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**Vincent ZOMA**

Department of Geography,  
Université Joseph KI-ZERBO,  
Burkina Faso

## Analysis of logistics information flows in the supply chain of Africa Global Logistics Burkina Faso (AGL BF)

**Vincent ZOMA**

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### Abstract

The study analyses the management of logistics information flows in the context of the mining supply chain in Burkina Faso, focusing on the case of Africa Global Logistics Burkina Faso (AGL BF), a company specialising in mining transit and international logistics. The aim is to examine how the integration of information systems impacts the efficiency of operations and reduces logistics costs. Data was collected through a mixed-methods survey, including a quantitative study, semi-structured interviews with AGL BF staff and documentary research. The results show good integration of tools such as Outlook and Teams, although gaps are identified with the use of LINK software. The study also highlights the importance of daily meetings and file tracking to ensure smooth coordination. Thus, improving the adaptation of digital tools to user needs could strengthen the competitiveness of Burkina Faso's mining companies by optimising information flows.

**Keywords:** Supply chain, information flow, logistics, AGL BF, Burkina Faso

### Introductions

The increasing globalisation of economies has transformed the dynamics of trade, making supply chain management more complex and more crucial than ever for companies. Indeed, companies, whether multinational or local, have to deal with heightened competition, not only in terms of production, but also in the logistical management of their operations (Lambert & Enz, 2017) <sup>[7]</sup>. In this context, the efficiency of supply chains relies primarily on the effective management of information flows, enabling the optimal coordination of goods flows and the reduction of logistics costs.

On the global scene, the development of information and communication technologies (ICT) has enabled a rapid transformation of logistics management, facilitating closer synchronisation of activities across globalised supply chains (Christopher, 2016) <sup>[4]</sup>. In particular, extractive industries such as mining, which rely heavily on the transport of raw materials through international logistics corridors, require rigorous management of information flows to avoid costly production interruptions and meet contractual deadlines (Ivanov 2022) <sup>[6]</sup>.

In Africa, logistics play a key role in the economic development of countries, particularly for nations whose economies depend on natural resources, as is the case in Burkina Faso. Challenges relating to infrastructure, inefficient customs systems and a lack of coordination between the various logistics players are major obstacles to the performance of supply chains (Signé & Johnson, 2021) <sup>[10]</sup>. Optimising information flows in this context would help to reduce these inefficiencies and improve the competitiveness of African companies on the global market.

Burkina Faso, a landlocked country in West Africa, is notable for its booming mining sector, which accounts for a significant proportion of its exports and tax revenues. Mining relies mainly on specialised logistics operators such as Africa Global Logistics Burkina Faso (AGL BF), formerly Bolloré Transport & Logistics Burkina Faso (BTL B-F). AGL BF offers integrated transport, customs and warehousing solutions, contributing to the efficiency of mining supply chains (AGL, 2023) <sup>[1]</sup>. However, the management of information flows in this sector presents specific challenges due to the complexity of cross-border operations and regulatory requirements. Poorly managed information flows could lead to delays, disruptions to the flow of goods and additional costs, negatively impacting the competitiveness of the country's mining companies. The aim of this study is therefore to analyse the management of logistical information flows in the mining transit supply chain in

**Corresponding Author:**

**Vincent ZOMA**

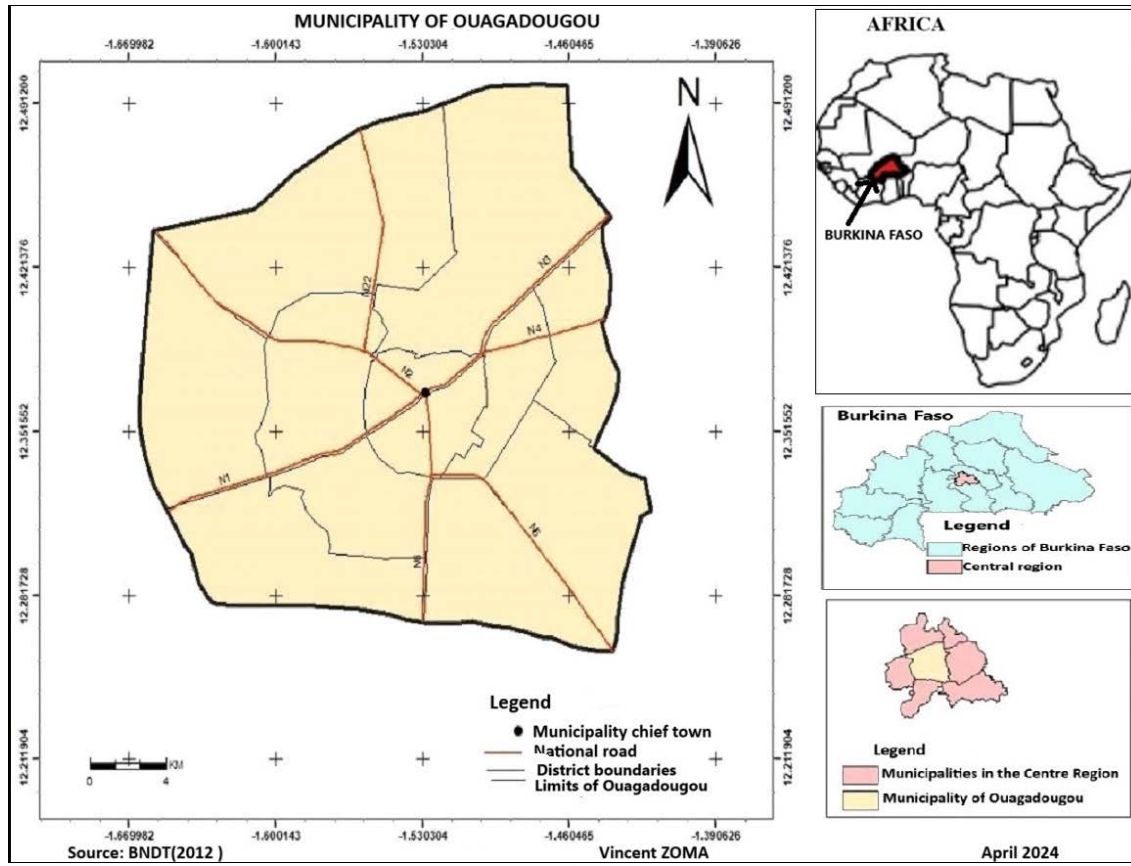
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Université Joseph KI-ZERBO,  
Burkina Faso

Burkina Faso, using AGL BF's maritime transport as a case study.

**Research methodology**

This research was carried out in July 2023 in Ouagadougou,

the capital of Burkina Faso, at Africa Global Logistics Burkina Faso (AGL BF), formerly Bolloré Transport & Logistics Burkina Faso, which specialises in mining transit and international logistics management (Figure 1).



**Fig 1:** Location of the municipality of Ouagadougou

The methodology adopted was based on a mixed survey, combining a quantitative and qualitative approach with documentary research.

For the quantitative part, a non-probabilistic purposive sample was drawn up, comprising 20 individuals working directly in AGL BF's logistics departments. Selection criteria included active involvement in the supply chain, management of information flows and collaboration with various internal and external supply chain actors.

In addition, semi-directive qualitative interviews were carried out with 08 people occupying various positions within the supply chain. The aim of these interviews was to gain a deeper understanding of the logistics information exchange processes, their impact on operations and to identify the main challenges faced by the various players.

Field data was collected in two main ways. Firstly, a structured questionnaire was designed to gather information on the management of information flows, the tools used and the challenges encountered. This questionnaire was administered to the 20 individuals selected. Secondly, interview guides were sent to 08 managers and employees in various positions, including transit managers, logistics coordinators and operations managers. These discussions provided in-depth perspectives on internal processes for

managing information flows.

Complementing the field data collection, a literature review was conducted to contextualise the findings. This documentary research provided a better understanding of the global issues involved in managing logistics information flows in a competitive environment subject to international regulatory constraints.

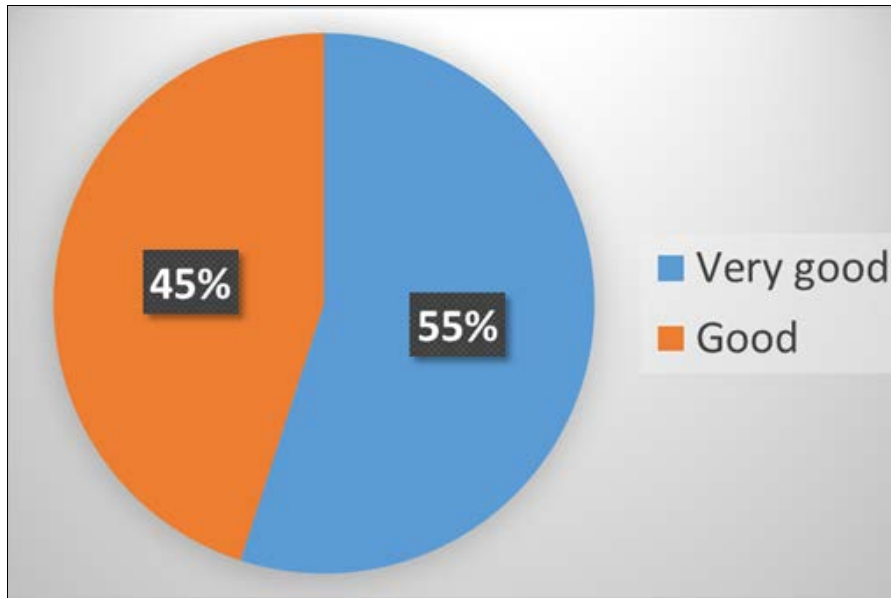
The quantitative data collected was processed using statistical analysis software to identify trends in information flow management at AGL BF. The interviews were transcribed and then analysed using a thematic approach to extract the main issues and solutions relating to information flow management in the supply chain.

This mixed methodology provides a broad view of information flow management within AGL BF's supply chain, while taking into account local operational realities.

**Results and Discussion**

**Level of integration of Outlook into the work process**

The use of Outlook, a key tool for managing e-mail exchanges and data via EDI, is highly appreciated among staff. According to Figure 2, 55% of users rate it as 'very good', while 45% rate it as 'good'.



Source: fieldwork (July, 2023)

**Fig 2:** Level of integration of Outlook into the work process

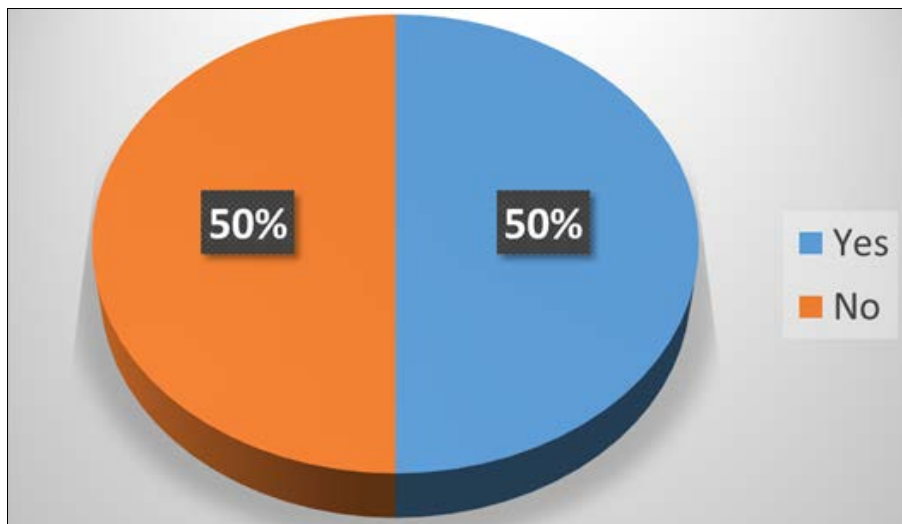
The above result shows that Outlook is a preferred platform for internal communication within AGL BF, and this is also confirmed by the results of interviews with staff.

This effective integration of Outlook contributes to the fluidity of information exchanges. According to Plane & Acri (2018) <sup>[9]</sup>, mastering electronic communication systems in supply chains is essential for reducing response times and

optimising information flows. Continuous improvement in the use of Outlook could enhance the efficiency of logistics operations at AGL BF.

**Use of LINK in the work process**

The LINK software package, used by 50% of staff (Figure 3), does not appear to be fully meeting expectations.



Source: fieldwork (July, 2023)

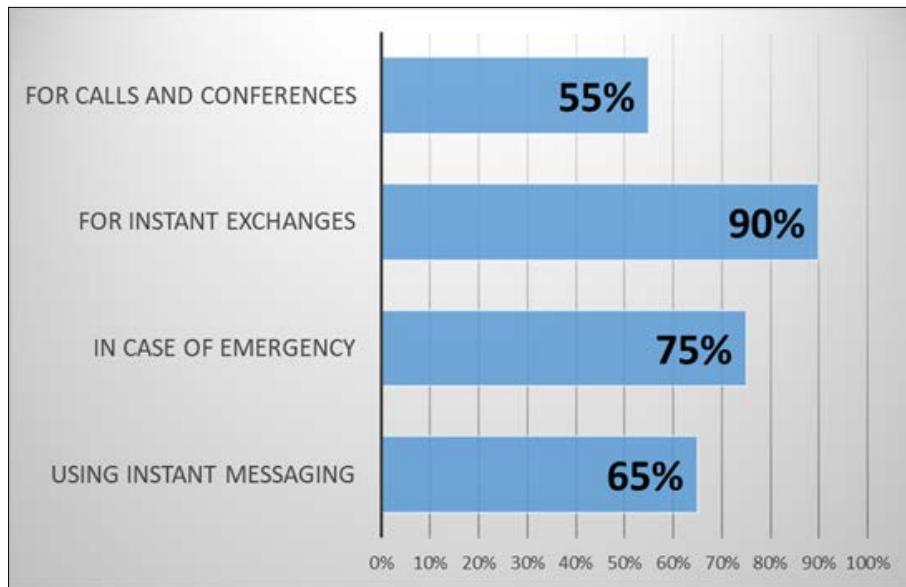
**Fig 3:** Use of LINK in the work process

Only 10% of users are satisfied, while 40% feel that the tool does not meet their needs. These results highlight a mismatch between LINK's functionality and user requirements. Bouzida (2022) <sup>[3]</sup> points out that it is crucial to adopt software packages that are adapted to the realities on the ground, in order to ensure fluid flow management. Thus, an in-depth analysis of internal communication needs

at AGL BF could lead to a better adaptation of LINK or the choice of a more appropriate solution.

**Reasons for using Teams to process files**

Teams is mainly used for calls and conferences (90%), followed by instant exchanges (75%) and emergency situations (65%) (Figure 4).



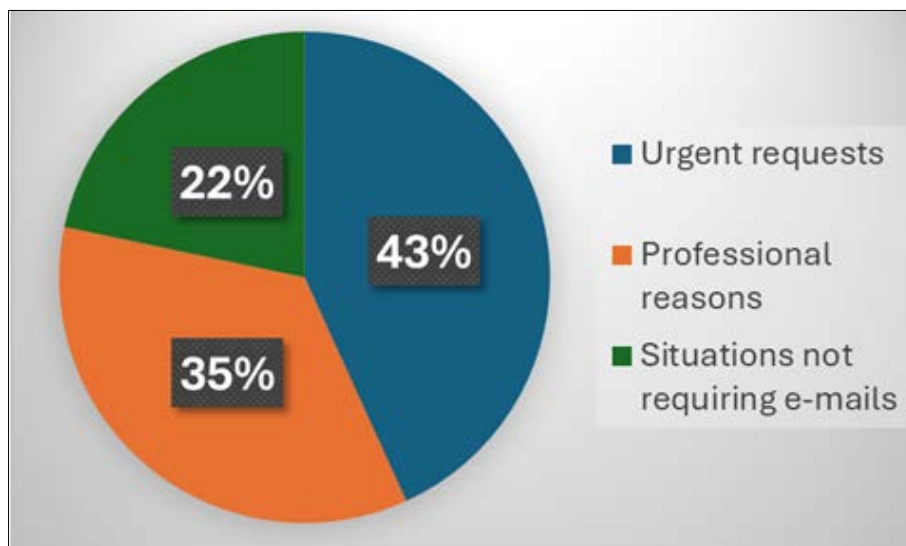
Source: fieldwork (July, 2023)

**Fig 4:** Reasons for using Teams to handle cases

This diversity of uses shows that Teams is a multifunctional tool adapted to a variety of communication needs. However, emergency management, with Teams used in 65% of cases, could be strengthened. Ouédraogo (2003)<sup>[8]</sup> points out that in critical logistics environments, the use of instant communication tools is essential to anticipate transport and delivery problems.

**Use of the telephone at work**

The telephone is rated as an essential communication tool, with an average use of between 7 and 10 on a scale of 10. This shows that despite instant messaging technologies, the telephone remains a fundamental means of communication. The telephone is particularly used for urgent requests (43%), followed by professional reasons (35%) and situations not requiring email (22%) (Figure 5).



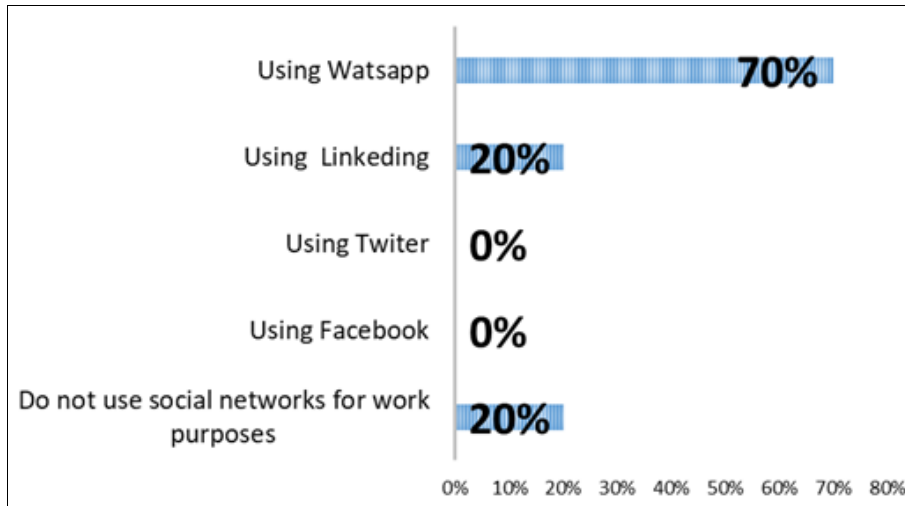
Source: fieldwork (July, 2023)

**Fig 5:** Use of the telephone for work purposes

This predominance of the telephone illustrates a need for responsiveness and speed in communication, as mentioned by Barbe (2018)<sup>[2]</sup>, who believes that in the African context, direct oral communication is often preferred because of its immediacy.

**Use of social networks for work purposes**

WhatsApp is the most used social network for casework, with 70% of respondents using it for work purposes (Figure 6). LinkedIn follows with 20%, while a further 20% of individuals do not use social networks for work purposes.



Source: fieldwork (July, 2023)

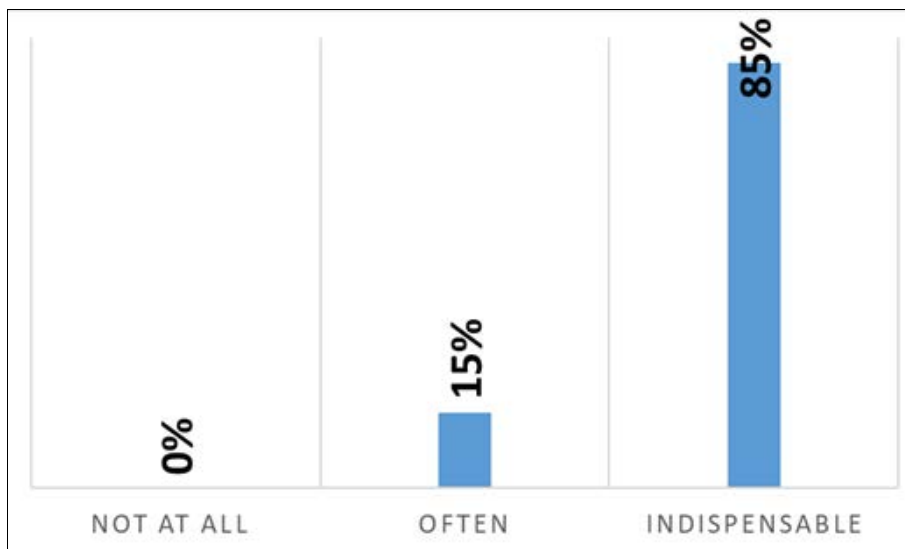
**Fig 6:** Use of social networks for work purposes

According to Bouzida (2022) [3], the growing use of social networks in professional environments, particularly in just-in-time sectors such as logistics, enables more agile and responsive communication. However, the use of social networks for critical tasks raises the question of the security of the information exchanged, a major challenge for

businesses.

**Usefulness of tracking files in the work process**

Tracking files play a crucial role, with 85% of respondents recognising their vital importance, and 15% deeming them often indispensable (Figure 7).



Source: fieldwork (July, 2023)

**Fig 7:** Usefulness of tracking files in the work process

According to interviews with AGL BF staff, these files are essential tools for managing information flows, as they enable shipments to be tracked in real time. However, failure to update these files can lead to delays in the decision-making process (Faster Capital, 2024). Implementing strict procedures for regularly updating these files could improve the overall performance of the supply chain.

**Assessing the importance of daily meetings**

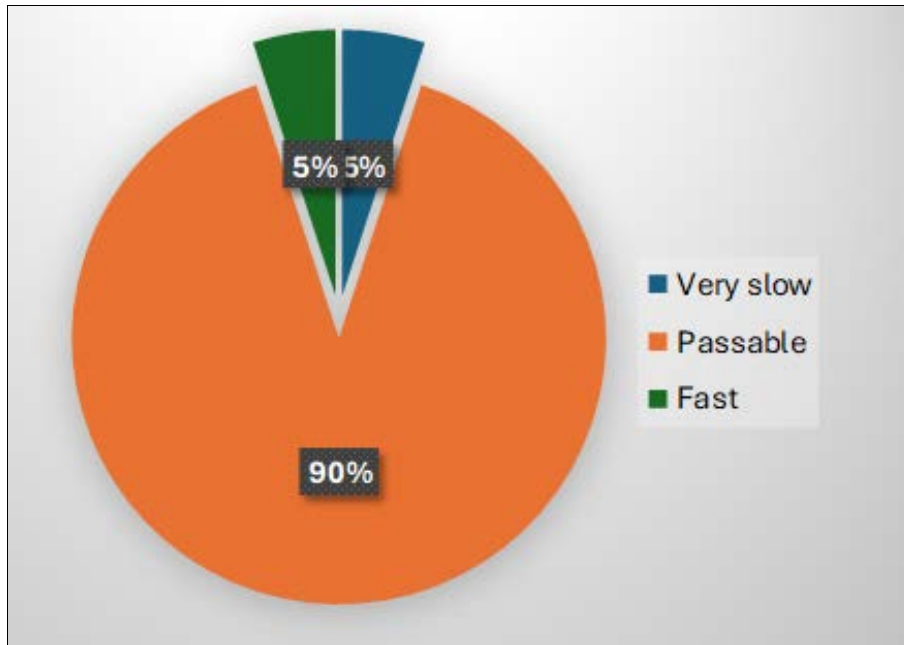
Daily meetings, known as ‘Daily Management’, are

perceived as very useful by more than 80% of respondents. According to the facility’s staff, these meetings make it possible to coordinate teams and find solutions to issues requiring special attention.

Day-to-day coordination between the various players in the supply chain is a key factor in a company’s success, as regular meetings ensure that priorities are aligned.

**Speed of information flow between colleagues**

The feedback process was judged satisfactory by 90% of respondents, with only 5% finding it slow (Figure 8).



Source: fieldwork (July, 2023)

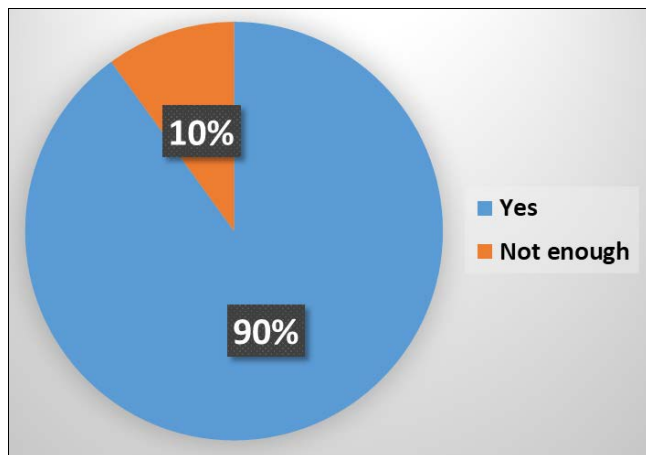
**Fig 8:** Speed of feedback between colleagues

This performance indicates that internal coordination is well managed, which is crucial for avoiding bottlenecks in the supply chain.

A high rate of information feedback is essential to reduce interruptions and keep operations running smoothly, as Bouzida (2022) [3] points out.

**General satisfaction with the information system**

Finally, 90% of users say they are satisfied with the Information and Communication System (ICS) in place, while 10% feel that it is not sufficiently effective (Figure 9).



Source: fieldwork (July, 2023)

**Fig 9:** Overall satisfaction with the information system

Such high satisfaction is a good indicator of the robustness of the CIS at AGL BF.

However, Plane & Acri (2018) [9], stress that user satisfaction should not overshadow the need to continually improve information systems to adapt to changing needs and technologies.

**Conclusion**

Effective management of logistics information flows is crucial to the success of supply chains, particularly in just-

in-time sectors such as mining transit in Burkina Faso. Through the study of AGL BF, this research has highlighted the importance of robust information systems to ensure the coordination and fluidity of logistics operations. The results show that tools such as Outlook and Teams are widely used and appreciated for their ability to streamline the exchange of information within the organisation, thereby contributing to greater responsiveness and better emergency management.

However, there are still some limitations. Dissatisfaction with LINK, an essential software package in the supply chain, and the predominance of the telephone and WhatsApp for critical tasks highlight the need to improve certain communication tools. The adoption of digital solutions that are well adapted to users' needs is essential for boosting the performance of logistics operations. A thorough evaluation of current solutions is therefore required, with the potential to replace or improve LINK to better meet staff expectations.

The importance of daily meetings and tracking files for internal coordination and real-time monitoring of shipments also shows that communication and collaboration between all players are key success factors. However, updating tracking files is a recurring challenge, and putting in place rigorous practices to keep these tools up to date would help avoid delays in decision-making and improve operational efficiency.

The overall satisfaction with AGL BF's information system reflects a solid foundation on which to build future improvements. However, research suggests that even in an environment where user satisfaction is high, there is still a need for continuous innovation to remain competitive. Rapidly evolving information technologies are forcing companies to constantly adapt their logistics systems in order to optimise costs, minimise risks and maximise productivity.

In short, an analysis of AGL BF's logistics information flows reveals that management is generally satisfactory, but there is room for improvement. Targeted efforts to adapt IT tools and improve the organisation of internal flows could

make the company more competitive in the mining transit market. It would be appropriate to extend these considerations to other logistics sectors in Burkina Faso in order to create a more efficient, integrated and resilient supply chain management ecosystem.

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