

From Communication to Comprehension: Reframing Airport Information as a Determinant of Passenger Communication Wellness

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ABSTRACT

Airport information is commonly assessed through availability, accuracy and speed. However, a message may reach passengers without being understood, particularly during disruption or when there is an occurrence of channels conflict. This concept paper proposed an Airport Communication-to-Comprehension Framework that incorporates professional communication, airport operations, accessibility research and Malaysian legal communication principles. The framework employs problem-driven integrative synthesis uses sections 2(a), 2(b), 3 and 4(1) of the Contracts Act 1950 as a conceptual lens, without treating every airport message as contractual. In establishing the conceptual foundation, the synthesis incorporates professional communication, uncertainty management, plain-language standards, airport wayfinding and service research as well as Malaysian legal communication. These sources were utilized for their relevance to the framework rather than to provide an exhaustive systematic review. The six stages are treated as sequentially connected and conditional mechanisms rather than independent dimensions. The framework distinguishes between information provision, transmission, accessibility, reception, comprehension, and actionability. It proposes that these stages shape passenger communication wellness through clarity, reduced uncertainty, confidence, lower cognitive burden and a sense of control. This study contributes by locating a critical gap between legal or technical reception and usable understanding and offers four propositions for empirical testing and practical guidance for coordinated, inclusive and passenger-centred airport communication.

Keywords: airport communication; passenger comprehension; communication wellness; professional communication; Contracts Act 1950

INTRODUCTION

Airports rely on communication across the passenger journey. Flight information display system (FIDS), mobile notifications, public announcements, signage and staff encounter; provide passengers where to go, what to prepare and how to respond when there are changes in operation. These systems are normally rated on the availability, accuracy and timeliness of information. These steps are necessary, but it is not an indication that a

passenger understood the message or are able to react accordingly. An instruction can be technically correct, but nonetheless can remain unclear, inaccessible, or dissociated from a feasible next step.

The challenge has been increased as aviation is now incorporating with digital technologies. During and after the pandemic, technology has been a significant element of aviation recovery measures, increasing reliance on digitally mediated operations and stakeholder collaboration (Nordin, 2023). Recent study on airports also relates digitalization with operational efficiency, information access and service quality, while pointing out the continuous requirement for reliable technology and human assistance (Garoes and Moyo., 2026)

Consequently, technology widens the communication environment; it does not eliminate the need to study how meaning is received and acted upon. Evidence from Kuala Lumpur International Airport further raises concerns against assuming that all visible innovations add value for passengers. Staff service, queue efficiency and future development activities were found to be significant predictors of satisfaction, while signage and digital innovation were not significant in the model (Mukhtar et al., 2026). This does not indicate that signage or electronic devices are insignificant. Relatively satisfaction models, may not indicate whether information carried by those instruments was available, clear and actionable during moment of need.

Disruption makes this gap more visible. Passengers may receive several communications on a delay, gate change, rebooking, baggage or entitlements and still may remain uncertain what is related to them. Research by UK Civil Aviation Authority indicated that, information gaps led to concern and some passengers who assumed they understood their rights could not differentiate crucial terms or remedies. Similarly, Osman et al. (2026) demonstrated that expectations, fairness and visible reaction activities are the basis for evaluating disruption responses in an airport rail context. Therefore, quality of communication is not merely on announcing a situation, however it is intended to assist a passenger understand its consequences.

The problem theoretically is fragmentation. In airport quality system, information quality or technology are typically closely associated with satisfaction, confidence or behaviour. Professional communication studies investigate messages, channels and organizational impediments. Accessibility studies examine how language, disability and sensory impairments impact access. Contract law describes when communication reaches a legally recognized level. These strands rarely explain the entire process from provision to meaningful understanding.

Therefore, this study further discussed: How can legal communication principles, professional communication and airport operations study be integrated to explain the movement from information provision to passenger comprehension and communication wellness? Its objectives are to provide a structured conceptual framework differentiating provision, transmission, access, reception, understanding and actionability. This study also further contributes to highlight the gap between reception and comprehension; by defining passenger communication wellness as a communication-specific outcome rather than a substitute for general satisfaction.

LITERATURE REVIEW

Professional Communication Beyond Message Transmission

A linear account of communication normally identifies a sender, message, channel and receiver. It helps locate a broken channel, but it can treat reception as the endpoint of communication and underestimate interpretation. Getchell et al., (2023) argued that transmission models can obscure the constitutive and social nature of organisational communication. Bhatia, (2017) similarly showed that professional discourse is shaped by institutional purpose, genre and practice. At an airport, the meaning of a message depends not only on its wording but also on its source, location, timing, relationship to other channels and fit with the passenger's task.

Hafeezd et al, (2026) highlighted that linguistic, physical, personal, and hierarchical barriers cause misaligned interpretations and reduced efficiency in the workplace. "Public information channels are weakened by

inaccessible formats, inequitable access, and inconsistent messaging” (Prado and Larena, 2026). While their contexts differ from airports, the two studies demonstrate that entering information into a channel is not the same as generating shared meaning. Airport communication is especially vulnerable to this, as multiple organizations may release conflicting instructions within short time limits.

Airport Information, Wayfinding and Service Value

Airport information study has provided useful findings on technology, service quality and wayfinding. Smart information services can enhance convenience and sustainability when they are consistent with passenger interests (Choi et al., 2024). Targeted information may also make the airport experience more tolerable by decreasing unnecessary searching and uncertainty (Kontogiannis, 2024). Furthermore, an airport experience is built via functional, service and emotional encounters rather than one isolated touchpoint (Wattanacharoensil et al., 2017). These results are consistent with a view of communication as a journey.

However, message visibility is not interpretation. According to Wang et al, (2025), transport symbols work via the interaction between signifier and signified. Their cross-lingual efficiency is based on the ability of users to infer the meaning. The visual guidance provided by airports also influences wayfinding, possibly due to cognitive processes rather than exposure alone (Wang & Wang, 2025). The usual assumption is that the validity of information design is to be determined at the point at which passengers interpret a sign or instruction, not simply during an operator makes it available.

Plain-language research helps in addressing the differences. Ariffin et al. (2024) demonstrated how word density and low readability can obstruct understanding in Malaysian insurance documents. Ahmad Kamil (2025) argued that clarity, comprehensibility, timing, sequence and empathy are important when professionals disclose high-stakes information. The plain-language standards for general and legal communication similarly place audience needs, findability, understandability and usability at the centre of message design (International Standard Organization, 2023, 2025). The shared lesson is that formal availability or accuracy is insufficient when a reader cannot form a usable and meaningful understanding.

Passenger Communication Wellness

Passenger wellbeing has been considered through airport design, experience and stress (Abdel-Gayed et al., 2023), but communication warrants a narrower construct. Communication can reduce uncertainty by helping people interpret a situation and select a response (Brashers, 2001). It can also create burden. In a workplace, Md Zani et al (2026) connect hyperconnectivity with information overload, digital fatigue and mental strain. The passenger context is different, but the mechanism is significant: more alerts do not certainly create more understanding, especially when messages repeat, conflict or require rapid switching may occur between channels.

Passenger communication wellness is defined as the passenger’s capacity to understand relevant airport information, recognise its consequences and identify a feasible next step with manageable ambiguity and cognitive effort. It has five indicators: clarity, reduced uncertainty, confidence, lower cognitive burden and a sense of control. The structure is neither a proven diagnosis nor a claim that communication can remove disappointment with a delay. It concerns whether communication avoids adding preventable confusion and preserves enough agency for the passenger to continue the journey or seek for assistance.

Conceptually, passenger communication wellness is deliberately narrower than general wellbeing. It does not indicate to a passenger’s overall life or travel wellbeing, employee experience, occupational health, psychological safety, or satisfaction with the service outcome. A passenger may remain dissatisfaction with a delay or cancellation while still experiencing communication that is clear, comprehensible and actionable. In this framework, wellbeing is therefore treated as a broader possible outcome, whereas passenger

communication wellness refers specifically to the quality of the passenger's communicative condition during the airport journey (Abdel-Gayed et al., 2023; Brashers, 2001).

Conceptual Development Approach

The framework was developed through a problem-driven integrative synthesis. This approach is appropriate to connect previously separate bodies of knowledge and explain a mechanism rather than estimate an effect (Jaakkola, 2020; Snyder, 2019). The synthesis continued in four steps. First, the practical problem was bounded as the gap between delivery and usable understanding in passenger-facing airport information. Second, concepts were drawn from professional communication, airport operations, accessibility, uncertainty management and Malaysian legal communication. Third, intersecting concepts were ordered according to when the passenger's encounter with a message. Fourth, the proposed relationships were checked against disruption, wayfinding and assistance examples to identify boundary conditions.

The literature was selected for conceptual relevance rather than treated as a systematic review with exhaustive database coverage. Recent studies were included to connect the framework on airport digitalisation, service quality, public information, communication barriers, language, accessibility and wellbeing. Seminal and cross-disciplinary sources were retained where they supplied concepts that are not available in these studies. The resulting framework is therefore an analytical proposal for later validation, not simply an empirical finding.

For transparency, the integrative review was structured based on six linked questions: what information is provided, how it is transmitted, whether it is accessible, whether it reaches awareness, whether it is understood, and whether it supports a feasible of next action. The search is merely focused on combinations of airport communication, passenger information, wayfinding, professional communication, communication barriers, plain language, accessibility, uncertainty, digital airport services, disruption communication and legal communication. Recent peer-reviewed studies in addition to authoritative standards or regulatory materials were prioritised, while seminal sources were retained when there is a need to define a concept. Sources were included when they informed at least one framework stage or the communication-wellness outcome whereas sources that are dealing only with technical performance without a passenger-facing communication implication were excluded for the framework construction. Synthesis was concept-centred, with recurring constructs were compared, grouped against the six stages and analysing the conceptual overlap before the propositions were formulated. As the purpose of this review is to support theory construction rather than exhaustive evidence aggregation, no claim of systematic-review completeness is made.

DISCUSSION

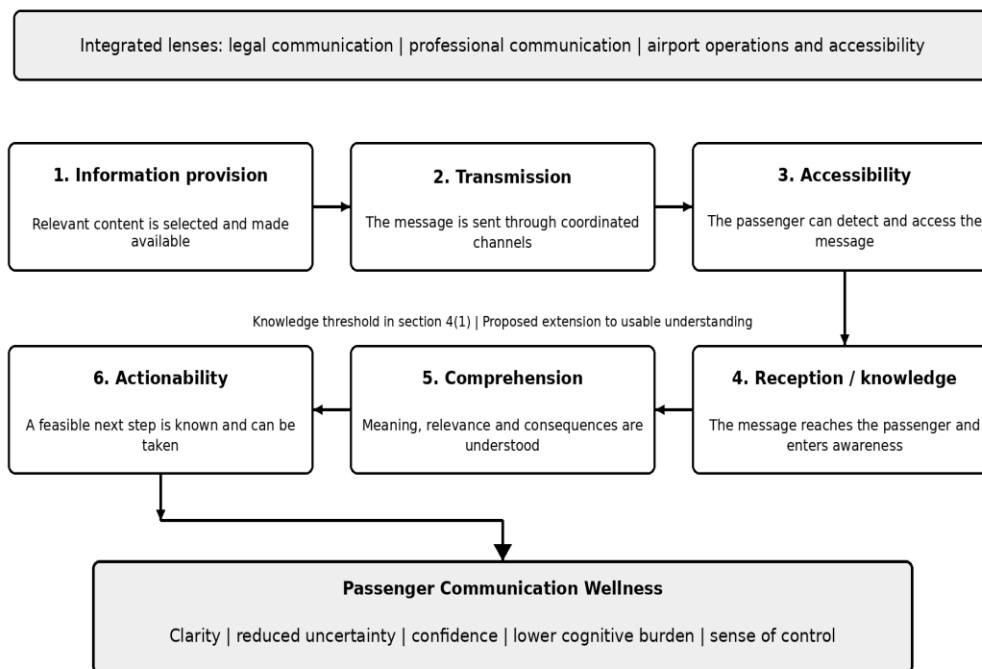
Figure 1 presents six connected stages. Information provision describes the availability and choice of relevant content. Transmission is the movement of the content, by one or more coordinated channels. Accessibility aims whether the targeted passenger can locate and access the message. Reception is the point which passenger receive the message and become aware of the condition. Comprehension is comprehending the message meaning, importance and consequence. Actionability is when the passenger knows what they can do next and either take the necessary action or need to further obtain assistance.

The sequence is not strictly deterministic instead it is sequential in logic and diagnostic in application. Failure at an early stage restricts the following. But the completion of one stage does not guarantee the efficacy of the next. A proper announcement may be missing due to uncontrolled condition such as noise. The notice may be accessible but not understood because it utilizes an unusual term. And a well-known notice may be non-actionable if it does not indicate where to rebook, or if the promised channel is not available. The framework therefore explains why information volume, channel reach and passenger satisfaction should not be used as interchangeable measures.

Accordingly, the six stages are not independent wellness dimensions nor a hierarchy of importance. Each earlier stage creates an enabling condition for the next but is not sufficient to guarantee the success of the stage. A later-stage failure may also require a return to an earlier stage. For instance, when a passenger misunderstands an information, they may get the assistance for clarification from another channel. The stages are therefore sequentially connected, conditional and mutually reinforcing across the passenger journey.

The main theoretical move lies between reception and comprehension. Section 4(1) of the Contracts Act 1950 provides a knowledge threshold for communication of a proposal (Contracts Act 1950 (Act 136), s 4(1)). In passenger operations, knowledge is necessary but insufficient. The passenger must connect the message with the immediate situation, recognise its consequences and identify a workable response. This extension leaves the statutory rule intact while explaining why legally or technically completed communication can still fail operationally and humanly.

Airport Communication-to-Comprehension Framework



Source: **Authors' conceptual development.**

Figure 1. Airport Communication-to-Comprehension Framework

Conceptual Propositions

Proposition 1. Information provision contributes to passenger communication wellness only when the message is transmitted through a channel that the intended passenger can access. The relationship is more fragile during disruption, when time, attention and channel availability are restricted.

Proposition 2. Reception contributes to comprehension when information is clear, consistent across channels and sufficiently contextualised for the passenger's immediate decision. Accuracy alone is unlikely to be sufficient under high cognitive load.

Proposition 3. Comprehension supports actionability when a message states the relevant consequence, available options and next step in language and formats suited to the intended audience.

Proposition 4. Actionable comprehension supports passenger communication wellness by reducing avoidable uncertainty and cognitive burden while strengthening confidence and a sense of control. Contradictory messages and unavailable options weaken this relationship.

Legal Communication Principles Within the Framework

Table 1 maps the selected provisions to the framework. The table deliberately separates the legal idea from its airport implication so that the analogy remains bounded. It does not determine whether a particular message is contractual, whether liability arises or what remedy may be available.

Table 1. Legal communication principles and their conceptual role

Provision	Legal communication idea	Airport communication implication	Framework stage
Section 2(a)	A proposal begins when willingness is signified (communicated) to another person (offeree).	Passenger information needs an identifiable audience and purpose; internal intention is not enough.	Information provision
Section 2(b)	Acceptance requires the person addressed (offeree) to signify (communicate) his assent to offeror.	A message should permit an appropriate response, confirmation or behaviour rather than assume passive compliance.	Actionability / feedback
Section 3	Communication may occur through an act or omission intended to communicate or having that effect (requires a positive conduct to communicate).	Words, signs, displays, alerts and staff conduct may combine as one multimodal message.	Transmission
Section 4(1)	Communication of a proposal is complete when it comes to the addressee's knowledge.	Reception is a necessary threshold; communication wellness requires comprehension and actionability.	Reception / knowledge
Section 13	Consent concerns agreement upon the same thing in the same sense.	Shared meaning highlights the practical importance of unambiguous terms, context and clarification.	Comprehension

Note: The provisions are used as a conceptual lens and do not classify all airport messages as proposals, acceptances or contractual terms.

Table 2. Theoretical foundations and conceptual boundaries of the six framework stages

Framework stage	Definition and boundary	Theoretical / literature foundation	Key constructs and supporting sources
Information provision	Selection and availability of relevant content. It concerns what is made available, not whether the message reaches or is understood by the passenger.	Professional discourse emphasises institutional purpose and audience; plain-language guidance emphasises audience needs and findability.	Relevance and availability of information (Bhatia, 2017; ISO, 2023).
Transmission	Movement of the message through one or more channels. It is distinct from accessibility	Transmission and organisational-communication research	Timeliness and cross-channel consistency (Getchell et al., 2023;

	because a transmitted message may still be unavailable or difficult to a particular passenger to engage with.	with focus on multimodal communication through words, acts, signs and graphic displays.	Contracts Act 1950, s 3).
Accessibility	The passenger can locate, perceive and technically access the message. Accessibility precedes, but it does not guarantee understanding.	Plain-language and accessibility research place audience access, appropriate format and usability before enables comprehension.	Findability, visibility/audibility, language and format access (ISO, 2023, 2025; Prado & Larena, 2026).
Reception / knowledge	The message reaches the passenger's awareness. This is a threshold of receipt and remains conceptually separate from interpretation.	The legal knowledge threshold in Section 4(1) helps to distinguish between receiving the message and interpretation of the meaning.	Awareness or receipt of the message (Contracts Act 1950, s 4(1)).
Comprehension	The passenger understands the meaning, relevance and consequence. of the message It is simply more than being aware of the information and remains distinct from knowing on what action is feasible.	Uncertainty-management, wayfinding and plain-language research emphasise interpretation, understandability and contextual meaning.	Interpretive accuracy and reduced uncertainty (Brashers, 2001; Wang & Wang, 2025; ISO, 2023, 2025).
Actionability	The passenger can identify a feasible of next step, response or route for assistance. It is not equivalent to satisfaction with the service outcome.	Plain-language usability and response-oriented communication; legal communication also recognises communication through response or assent.	Next-step recognition and feasible response (ISO, 2023, 2025; Contracts Act 1950, s 2(b); UK Civil Aviation Authority, 2025).

Note: The table makes the conceptual boundaries explicit. Passenger communication wellness remains the outcome of the sixth-stage mechanism rather than a seventh stage. The theoretical foundations shown are complementary lenses, not to claim that any single theory fully explains any one stage.

Application Across the Passenger Journey

An email or application should explain not just that a rule has changed, but also what the passenger needs to prepare and where clarification is available before arrival. Upon arriving at the terminal there must be a sign connecting the passenger's current location to a recognizable route. Check-in, security and immigration instructions shall be possible in sequence in the available area and time. Thus, communication design should be guided by the passenger's task, not by the internal structure of the organization.

Disruption is the greatest challenge as airports, airlines, ground handlers, border authorities and ground transport operators may be in control of different parts of the communication. The passenger will get many updates but will not know which is the latest one, or what to do. According to Civil Aviation Authority, (2025) and Kıyıklık et al., (2022) confidence is shaped by regular updates, clear reasoning, fairness, aligned channels, and visible reaction alternatives. In framework terms, these practices protect the transition from reception to understanding and actionability.

Inclusive communication also requires more than translating a standard notification. Airports need to evaluate whether passengers can see or hear it, understand its terms, navigate the digital channel and reach a human

alternative. The accessibility studies reviewed in this paper showed that needs vary across individuals and situations. A multi-channel system needs to communicate similar operational meaning and not only restate words.

Theoretical and Practical Contribution

The framework highlights three theoretical contributions. First, it changes communication from a single input into a staged mechanism, which allow more specific failure location. Second, it separates passenger communication wellness from satisfaction. A passenger may remain dissatisfied with a cancellation, however still experiencing clear, confidence-supporting communication. Third, it connects a legal knowledge threshold with the professional-communication requirement for usable understanding without conflating separate goals.

The proposed framework is also distinct from associated models. Unlike linear transmission models, it does not treat message receipt as the endpoint. Unlike service-quality or satisfaction models, it does not use an overall service evaluation as evidence that communication was successful. It is also not intended to replace aviation safety communication or human-factors frameworks, which address broader operational-risk and coordination concerns, nor organisational wellbeing, psychological-safety, employee-experience or occupational-health approaches, which concern broader human or workplace conditions. Its narrower contribution is diagnostic: locating where passenger-facing communication fails between provision and usable action and linking that process to a communication-specific wellness outcome (Getchell et al., 2023; Abdel-Gayed et al., 2023).

The framework also expands the authors' context of aviation technology context. Nordin, (2023) mentioned that technology as a crucial resource for aviation recovery and coordination. This argument identifies the communicative conditions through which a technological resource can create passenger-level value. This expansion consistently agrees with (Sharon Rose Garoes., 2026) concludes that digitalisation becomes significant through reliable operations, responsive service and human-supported systems.

For practice, an airport communication audit can test each stage separately: Is the necessary information provided? Do the channels carry the same current message? Can different passengers access it? Does it reach awareness? Is its meaning understood? Is the stated action feasible? These questions are more diagnostic than a general satisfaction item and can be applied to signs, announcements, mobile alerts, self-service systems and staff scripts. Governance should also assign message ownership, update intervals, cross-channel checks and escalation routes across organisations.

RESEARCH AGENDA AND LIMITATIONS

Initial studies should refine the stages through interviews, journey mapping and scenario workshops with passengers, airport personnel, airline representatives, accessibility advocates and legal practitioners. Scenario-based studies could assess to gates changes, security instructions, and cancellation notifications. Experimental study could evaluate plain versus technical language, single versus coordinated channels, text-only versus text-plus-graphic forms, or communications with and without a doable next step. The measures should identify the five wellness indicators and evaluate whether understanding and actionability moderate the association between information quality and communication wellbeing.

For empirical operationalisation, the six stages can initially be represented by observable indicators. Provision can be referred to availability and relevance of required information, transmission is merely focuses on timeliness and cross-channel consistency, accessibility emphasizes more on findability, perceivability and language or format access, reception refers to awareness of the message, comprehension highlights on correct interpretation of meaning and consequence, and actionability is more concerned with ability to identify and undertake a feasible next step. Passenger communication wellness can then be assessed separately through the five proposed indicators of clarity, reduced uncertainty, confidence, lower cognitive burden and sense of

control. These indicators are provisional and should be refined through qualitative validation before scale development or hypothesis testing.

This paper has four key limitations. The framework has not been empirically tested. Its literature basis is integrative, not comprehensive. The Contracts Act 1950 is for theory construction, not for deciding legal liability. Comparative legal application needs to be analysed separately. Finally, there is uncertainty of understanding, as it also depends on language, past knowledge, stress and circumstances. The operational objective is to remove avoidable hurdles and offer acceptable paths for clarification, not to place all the responsibility on the sender or the passenger.

CONCLUSION

This paper reconceptualizes airport information as an indicator of passenger communication wellness. The response to the research question is a six-step process: information provision, transmission, accessibility, reception, comprehension and actionability. The process concludes with clarity, less ambiguity, confidence, a lesser cognitive load and a feeling of control.

The key distinction is between receipt and comprehension. Section 4(1) of the Contracts Act 1950 provides a helpful threshold wherein communication of a proposition is complete when it is known to the person to whom it is made (Contracts Act 1950 (Act 136), s 4(1)). One more practical test for passenger operations is that the passenger must understand the meaning, relate it to the circumstance and recognize a plausible next action. A message that merely receive by the passenger may fulfil a technical or formal need but may still disappoint the passenger overall condition.

The transition from communication to comprehension changes the emphasis from the number of messages to the quality of understanding; may be applied. It also considers professional communication as part of the airport's passenger-care function and not merely as a supporting output. The framework offers a focused foundation for empirical testing, inclusive communication design and coordinated disruption control in the professional and workplace settings.

Ethical Approval

Not applicable. This conceptual paper did not involve human participants, animals or primary data collection.

Conflict of Interest

The authors declare no conflict of interest.

Data Availability

No new dataset was generated or analysed for this conceptual paper.

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