropriately, de-escalate situations, and project authority and care.

Taken together, these findings show that customer and staff security perceptions are not competing priorities, but interdependent dimensions of the same security environment.

2.3. Main Drivers of Perceived Insecurity

The survey next examined the main drivers of perceived insecurity. Respondents were asked to identify the five most significant contributors, focusing on relative importance rather than exhaustive risk enumeration.

As shown in *Figure 3*, responses indicate a clearly multifactorial perception of insecurity, with a few possible dominant causes. Most reported drivers include negative social interactions, the presence of undesirable individuals or groups, limited staff presence. Signs of active criminality or visible signs of malicious acts also appear as prevalent causes.

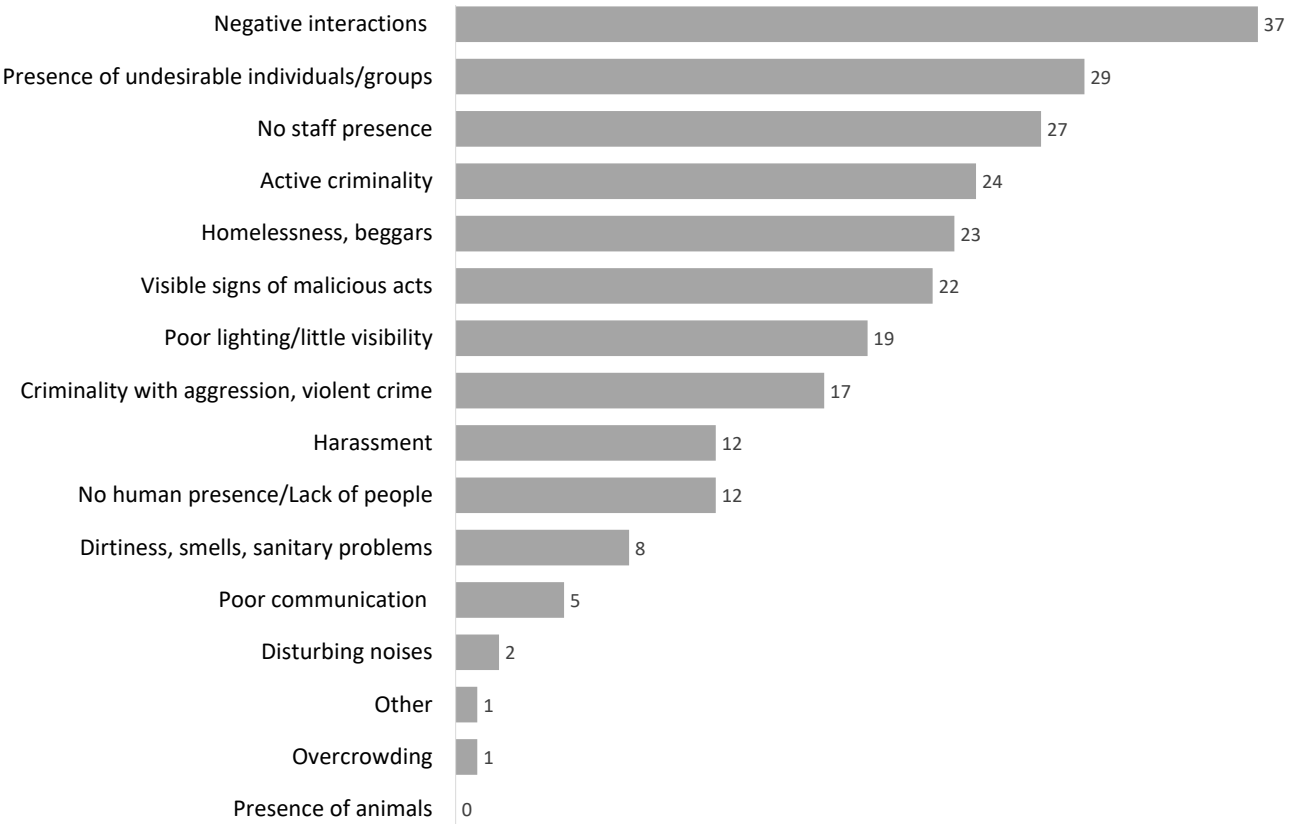


Figure 3 – Main drivers of perceived insecurity

To support interpretation, the identified drivers were regrouped into broader thematic categories, as presented in *Figure 4*, in line with established security and human-factors frameworks.

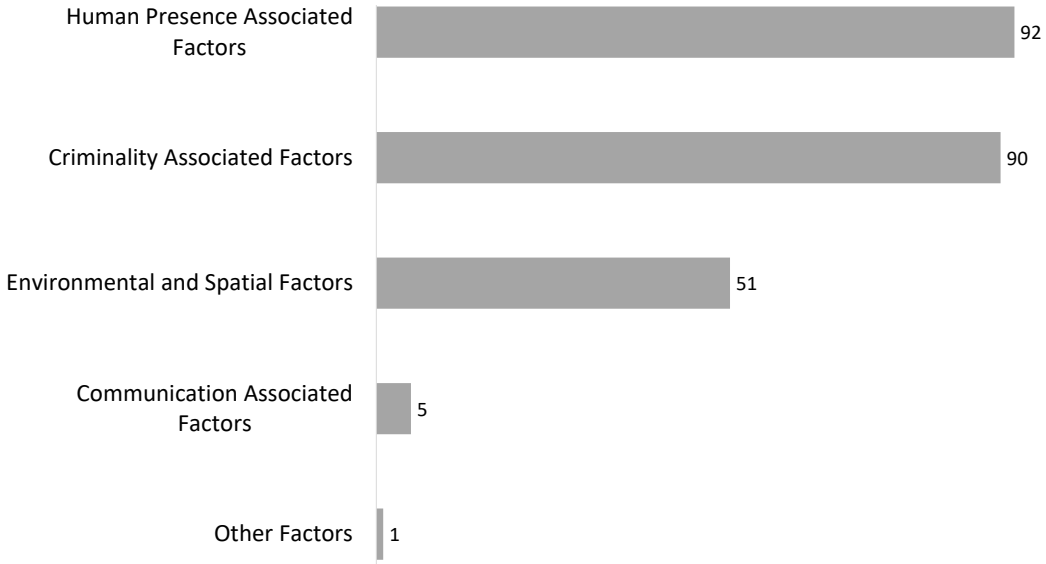


Figure 4 – Grouped drivers of perceived insecurity

The thematic analysis shows that human presence- and behaviour-related factors represent the most influential category. This finding aligns with principles of Routine Activity Theory and CPTED, which emphasise the role of visible guardianship and informal social control in open public spaces. In railway environments, the perceived absence of legitimate guardians is a strong amplifier of insecurity.

Environmental factors, including lighting, cleanliness, degraded spaces, and spatial complexity, form the second most influential group. These elements function as contextual signals that shape perceptions of order and control, and can undermine reassurance even in the absence of incidents.

Communication-related factors, while less frequently cited as primary drivers, emerge as a critical cross-cutting dimension. Unclear information, limited visibility of reporting options, or uncertainty about procedures increase ambiguity and perceived vulnerability, thereby intensifying the impact of other insecurity drivers.

These results indicate that perceived insecurity in railway environments is shaped less by isolated technical conditions than by how human, environmental, and organisational factors are experienced in combination.

3

Implemented Measures and Good Practices

Building on the drivers of perceived insecurity identified in the previous section, this chapter examines how railway organisations respond in practice to improve the feeling of security in railway environments based on the survey results.

The analysis combines quantitative evidence on the types of measures reported with qualitative inputs provided through open-ended responses, allowing the identification of both dominant approaches and concrete examples of practice. Particular attention is given to differences between measures addressing customers and those targeting staff, reflecting their distinct roles, exposure, and interaction with security risks. The chapter also considers how organisations assess and monitor the effectiveness of these measures.

3.1. Measures to Improve Customers' Feeling of Security

As shown in *Figure 5*, the most frequently reported measures combine visible human presence and security-related technologies, providing immediate signals of control in stations and trains.

Alongside these, environmental quality, including cleanliness, maintenance, lighting, and spatial design, emerges as a central lever, contributing to reassurance by signalling care, order, and institutional presence. Together, these measures reflect a strong emphasis on shaping customers' perception of the space, even in the absence of direct interaction with staff.

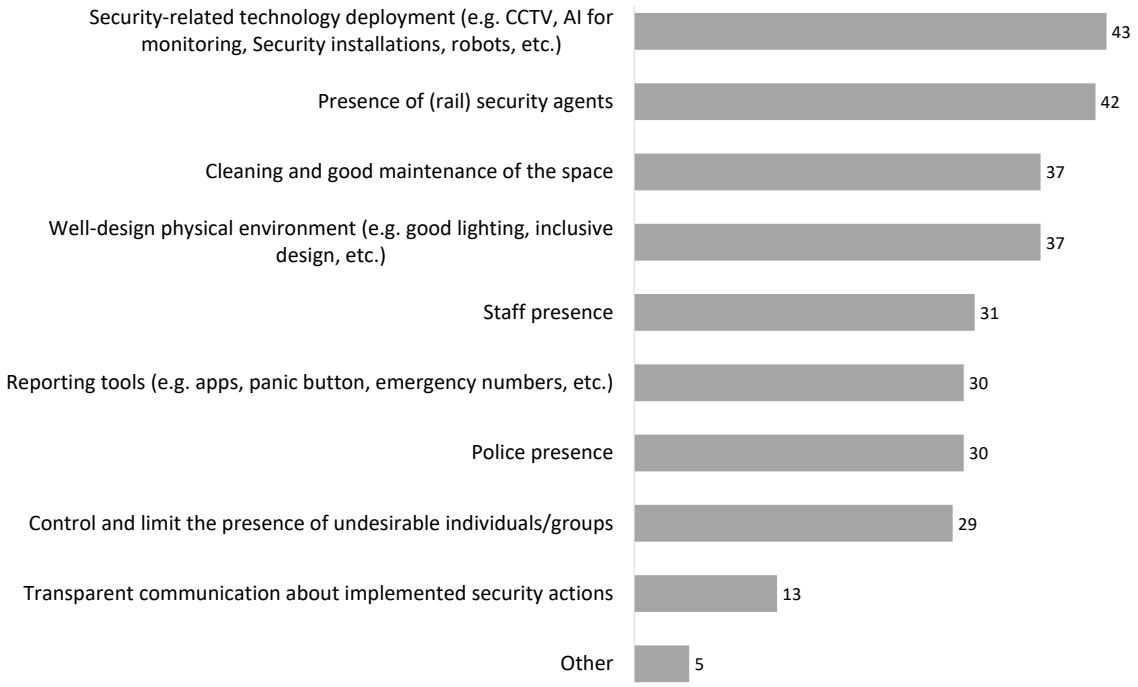


Figure 5 – Measures implemented to improve customers' feeling of security

The thematic regrouping presented in *Figure 6* confirms the overall distribution of measures. Human-presence-related measures represent the most frequently reported category, followed by environmental measures and security-related technological measures. By contrast, communication and prevention measures appear comparatively less developed across responding organisations.

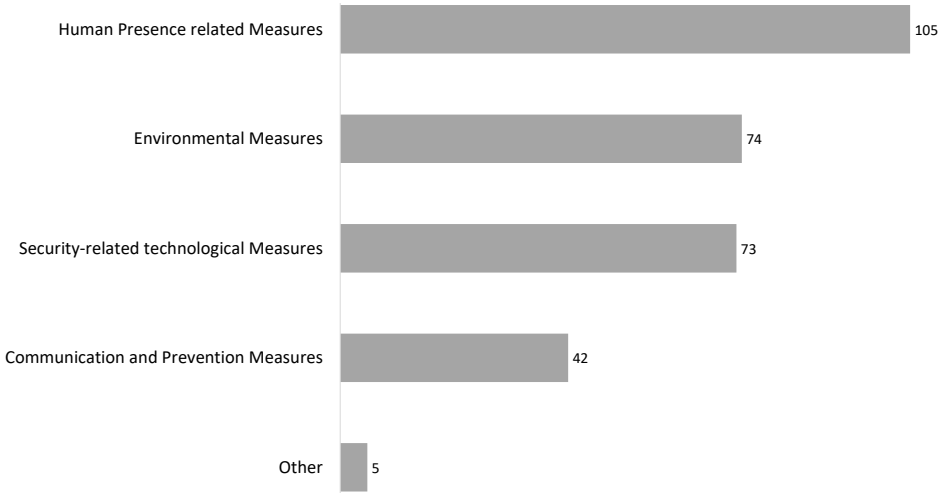


Figure 6 – Category of Security measures deployed in order to increase customer's subjective feeling of security

This pattern points to a recurrent gap between the deployment of security measures and deployment of communication campaigns. While substantial efforts are made to strengthen presence, technologies, and the physical environment, fewer measures explicitly aim to explain, contextualise, or make these actions understandable to users. The survey does not allow a direct assessment of how these differences affect customer perception. It suggests that communication may play an important role in how such measures are understood and experienced. It should also be noted that communication campaigns may serve different purposes, including both behavioural awareness (e.g. “see something, say something”) and information on security arrangements.

3.1.1. Qualitative Insights from open-ended responses: Customers

The qualitative inputs help contextualise the quantitative results by illustrating how security measures are experienced in practice. Across responses, customers’ feeling of security is closely linked to visible management of space, environmental quality, and access to assistance.

Visible human presence emerges as a primary driver of reassurance. Respondents consistently highlight the role of police and security staff, particularly during evening hours, major events, or in locations perceived as sensitive. Beyond deterrence, such presence signals that spaces are actively monitored and managed.

Good practice example #1. Portugal

Targeted patrols by security agents and police are deployed in stations and trains, particularly during sensitive periods, reinforcing visible control and contributing to increased reassurance.

The quality of interaction with staff also plays a central role. Approachable and well-trained personnel who can assist, guide, and reassure passengers contribute significantly to perceptions of control, especially in unfamiliar or stressful situations.

Good practice example #2. Chile

Security personnel perform both protection and customer-facing roles, assisting passengers, providing guidance, and supporting them in stressful situations, thereby contributing to everyday reassurance.

Technological measures act as a complementary layer of support. CCTV systems, reporting tools, and emergency devices contribute both through their operational function and their visibility, signalling preparedness and the capacity to respond effectively.

Good practice example #3. Belgium

CCTV systems, emergency call numbers, and centralised dispatching centres are used to monitor stations and coordinate responses, ensuring rapid intervention while making security arrangements visible to users.

Environmental design and maintenance provide the underlying conditions for perceived security. Well-lit, clean, and open spaces are associated with reassurance, while degraded or poorly legible environments tend to increase uncertainty.

Good practice example #4. Germany

Regular cleaning and maintenance are prioritised, as well-maintained environments signal human presence and contribute directly to a stronger feeling of safety among passengers.

Communication and prevention initiatives influence how these measures are understood and used. Awareness campaigns, information on security arrangements, and accessible reporting mechanisms can strengthen trust when they are clear and visible.

Good practice example #5. United Kingdom

National awareness campaigns encourage passengers to report incidents and raise understanding of available tools and measures, supporting trust and engagement with the security system.

Overall, the findings indicate that customers feel most reassured where these elements are combined: visible presence, supportive staff interaction, well-maintained environments, and accessible tools for assistance. While communication appears less frequently reported than other measures, it may represent an additional lever to support how security measures are understood and experienced by users.

3.2. Measures to Improve Staff's Feeling of Security

As shown in *Figure 7*, measures addressing staff's feeling of security appear to be linked to staff's higher exposure to risk and threat.

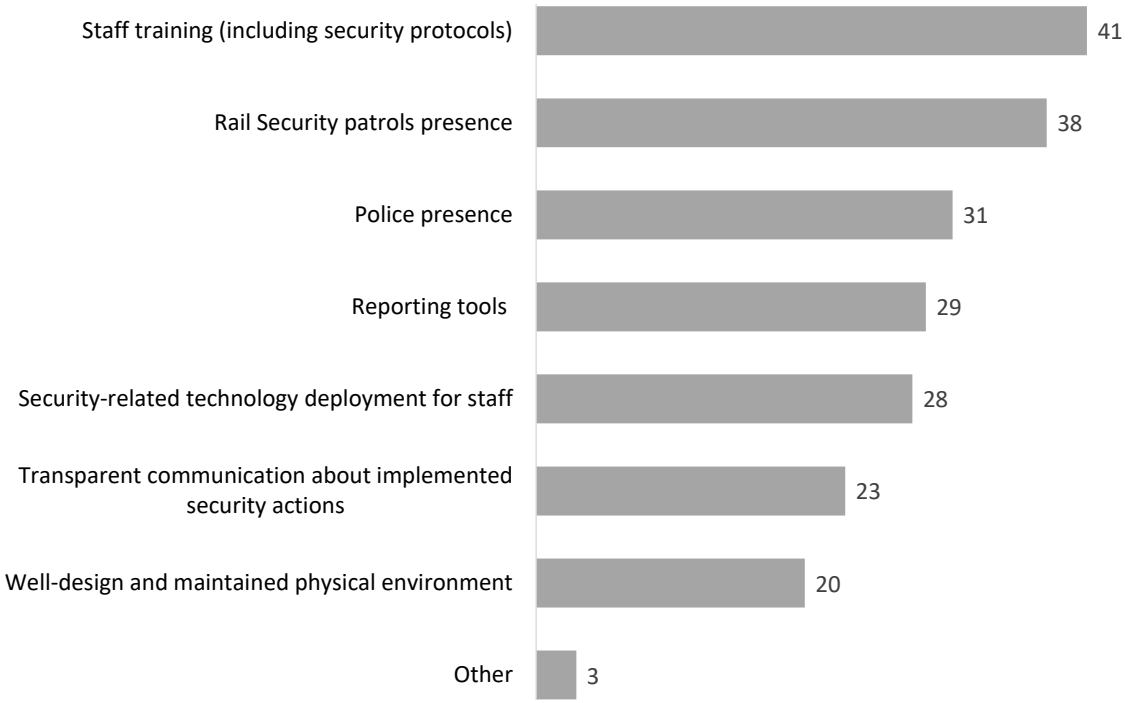


Figure 7 – Measures implemented to improve staffs' feeling of security

The most frequently reported measures relate to training and preparedness, including security procedures, conflict management, de-escalation techniques, and psychological preparedness. These are complemented by measures ensuring access to support and escalation, such as the presence of security patrols or police, and by the deployment of operational technologies supporting incident management.

Unlike customer-focused measures, environmental interventions are less prominent in staff-oriented responses, suggesting that many railway environments continue to be designed primarily from a passenger perspective.

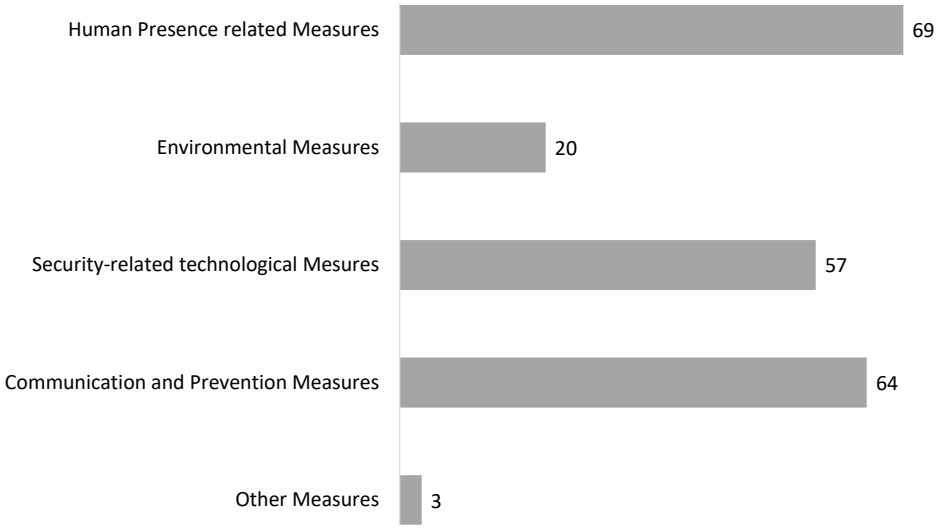
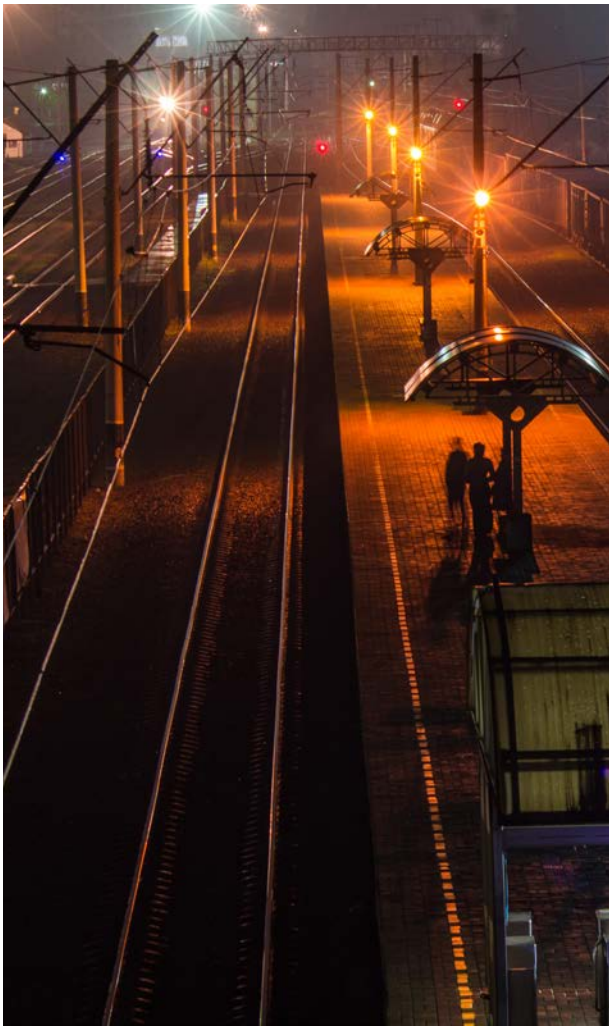


Figure 8 – Category of Security measures deployed in order to increase staff's subjective feeling of security



The thematic regrouping presented in *Figure 8* confirms this distribution. Organisational support and preparedness-related measures dominate, followed by communication and reporting mechanisms and security-related technological tools, while environmental design measures play a secondary role.

This pattern reflects a staff-focused approach centred on capability, support, and reliability of response.

3.2.1. Qualitative Insights: from open-ended responses: Staff

The qualitative inputs provide a complementary perspective on how staff experience security measures in practice. Across responses, staff reassurance is closely linked to access to support, operational preparedness, and the reliability of organisational arrangements.

Access to rapid and reliable backup emerges as a primary factor. Respondents consistently emphasise the importance of real-time coordination with police and security services, particularly for frontline and lone-working staff. Clear and trusted escalation pathways are seen as essential to maintaining confidence in challenging situations.

Good practice example #6. Finland

Security operations are coordinated through national control rooms connected to police and other authorities, enabling real-time information sharing and rapid deployment of security personnel to support staff in the field.

Technological tools are highlighted when they directly support incident management. Devices such as body-worn cameras, panic buttons, and secure communication systems are valued for reducing isolation, supporting decision-making in confrontational situations, and improving post-incident follow-up.

Good practice example #7. Netherlands

Staff are equipped with panic buttons, communication devices, and body-worn cameras, allowing them to alert control centres and request immediate support when incidents occur, while also providing reassurance during daily operations.

Training and preparedness are described as foundational to staff confidence. Respondents underline the importance of conflict management and de-escalation training, often complemented by broader initiatives to strengthen resilience and preparedness in high-stress environments.

Good practice example #8. United States

Targeted patrols by security agents and police are deployed in stations and trains, particularly during sensitive periods, reinforcing visible control and contributing to increased reassurance.

Reporting and post-incident support mechanisms also play a central role. Simple reporting tools, clear follow-up processes, and transparent internal communication are seen as essential for encouraging reporting and ensuring that staff feel recognised and supported after incidents.

Good practice example #9. Canada

Staff can report incidents through dedicated tools, with systematic follow-up through internal committees and monitoring processes that ensure incidents are reviewed and addressed at organisational level.

Finally, organisational and environmental arrangements contribute to reducing staff exposure to risk. Measures such as working in pairs, access to protected spaces, and coordinated supervision are identified as important when consistently implemented.

Good practice example #10. South Africa

Staff working in potentially high-risk environments operate under structured arrangements such as working in pairs, controlled access conditions, and coordination with local security personnel to reduce exposure to risk.

Overall, the findings indicate that staff feel most reassured where preparedness, access to support, and reliable organisational arrangements are combined. Environmental design, while less frequently addressed in staff-focused measures, may offer additional opportunities to strengthen staff security in operational contexts.

3.3. Comparative Perspective: Customers and Staff

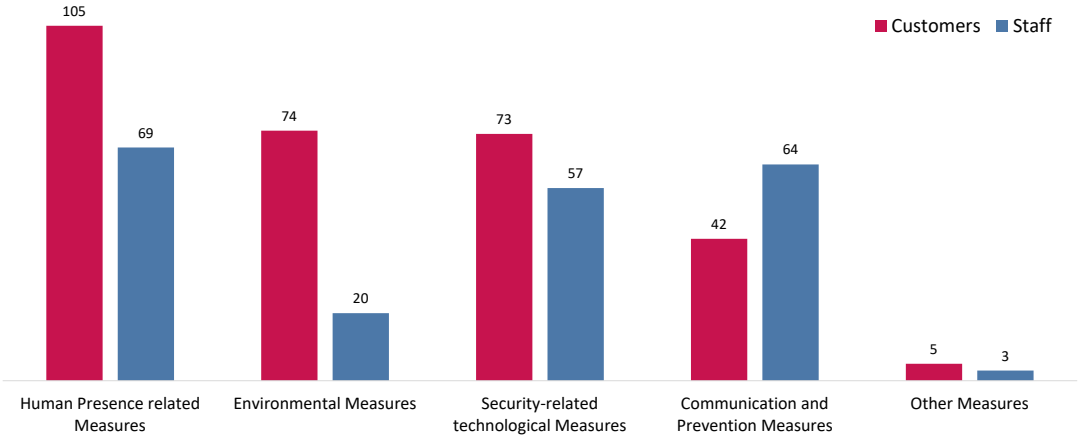


Figure 9 – Category of Security measures deployed in order to increase customer and staff's subjective feeling of security

The comparative analysis shown in *Figure 9* highlights both convergences and divergences in how railway organisations address the feeling of security for customers and staff.

Across both groups, human presence and security-related technological measures receive strong emphasis, confirming their central role in reassurance and operational control. However, environmental measures are predominantly targeted at customers, while playing a more limited role in staff-focused strategies. At the same time, communication and prevention measures remain comparatively under-represented for both customers and staff, despite their recognised potential to enhance the impact of other measures.

Overall, the comparison shows that while many security measures are shared, their purpose and relative importance differ according to user group. These findings underline the need for differentiated but coordinated approaches, combining visible reassurance for customers with preparedness, support, and organisational reliability for staff.

3.4. Quantification and Evaluation

Beyond identifying drivers of perceived insecurity and the measures implemented in response, the survey also examined how railway organisations assess and monitor the feeling of security for both customers and staff.

Customers

As shown in *Figures 10* and *11*, a majority of responding organisations report having some form of procedure in place to assess customers' feeling of security. These procedures most commonly rely on customer satisfaction surveys and perception questionnaires, frequently embedded within broader service-quality or customer-experience frameworks.

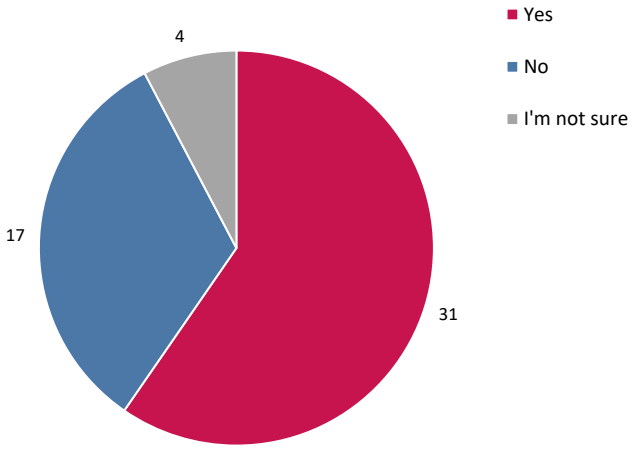


Figure 10 – Procedure in place to assess customers' feeling of security

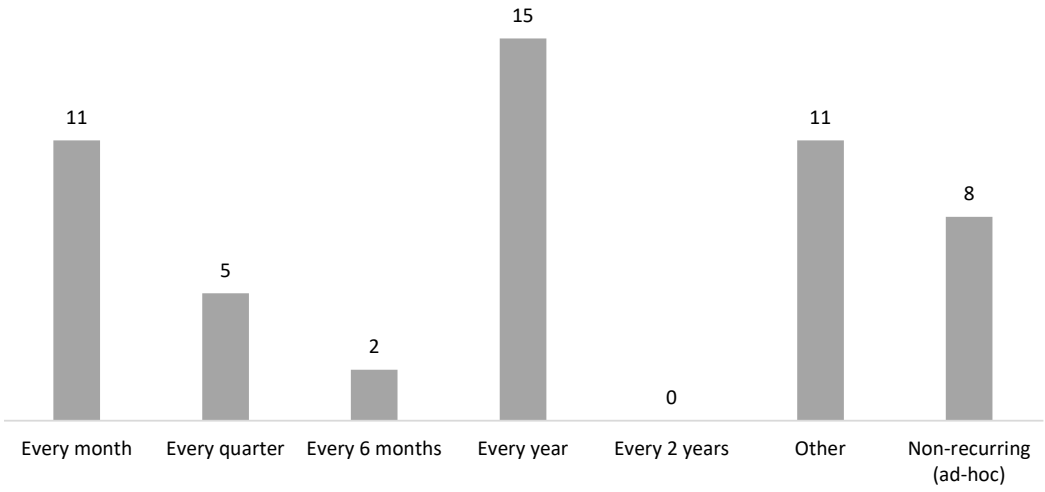


Figure 11 – Frequency of procedure in place to assess customers' feeling of security

While this integration reflects a certain maturity of practice, it also results in heterogeneity in how security-specific perceptions are isolated, analysed, and used. Survey results highlight substantial variation in both the frequency and structure of assessments. Survey results show that most organisations conduct the assessment of customers' feeling of security on a regular basis (monthly, quarterly, or annually), while a smaller number rely on ad hoc evaluations, typically triggered by incidents, local concerns, or specific studies.

Qualitative responses indicate that surveys are often complemented by interviews, observations, and structured feedback, particularly in sensitive locations or during specific time periods. In some cases, the feeling of security is aligned with EN 13816 service-quality standards; in others, it is supported by digital monitoring and analytical platforms enabling more continuous tracking. Several organisations report attempts to correlate perception indicators with incident data, with the aim of identifying gaps between perceived and actual security conditions.

Taken together, these findings indicate that although customers' feeling of security is widely recognised and frequently measured, current approaches remain diverse, limiting comparability and systematic evaluation across networks.

Staff

The evaluation of staff's feeling of security appears less structured, as illustrated in *Figures 11* and *12*. Fewer organisations report the existence of a formal, dedicated assessment procedure for staff perceptions. Where measurement exists, it is often embedded within broader frameworks related to occupational health, psychosocial risk, or employee engagement, rather than treated as a specific security indicator.

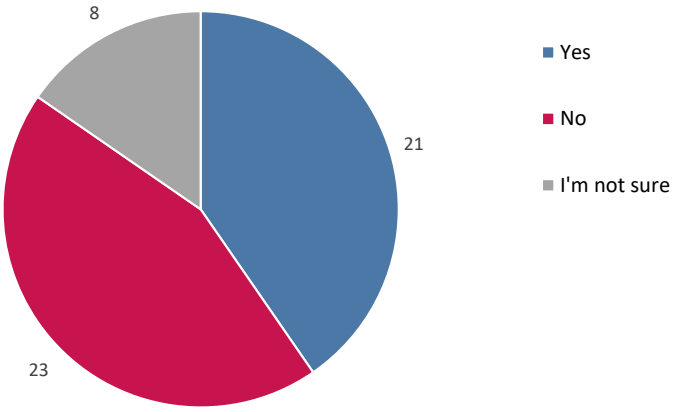


Figure 12 – Procedure in place to assess staffs' feeling of security

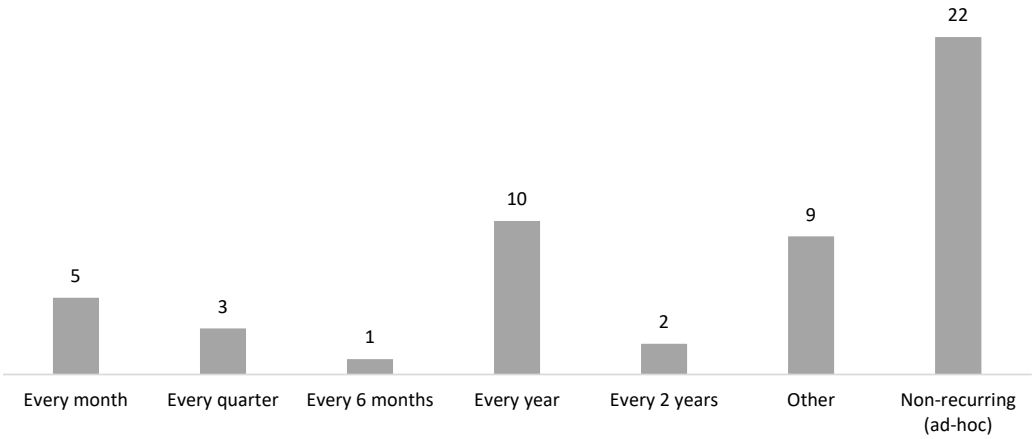


Figure 13 – Frequency of procedure in place to assess staff's feeling of security

Both quantitative and qualitative results indicate that the assessment of staff perceptions is often limited and not systematically structured. Where it exists, it is frequently carried out indirectly or on an irregular basis, for example through incident statistics, reporting systems, or post-incident feedback. A key limitation of such approaches is that staff exposure to insecurity is often cumulative and latent, meaning that incident-based indicators may underestimate emerging concerns and gradual deteriorations in perceived security.

Qualitative inputs further show that, when staff perception is explicitly assessed, it typically relies on internal questionnaires, direct communication channels, whistleblowing systems, or digital dashboards. These inputs are often reviewed through committee-based processes (e.g. health and safety or psychosocial risk committees), combining perception data with incident information. However, the frequency of such evaluations remains predominantly ad hoc, and a significant number of organisations report no formal or regular measurement of staff's feeling of security.

Cross-Cutting Observations

Across both customers and staff, it can be noted that respondents are taking recurrent efforts to correlate perception indicators with incident statistics. This appears to reflect a shared understanding that the gap between perceived and actual security should be actively managed, measured and minimised.

Overall, the findings suggest that both the quantification and evaluation of the feeling of security are widely seen as essential. However, current practices remain diverse across organisations. For those organisations who wish to collect such data in a harmonised way, the HFWG has developed a shared assessment framework, proposed in the annex.

Figure 14 – Frequency of procedure in place to assess customer and staff's feeling of security

4

Challenges and Pathways to Success

The combined survey results, qualitative inputs and literature review confirm that the feeling of security in railway environments is shaped by the interaction of multiple dimensions, including the deployment of security measures, how these measures are perceived, how spaces are designed and managed, how staff and customers experience daily situations, and how organisations monitor and adapt their actions.

The work carried out within the Human Factors Working Group over the past two years shows a high level of engagement and activity across the sector in order to increase the feeling of security of both customers and staff, with many respondents implementing established good practices. Yet the impact such measures have on the actual feeling of security appears to be less well known and the sector faces several challenges:

- Limited visibility and intelligibility of security measures for customers;
- Imbalance between customer-centred design and staff exposure to insecurity;
- Persistent gap between objective security conditions and subjective perceptions, as highlighted in the literature and expert discussions;
- Staff's feeling of security appears to be less well studied; and
- Diversity of evaluation methods across organisations, which may limit comparability and share learning in some contexts.

The first challenge concerns the **visibility and intelligibility of security measures for customers**. Measures contribute to reassurance mainly when they are clearly perceived and understood. While human presence, environmental improvements, and technological protection have been largely deployed in many networks, fewer organisations report that they are communicating about these actions. As a result, security efforts are not always translated into reassurance in everyday experience. Therefore, it is recommended to treat communication as an integral part of ensuring the feeling of security (Abenoza et al., 2018).

A second challenge relates to the **imbalance between customer-centred design and staff exposure to insecurity**. While stations and trains increasingly integrate design features intended to reassure passengers, staff feeling of security is often addressed primarily through procedures, training, and equipment. Feedback from the HFWG shows that staff insecurity is strongly influenced by factors such as isolation, limited visibility, lack of protected spaces, and organisational arrangements during high-risk operations. Therefore, it is recommended to also consider security-by-design measures which may increase the feeling of security of staff.

A third challenge is the **gap between objective security conditions and subjective perceptions**, particularly for customers. Beyond the survey results, discussions within the Human Factors Working Group and the literature review highlight this as a recurring issue. Low levels of incidents do not automatically translate into high perceived security. Perceptions are shaped by context, interactions, and past experiences, and may diverge significantly from statistical indicators. Managing this gap may require recognising it as a normal feature of security governance and using it as an analytical input, rather than addressing it solely through technical measures with additional roles potentially played by communication and user engagement approaches.

Another challenge concerns to more **limited and less structured approaches used to assess staff's feeling of security**. Compared to customers, formal and regular mechanisms remain less developed, which may limit the identification and analysis of staff perceptions. Strengthening these approaches could support a more comprehensive understanding of security conditions.

Across both customers and staff, a final cross-cutting challenge concerns **diversity of evaluation methods**. Organisations use a wide variety of tools, indicators, and evaluation frequencies, which limits comparability and shared learning across the sector. While local adaptation is necessary, the absence of common reference points constrains benchmarking and collective progress.

Conclusion

This publication reflects the shared understanding developed within the Human Factors Working Group that improving the feeling of security in railway environments is a continuous and adaptive process, rather than a one-off initiative. The work brings together insights from an extensive review of academic and operational literature, expert exchanges from within the UIC, and empirical evidence collected through a survey with the railway and public transport sector, offering a consolidated perspective on how security is experienced by customers and staff in everyday situations.

The survey should therefore be understood as a structuring milestone within a broader process of collective learning and adjustment. Combined with the literature review and qualitative expert input, it provides a common basis for understanding current practices, identifying gaps, and supporting informed decision-making across organisations, while recognising the need for adaptation to local contexts.

To support this process, the document is complemented by a harmonised assessment checklist, presented in the annex. This practical tool translates the main insights of the guideline into a structured self-assessment framework, enabling organisations to review their practices, identify gaps between objective conditions and perceived security, and monitor progress over time. It is designed for flexible use, including self-assessment, internal audits, workshops, and benchmarking and exchange within the UIC Security Platform.

Beyond the scope of this guideline, several topics identified through the literature review, the survey, and expert discussions warrant further exploration. In particular, the design and organisation of stations and trains, especially visibility, circulation, and spatial coherence, remain central to perceived security for both customers and staff. In addition, the visual presence of staff, including uniforms, equipment, and overall appearance, continues to play an important role in authority, approachability, and reassurance.

Overall, this work reinforces the value of placing human experience at the centre of railway security governance and can be seen as a jumping off point for continued collaboration across the sector.

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Annex: Harmonised assessment checklist for companies

How to use this checklist

This checklist is based on the main feeling of security drivers identified in the literature and in related studies. While it is not meant to be exhaustive, the checklist summarises good practices and type of measures which can be implemented to increase the feeling of security.

It can be used as a comprehensive guide of elements to be assessed, thus providing a first step towards a harmonised approach. In order to help the user in the assessment and decision-making process, the factors included in the checklist are grouped from a practical perspective (focus on customers, staff, both or organisation level).

The checklist can be used:

- for self-assessment,
- during internal audits or workshops,
- to identify gaps between objective security and perceived security,
- and to support benchmarking and exchange within the UIC community.

For each item, the users can indicate the current situation in their organisation using simple scales assessing the implementation level, such as:

☐ In place ☐ Not in place

or

☐ Not in place ☐ Partially in place ☐ Fully in place

CUSTOMERS

A. Human Presence and Reassurance

☐ Customers can easily identify whom to contact in case of concern.
☐ Human presence is organised to prioritise approachability and assistance, not only deterrence.
☐ Frontline staff is visible and predictable in stations and trains.
☐ Security patrols are dispatched also with the goal of maximising visibility.

B. Public Communication and Information

☐ Customers are informed about existing security measures in a clear and understandable way.
☐ Information on reporting mechanisms (e.g. help points, apps, emergency numbers) is visible and accessible.
☐ Communication about security is proactive, not limited to responding to incidents or crises.
☐ Crisis communication is inclusive and follows best communication practices (avoids anxiety, reinforces trust, is actionable, etc.).

STAFF

C. Human Presence and Support

☐ Staff feel that reliable and trusted backup is available.
☐ Measures are in place to avoid staff isolation during high-risk operations or time periods.
☐ Staff have access to appropriate equipment and support tools (e.g., communication devices, panic tools).
☐ Post-incident support and follow-up are structured and visible to staff.

D. Staff Training and Preparedness

☐ Staff receive regular training in conflict management and de-escalation.
☐ Training includes scenario-based or simulation exercises.
☐ Training content reflects real situations encountered by staff.
☐ Staff feel confident in their ability to manage difficult or stressful situations.

E. Organisational Recognition of Staff Exposure

☐ Staff's feeling of security is recognised as a strategic workforce issue.
☐ Staff perception is assessed independently from incident statistics.
☐ Assessment of staff's perceptions is regular and recurring, not only incident-driven.
☐ Results are discussed with staff or staff representatives.

CUSTOMERS & STAFF

F. Alignment Between Objective Security and Perceived Security

☐ Regular comparisons between objective incident data with perception-based indicators (surveys, feedback, complaints).
☐ Locations or time periods with low incident rates but high perceived insecurity are explicitly identified.
☐ Discrepancies between objective security and perceived security are analysed and discussed internally.
☐ These discrepancies are used as inputs for decision-making, not treated as anomalies or errors.

G. Environmental Quality and Design

☐ Lighting, visibility, and sightlines are regularly reviewed from a user-perception perspective.
☐ Degraded, hidden, or poorly legible spaces are identified and prioritised for improvement.
☐ Stations and trains are well maintained to signal care, order, and control.
☐ Design choices take into account both customers and staff (protected spaces, visibility, escape routes, inclusivity, etc.).

STRATEGIC LEVEL

H. Cooperation and Shared Responsibility in a "Security Continuum"

☐ Cooperation frameworks exist with police, municipalities, and relevant public authorities.
☐ Roles and responsibilities are clearly defined in complex or recurring insecurity situations.
☐ Joint diagnostics or audits are carried out for sensitive locations.
☐ Security challenges linked to broader social or urban issues are addressed collaboratively.

I. Evaluation, Monitoring, and Follow-Up

☐ The feeling of security is monitored over time using consistent indicators.
☐ Changes in perception are tracked after implementing new measures.
☐ Evaluation results are used to adjust measures, training, or communication.
☐ Lessons learned are documented and shared internally.

J. Overall Maturity and Continuous Improvement

☐ The feeling of security is integrated into security strategies and action plans.
☐ Responsibility for perceived security is clearly assigned within the organisation.
☐ The organisation participates in knowledge exchange or benchmarking on perceived security with external organisations (e.g. strategic partners, similar stakeholders from other countries).
☐ Continuous improvement of perceived security is explicitly recognised as an ongoing process.

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