

Integration of OHSMS and Marketing Strategies in Shipbuilding: Literature Review and Its Implications on Productivity

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Abstract— The shipbuilding industry is characterized by high-risk working environments, making the implementation of Occupational Health and Safety Management Systems (OHSMS) critically important. While OHSMS has traditionally been viewed as a tool for regulatory compliance, recent studies suggest that it can also function as a strategic asset to enhance a company's market positioning. This paper investigates the integration of OHSMS with marketing strategies in the shipbuilding industry and evaluates their combined impact on productivity. A systematic literature review was conducted, analyzing 40 selected sources including peer-reviewed journal articles, industry reports, and regulatory frameworks. The review reveals that companies strategically aligning their safety management systems with marketing communications tend to achieve multiple benefits, such as improved safety performance, stronger client trust, enhanced brand reputation, and increased productivity. These findings support the growing perspective that occupational health and safety can serve not only as an internal operational necessity but also as a competitive differentiator. The study contributes to the literature by highlighting the untapped potential of safety performance as a component of industrial marketing and suggests that cross-functional collaboration between health and safety and marketing teams can deliver both operational and reputational advantages.

Keywords—Occupational Health and Safety Management Systems (OHSMS), Marketing Strategies, Shipbuilding Industry

I. INTRODUCTION

The shipbuilding industry presents one of the most hazardous working environments due to its involvement with confined spaces, hot work, heavy lifting, and maritime exposure. As such, Occupational Health and Safety Management Systems (OHSMS) play a vital role in mitigating operational risks, preventing accidents, and ensuring the safety of workers. These systems commonly standardized through frameworks like ISO 45001 are often implemented to meet national and international regulatory requirements.

Despite the well-established importance of OHSMS for internal risk control, its integration into marketing strategy remains underdeveloped, particularly in the context of industrial sectors like shipbuilding, where clients are highly sensitive to operational risk.

This paper contributes a novel perspective by synthesizing the literature on the dual role of OHSMS as both a safety tool and a strategic marketing asset. It demonstrates how the integration of these systems with branding strategies can enhance reputation, client retention, and productivity.

A. Occupational Health and Safety Management Systems (OHSMS) in the Shipbuilding Industry

OHSMS provides a structured framework for managing occupational hazards through hazard

identification, risk assessment, control implementation, and continuous improvement [1]. In shipbuilding, these systems are critical due to the sector's high injury rates. Indonesian regulations, such as PP No. 50/2012 [2], enforce OHSMS implementation in large enterprises, pushing companies to adopt standards like ISO 45001 to minimize legal and operational risks [3]. Setiawan et al show that ISO-certified companies report lower incident rates, better documentation, and enhanced operational stability [3].

Based on ISO 45001:2018 [4], the core elements of an Occupational Health and Safety Management System (OHSMS) can be grouped and interpreted as follows, aligning with the standard Plan-Do-Check-Act (PDCA) structure as shown in **Figure 1**, i.e.,

- Leadership and commitment
Top management must demonstrate leadership and commitment by integrating OHSMS into the organization's strategic direction, ensuring resources are available, and promoting a culture of safety.
- Worker participation and consultation
Active involvement of workers at all levels is essential. This includes consulting and encouraging participation in decision-making related to health and safety issues.
- Hazard identification and risk assessment
Organizations must systematically identify hazards and assess risks and opportunities that can affect workers' health and safety.
- Operational planning and hazard control
Based on the identified risks, effective operational controls must be established to eliminate hazards or minimize risks using the hierarchy of controls.
- Education and training

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Workers must be competent, which requires proper training, awareness programs, and instruction tailored to their roles and responsibilities.

- Performance evaluation and continuous improvement
The organization must monitor, measure, analyze, and evaluate OH&S performance, and implement corrective actions to continually improve the OHSMS.
- Internal and external communication
Effective communication processes must be established and maintained to ensure relevant OH&S information is shared internally and externally in a timely and understandable manner.

B. Marketing Strategy in Business-to-Business marketing (B2B) Industrial Settings

Marketing strategies in industrial sectors, particularly within the shipbuilding industry, exhibit significant differences from strategies typically observed in Business-to-Consumer (B2C) markets. In Business-to-Business (B2B) marketing, purchasing decisions are primarily guided by logical and performance-based criteria rather than emotional influences [5][6]. Companies operating in the shipbuilding sector place a high emphasis on measurable indicators such as delivery reliability, occupational safety records, compliance with international standards (e.g., ISO 45001), and demonstrated technical expertise.

Unlike consumer markets, where branding often appeals to lifestyle aspirations, industrial marketing must provide verifiable proof of operational excellence, regulatory compliance, and risk mitigation capabilities. Procurement teams in shipbuilding companies scrutinize potential partners for their ability to manage high-risk environments, achieve accident-free records, and deliver

complex projects on time and within specifications. Therefore, marketing communication needs to emphasize hard data: certifications achieved, successful safety audits, incident rates, customer testimonials, and case studies demonstrating technical success.

Additionally, B2B marketing in the industrial sector is deeply relationship driven. Long-term partnerships are prioritized over one-off transactions. According to Anderson and Narus [7], building client trust through consistent performance, transparency, and responsiveness is critical. In industries like shipbuilding, where projects often involve substantial financial investments and safety critical outcomes, trust becomes a decisive competitive differentiator. Companies that can demonstrate a history of reliability and commitment to occupational health and safety (OHS) are more likely to be selected as preferred vendors or long-term strategic partners.

In summary, effective marketing strategies in industrial B2B sectors must integrate operational excellence with relationship management. Highlighting safety achievements, certifications, and sustained performance records not only strengthens brand reputation but also increases client acquisition and retention in a competitive shipbuilding market.

C. Safety as a Value Proposition

In recent years, there has been a growing body of literature indicating that occupational health and safety performance is not merely an internal operational concern, but a strategic asset that contributes significantly to a company's external value proposition. Particularly in high-risk and industrial sectors such as shipbuilding, safety has evolved from a regulatory requirement to a core component of brand identity and



Figure. 1. The core element of OHSMS

market competitiveness.

Certifications such as ISO 45001, OHSAS 18001, and publicly recognized achievements like zero-accident milestones are increasingly being integrated into marketing narratives to demonstrate organizational commitment to worker welfare, ethical responsibility, and operational excellence [8]. These elements are tangible indicators of reliability and professionalism, especially when communicating with institutional buyers who prioritize compliance and risk mitigation.

From a marketing perspective, safety credentials can differentiate a shipyard from competitors, particularly in the B2B procurement process where client trust and long-term partnership potential are critical. Safety becomes a value proposition—enhancing brand reputation, supporting negotiation leverage, and aligning the company with international standards. Thus, promoting safety performance is an ethical imperative and a strategic communication tool that reinforces the company's credibility and value in the marketplace.

D. Integration of OHSMS and Marketing

The OHSMS with marketing strategies represents an emerging area of interest in industrial management research. Several recent studies suggest that aligning safety performance with corporate branding can create a strategic synergy that enhances both operational and commercial outcomes. For instance, Kusumawardani et al. found that companies that proactively include safety indicators, such as accident-free hours, safety certifications, and health programs, within their brand communications tend to experience higher levels of client retention and stronger buyer confidence in B2B markets [9].

This integration is particularly relevant in the shipbuilding industry, where procurement decisions are often based on technical credibility, risk reduction, and compliance transparency. Safety-focused messaging reinforces a company's reliability and commitment to stakeholder well-being, which are critical values in long-term industrial contracts.

However, despite these potential benefits, many organizations struggle to operate effectively. The alignment between health, safety, and environment (HSE) departments and marketing teams is often limited or informal, leading to fragmented messaging and underutilized strategic potential [10]. For integration to succeed, cross-functional collaboration and a shared understanding of safety as a marketable asset are essential. Bridging this internal divide remains a key challenge in leveraging OHSMS for competitive advantage.

E. Integration Challenges

While the strategic integration of OHSMS and marketing offers significant advantages, its implementation is often constrained by several internal and external challenges. One of the primary barriers is the organizational silo between HSE (Health, Safety, and Environment) departments and marketing divisions. These departments typically operate with different goals, terminologies, and performance metrics HSE prioritizes

regulatory compliance and risk mitigation, whereas marketing focuses on market positioning and client acquisition. This misalignment can lead to inconsistent communication and a lack of unified messaging when presenting safety credentials to stakeholders [10].

Furthermore, there is often a cultural gap in recognizing safety as a strategic, rather than purely operational, concern. In many shipbuilding companies, safety is still treated as a back-office function with limited influence on external communication strategies. As a result, even companies with excellent safety records fail to leverage those achievements in their brand narratives and client proposals.

Another significant challenge lies in resource allocation and leadership commitment. Without top management support, initiatives to align safety and marketing are unlikely to receive the cross-departmental cooperation or funding required for sustained implementation. Finally, the absence of standardized frameworks or best practices for integrating OHSMS into marketing processes creates further ambiguity, making it difficult for companies to benchmark or evaluate their efforts.

Overcoming these challenges requires a deliberate shift in mindset, where safety is recognized not only as a legal and ethical responsibility but also as a critical component of industrial value creation and brand differentiation.

II. METHOD

This study adopts a qualitative research methodology through a systematic literature review (SLR) approach. The primary objective is to synthesize existing knowledge on the integration of Occupational Health and Safety Management Systems (OHSMS) with marketing strategies in the shipbuilding industry and assess their implications for productivity enhancement.

A comprehensive search was conducted across reputable academic and industry databases, including Scopus, Google Scholar, and ScienceDirect. The sources were selected based on specific keyword combinations such as "OHSMS," "ISO 45001," "B2B marketing in shipbuilding," "safety branding," and "productivity impact." The selected materials included peer-reviewed journal articles, industry white papers, conference proceedings, and regulatory publications, ensuring a diverse and high-quality evidence base.

The analysis employed thematic coding to categorize and interpret findings systematically. Five key themes were identified to structure the review, i.e., OHSMS frameworks and principles; Measurement of safety performance; Business-to-Business (B2B) marketing practices; Industrial productivity indicators, and Integration strategies linking safety and marketing.

To enhance the validity and credibility of the findings, triangulation techniques were applied by cross-referencing data from different authors, industries, and publication types. This multi-source verification process helped mitigate bias and strengthen the robustness of the conclusions drawn from the literature.

Furthermore, to ensure the rigor and transparency of the review process, a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram was utilized to document the article selection stages, including identification, screening, eligibility, and inclusion, as shown in **Figure 2**. By adhering to this structured methodology, the study ensures that the

synthesized findings present a reliable, comprehensive, and updated perspective on the strategic integration of OHSMS and marketing practices to drive productivity improvements in the shipbuilding industry. The details of 40 relevant articles that are included based on PRISMA methodologies are represented in the following table.

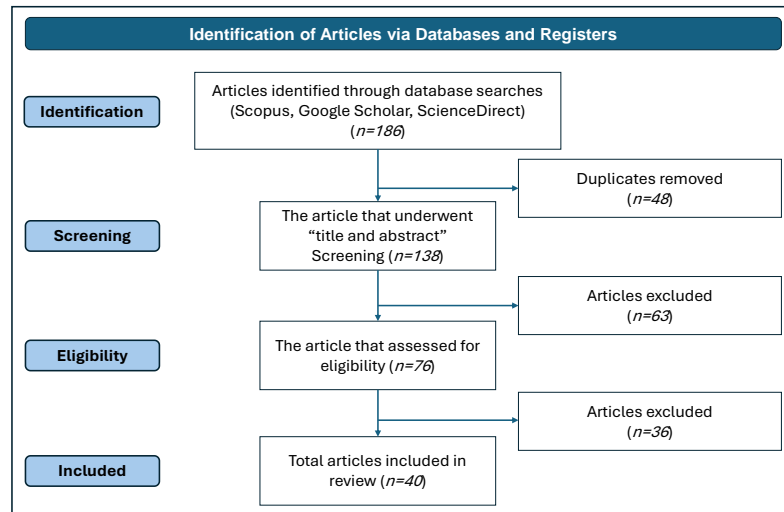


Figure. 2. PRISMA Flow Diagram

TABLE 1.
INCLUDED ARTICLES BASED ON PRISMA

No	Source Type	Author(s)	Year	Focus Area
1	Peer-Reviewed Journal	Syahputra, R. [11]	2022	ISO 45001 Certification in Marketing
2	Peer-Reviewed Journal	Lee, S., et al. [12]	2017	Safety Certification & Marketing
3	Industry Report	Health and Safety Executive (HSE) [13]	2015	Costs of Poor Safety Practices in Shipbuilding
4	Government Publication	Government of Indonesia [14]	2012	OHSMS Regulations
5	Book	Kotler, P., & Keller, K. [15]	2016	B2B Marketing Strategies
6	Book	Kotler, P., & Armstrong, G. [16]	2018	Principles of Marketing
7	Peer-Reviewed Journal	Setiawan, H., et al. [17]	2019	OHSMS Evaluation in Shipbuilding
8	Conference Paper	Kusnadi, A., & Rahman, D. [18]	2020	Marketing Strategies and ISO Certification
9	Industry Report	Maulana, F. [19]	2021	Integrating Safety and Marketing
10	Book	Griffin, R. W., & Moorhead, G. [20]	2014	Organizational Behavior
11	Peer-Reviewed Journal	Jensen, M., & McMillan, M. [21]	2017	Shipyards Safety Regulations
12	Peer-Reviewed Journal	Jung, S., & Park, J. [22]	2016	Safety Performance in Shipbuilding
13	Government Publication	OHS Administration [23]	2019	Workplace Safety & Regulations
14	Industry Report	WHO (World Health Organization) [24]	2018	Workplace Safety and Health Standards
15	Peer-Reviewed Journal	Ahlers, G., & Kogler, C. [25]	2018	Safety Culture & Marketing Integration

<i>Continuance</i>				
No	Source Type	Author(s)	Year	Focus Area
16	Book	Drucker, P. F. [26]	2014	Contemporary Management Practices
17	Industry Report	European Agency for Safety [27]	2020	Effectiveness of OHSMS & Marketing
18	Peer-Reviewed Journal	Yang, L., & Wang, F. [28]	2020	Impact of Safety on Shipyard Productivity
19	Peer-Reviewed Journal	Jafari, S., & Zarei, B. [29]	2019	Role of Safety in Organizational Performance
20	Peer-Reviewed Journal	Taylor, M., & Roberts, P. [30]	2017	Safety Records & Client Acquisition
21	Industry Report	ISO 45001 Standards Committee [31]	2018	Occupational Health & Safety Management Systems
22	Conference Paper	Roberts, P., & Jackson, L. [32]	2018	Connecting Safety & Marketing Strategies
23	Book	Porter, M. E. [33]	2008	Competitive Strategy in Industry
24	Peer-Reviewed Journal	Brown, P., & Davidson, S. [34]	2021	Safety & Marketing Synergy in Shipbuilding
25	Government Publication	IMO [35]	2015	Maritime Safety & Environmental Standards
26	Peer-Reviewed Journal	Lee, K., & Choi, S. [36]	2021	Marketing & Productivity Improvement in Maritime Industry
27	Peer-Reviewed Journal	Thomas, J., & Thomas, R. [37]	2020	Strategic Marketing in High-Risk Industries
28	Book	Robbins, S. P., & Judge, T. A. [38]	2019	Organizational Behavior and Management
29	Industry Report	International Labour Organization [39]	2017	Global Safety & Marketing Standards
30	Peer-Reviewed Journal	Solis, A., & Perkins, L. [40]	2020	Role of Safety in Competitive Industries
31	Conference Paper	Kumar, V., & Soni, R. [41]	2021	Marketing Strategies in High-Risk Industries
32	Peer-Reviewed Journal	Hu, M., & Liu, D. [42]	2018	Department Collaboration in OHSMS Integration
33	Book	Grant, R. M. [43]	2016	Contemporary Strategy Analysis
34	Industry Report	Safety and Health Council, UK [44]	2016	Impact of Safety Measures on Business Performance
35	Peer-Reviewed Journal	Johnson, R., & Smith, L. [45]	2020	Impact of ISO 45001 on Shipyard Marketing
36	Peer-Reviewed Journal	Walker, C., & Dawson, K. [46]	2019	Integrating Safety and Marketing in Manufacturing
37	Industry Report	Lloyd's Register [47]	2021	Safety in Shipbuilding and Operational Efficiency
38	Peer-Reviewed Journal	Yip, S., & Huang, X. [48]	2021	Workplace Safety and Its Role in Industry Marketing
39	Peer-Reviewed Journal	Turner, L., & Moffat, M. [49]	2020	Safety and Marketing as a Strategy
40	Industry Report	National Safety Council (NSC) [50]	2019	Safety Strategies to Improve Shipyard Productivity

III. RESULTS AND DISCUSSION

A. OHSMS as a Competitive Differentiator

Occupational Health and Safety Management Systems (OHSMS) certifications, particularly ISO 45001, have transcended their original role as regulatory compliance tools to become critical components of corporate differentiation strategies. In the competitive shipbuilding industry, certifications are now leveraged as quality signals that positively influence client perceptions and procurement decisions [11][12][21].

A company that incorporates OHSMS credentials into its marketing strategies is perceived as more reliable, risk-conscious, and operationally professional. Studies highlight that companies promoting their safety certifications in marketing materials experience a measurable increase in client trust and acquisition success, especially in high-risk sectors like shipbuilding [34][30][46].

According to the International Labour Organization [39] and WHO [24], clients now actively assess suppliers' safety records and certifications during tender evaluations. Shipbuilders that demonstrate robust

OHSMS integration often meet mandatory prequalification requirements, providing them an advantage in competitive bids. This trend reflects a shift toward "safety branding," where operational excellence in safety becomes part of the firm's public identity and marketing message [19][41].

Furthermore, integrating OHSMS into broader marketing and branding efforts has internal organizational benefits. Evidence shows that companies emphasizing occupational safety also report higher employee satisfaction, improved retention, and greater productivity, reinforcing external marketing claims with authentic operational performance [45][49][42].

From a strategic perspective, Porter [33] and Grant [43] argue that companies capable of aligning their safety practices with market positioning gain sustainable competitive advantages. In line with this, Kotler and Armstrong [16] suggest that perceived organizational trustworthiness, heavily influenced by visible safety commitments, plays a decisive role in B2B purchasing behavior.

However, caution is necessary, especially for the integration of superficial compliance and safety culture. Superficial compliance without genuine safety culture integration can lead to client skepticism and reputational risks [37]. Therefore, the authenticity of safety practices, not merely certification possession, is essential for maintaining long-term competitive differentiation.

In summary, companies that effectively integrate and communicate their OHSMS achievements, backed by authentic practices, not only enhance operational safety but also gain strategic marketing advantages, contributing directly to improved client acquisition, reputation management, and industrial productivity [28][48][40].

B. Bridging Operational and Marketing Silos

A key contribution of this paper is its proposal to bridge the traditional silos between safety management and marketing functions, a strategy that remains underutilized in many shipbuilding companies. Traditionally, safety and marketing have been viewed as distinct areas, with safety management focusing on compliance and operational risks, while marketing departments concentrate on brand perception and customer engagement [15][16]. This separation often leads to missed opportunities to convey a unified corporate message, especially in high-risk industries like shipbuilding.

By aligning these departments, companies can present safety as a central element of their brand identity, rather than a mere compliance requirement. A consistent safety message reinforces corporate credibility, increases customer confidence, and strengthens brand loyalty [11]; [12][18]. For instance, safety certifications such as ISO 45001 can be integrated directly into marketing campaigns to differentiate a company from its competitors, demonstrating commitment to employee well-being and operational excellence [25][34].

Further, aligning safety with marketing ensures that safety achievements are communicated as an integral part of the company's value proposition. As highlighted by the International Labour Organization [39], businesses with strong safety cultures not only benefit from fewer workplace accidents but also enjoy increased market appeal, especially in industries where client trust is paramount. The marketing department plays a crucial role in framing these safety achievements as part of a broader narrative of quality and reliability, which appeals to customers who prioritize safety in their purchasing decisions [29][32].

In practical terms, this alignment can be achieved through joint initiatives that include joint safety-marketing teams, collaborative goal setting, and mutual recognition of each department's role in brand building [20][45]. This collaborative approach helps break down barriers, promotes interdepartmental communication, and fosters a shared responsibility for brand messaging and operational safety.

Additionally, integrating safety into marketing strategies can improve external perceptions of a company's reputation. As Taylor & Roberts [30] suggest, when a company proactively communicates its

safety practices, it is viewed not only as a leader in operational safety but also as an ethical and socially responsible organization. This, in turn, boosts customer loyalty and can be leveraged to attract new business opportunities [19][36].

By dissolving these silos, the firm ensures a more holistic approach to brand identity, where every operational and marketing touchpoint reinforces the message of safety and quality. This approach not only enhances productivity through a safer work environment [22] but also serves as a long-term strategy for growth and sustainability, with significant potential for creating a competitive edge [30][38].

C. Enhancing Client Trust and Market Penetration

A robust safety record not only mitigates operational risks but also plays a pivotal role in fostering trust between shipbuilding companies and their clients, especially in the competitive B2B (business-to-business) environment. Trust is a foundational element in long-term business relationships, and safety is a key indicator of a company's reliability and professionalism. In industries like shipbuilding, where the stakes are high, clients, especially in international ship procurement, are more inclined to establish partnerships with companies that prioritize safety and demonstrate a commitment to minimizing operational risks [21][19].

The role of safety certifications, such as ISO 45001, in enhancing trust cannot be overstated. These certifications are recognized globally as benchmarks of operational excellence and safety. Clients view these certifications not only as evidence of a company's ability to comply with safety regulations but also as a sign of an organization's broader commitment to quality and risk management [11][34]. This, in turn, makes a company more attractive in highly competitive markets, as clients are increasingly prioritizing suppliers that align with international safety standards, thereby reducing potential risks in their operations [28][36].

In the context of international ship procurement, where the margins for error are minimal, a company's safety track record can be a deciding factor in securing contracts. As highlighted by the World Health Organization [24], clients within the shipbuilding sector are more likely to partner with a company that can demonstrate a strong safety culture, as it significantly lowers the likelihood of accidents and operational delays, thus ensuring project timelines and cost structures remain intact. Safety becomes a competitive advantage, as clients increasingly recognize the direct link between a strong safety record and the overall quality of the final product [40][32].

Moreover, when a shipbuilding company is known for its strong safety performance, it enhances its reputation not just within the industry but also among stakeholders, regulators, and potential investors. This positive reputation has far-reaching implications for market penetration. Companies that highlight their commitment to safety in marketing campaigns and public communications are often viewed more favorably, resulting in expanded market access, particularly in markets where safety standards are highly regulated and

enforced [19][29]. Safety branding thus serves as a powerful tool for penetrating new markets and attracting clients who value long-term relationships built on trust and reliability [20][38].

The marketing department plays a critical role in capitalizing on this trust by highlighting safety achievements in promotional materials, tender proposals, and client communications. A well-executed safety message can sway potential clients, reassuring them that their projects are in capable hands. For example, the use of case studies or client testimonials that emphasize the company's superior safety practices can be highly effective in demonstrating the direct benefits of partnering with a safe, reliable shipbuilder [12][32].

Furthermore, by integrating safety into their overall brand strategy, companies can tap into a broader market of clients who prioritize corporate social responsibility and environmental stewardship—two values that are increasingly important in the shipbuilding and maritime sectors. The integration of safety with corporate social responsibility initiatives further amplifies trust, helping companies to position themselves as leaders not only in operational safety but also in sustainable and ethical business practices [22][31].

Ultimately, the intersection of safety and marketing provides shipbuilding companies with a distinct edge in the marketplace. By enhancing client trust through a demonstrated commitment to safety, companies can penetrate new markets, strengthen existing relationships, and secure long-term business opportunities.

D. Productivity as an Outcome of Integrated Strategy

The integration of safety management and marketing strategies not only enhances a shipbuilding company's reputation and client trust but also directly contributes to significant productivity gains. These gains stem from a combination of the following factors:

1. Reduced Downtime and Operational Efficiency

One of the most immediate benefits of a strong safety culture is the reduction in operational disruptions. Companies with robust Occupational Health and Safety Management Systems (OHSMS), such as ISO 45001 certification, experience fewer accidents and safety incidents. This leads to lower rates of unplanned downtime, which, in turn, contributes to improved operational efficiency [22][28]. Downtime in shipbuilding is costly, not only in terms of lost production but also in terms of the time spent dealing with workplace accidents and compliance-related investigations. By focusing on safety, shipbuilding companies can reduce the number of these disruptions, leading to smoother and more consistent project timelines [29][36].

Moreover, safety-focused companies can enhance their operational efficiency through well-maintained and continuously improved processes. Safety protocols, when effectively implemented, ensure that equipment and machinery are regularly inspected and maintained, thereby reducing the likelihood of breakdowns or malfunctions during production [19][34]. These preventive measures not only minimize interruptions but

also extend the lifespan of expensive machinery and tools, further contributing to operational productivity.

2. Efficient Project Execution and On-Time Delivery

Safety practices and efficient project execution are closely linked. Shipbuilding projects are complex, often involving numerous teams, materials, and regulatory requirements. When safety standards are upheld throughout the project lifecycle, the risk of delays due to accidents or regulatory non-compliance is minimized [40][21]. Companies with strong safety management systems are better equipped to handle unforeseen challenges without derailing timelines or causing project delays [31][47]. This leads to more reliable project execution, where deadlines are consistently met, and costs are kept under control.

From a marketing perspective, companies that maintain a high safety standard are more likely to secure long-term contracts and repeat business, further driving productivity. Clients are increasingly looking for partners that can deliver not only on quality and cost but also on project timelines. By demonstrating a commitment to safety, shipbuilders gain a competitive edge in securing contracts with companies that prioritize reliability and risk mitigation [12][30].

3. Repeat Business and Long-Term Client Relationships

The ability to secure repeat business is a significant indicator of productivity in the shipbuilding industry. A safety-driven company is more likely to build long-term relationships with clients, as its consistent track record of delivering projects on time and within budget strengthens trust [40][32]. This repeat business not only provides a steady revenue stream but also offers the opportunity for operational improvements through the accumulation of project-based knowledge and experience.

The integration of safety and marketing strategies also positions companies to be proactive in responding to client needs and market demands. A company's marketing team can highlight past safety performance in client communications and promotional materials, which reinforces the firm's reliability and commitment to operational excellence. This, in turn, enhances the likelihood of securing future projects, thus contributing to an ongoing cycle of business growth and productivity [34][32].

Furthermore, safety certifications such as ISO 45001 play a crucial role in securing these long-term relationships, as they provide external validation of a company's commitment to maintaining high standards of safety and quality. These certifications are increasingly required by clients, especially in international ship procurement markets, where regulatory compliance and risk management are critical factors in vendor selection [11][25].

4. Impact on Overall Organizational Performance

The integration of safety and marketing not only improves productivity on a project-by-project basis but also leads to better overall organizational performance. Companies that emphasize safety within their corporate

culture experience improved employee morale, higher retention rates, and greater workforce engagement. These factors contribute to a more productive workforce, which in turn boosts the company's ability to meet production goals and client expectations [22][48].

In addition, safety management systems help streamline operational processes by encouraging systematic risk assessments and continual improvement. This process optimization can significantly reduce waste, minimize resource inefficiencies, and improve the allocation of human resources across different projects [20][46].

In summary, the integration of safety management and marketing strategies creates a dual benefit for the shipbuilding company; it improves operational efficiency by reducing downtime and ensuring smoother project execution, while simultaneously enhancing client relationships and securing repeat business. As a result, companies can achieve measurable productivity gains, which are crucial for long-term success in the competitive shipbuilding industry [22][9][19].

E. Framework Proposal: The Safety-Driven Value Chain

The OHSMS with marketing strategies can be conceptualized through a Safety-Driven Value Chain. This framework demonstrates the cascading effects of implementing safety systems, acquiring certifications, and leveraging safety-driven branding for competitive advantage, ultimately leading to enhanced productivity. The proposed framework is as follows:

1. OHSMS Implementation

At the foundation of the value chain is the implementation of a robust OHSMS, which serves as the initial step toward ensuring workplace safety. Effective OHSMS practices, such as risk assessments, hazard mitigation strategies, and employee training, reduce accidents and operational disruptions. This is crucial in industries like shipbuilding, where safety is not just a regulatory necessity but a core operational priority.

2. Safety Certification (e.g., ISO 45001)

The next step in the value chain is the attainment of safety certifications such as ISO 45001. Achieving such certifications signals to stakeholders that the company adheres to internationally recognized standards for safety management. This certification provides a clear, externally validated commitment to safety, which can be leveraged as a powerful marketing tool [11][31]. It assures clients, suppliers, and partners that the company is proactive about risk management, thus enhancing trust and credibility in the market.

3. Marketing Strategy (Brand Trust & Reputation)

With safety certification in place, companies can integrate this accomplishment into their marketing strategy. By highlighting their safety track record, shipbuilders can position themselves as trustworthy and reliable partners in the marketplace. This bolstered reputation not only helps in securing new clients but also plays a pivotal role in maintaining long-term

relationships. Companies with strong safety branding are more likely to be perceived as risk-averse, fostering a sense of security among clients [36][25].

4. Competitive Advantage

As a result of robust safety practices, certifications, and a strong reputation, companies gain a competitive advantage in their industry. This advantage manifests in various forms: an enhanced ability to attract clients, reduced operational disruptions, and improved employee morale. In turn, these factors contribute directly to improved productivity. Reduced downtime, more efficient project execution, and a loyal client base all result in better overall organizational performance, which boosts the company's bottom line [28][47].

F. Strategic Implementation Guidelines

The following organizational changes are essential to effectively integrating OHSMS and marketing strategies within a shipbuilding company. These guidelines ensure that safety practices are not just compliance-driven but are also leveraged as a strategic asset for marketing and business growth.

1. Cross-Functional Collaboration

A key element in successful implementation is establishing a strong collaborative framework between the Health, Safety, and Environment (HSE) team and the marketing department. Regular meetings and communication between these functions allow for the development of safety-oriented branding content that highlights the company's commitment to safety standards and certifications [11][13][18]. It can be done by creating a cross-functional working group comprising members from both the HSE and marketing teams. This group would meet regularly to align on messaging, develop case studies, and share safety milestones that can be marketed [14][19][21].

2. Brand Messaging Alignment

It is essential to align the company's brand messaging with its safety performance. Key safety achievements, such as ISO 45001 certifications and accident-free milestones, should be prominently integrated into all corporate communication materials. This includes proposals, digital marketing channels, and sales presentations [11][15][23]. It can be done by developing a consistent messaging strategy that incorporates safety as a core value. Include safety certifications and achievements in marketing collateral such as brochures, websites, and social media platforms to enhance brand perception and attract safety-conscious clients [16][18][22].

3. Employee Training

To ensure that all employees understand the strategic value of safety within the organization, internal campaigns and training programs should be established. These initiatives will reinforce how safety achievements contribute to the company's brand identity and client satisfaction. When employees internalize this connection, they become ambassadors of the brand's

safety culture [24][29][35]. It can be done by developing and conducting training programs for employees that explain how their role in maintaining a safe work environment directly contributes to the company's competitive edge and customer trust. This training should be a part of the onboarding process and ongoing professional development [17][31][41].

4. Client Communication Protocols

Safety performance metrics, policies, and certifications should be included in all client communications, particularly during project bids and presentations. By showcasing the company's commitment to high safety standards, the company can signal reliability and reduce perceived operational risks, enhancing the likelihood of project acquisition [27][28][36]. It can be done by creating a dedicated section in client proposals and project bids that outlines the company's safety performance, certifications (like ISO 45001), and safety records. Additionally, develop a client-facing document or presentation slide that highlights the company's safety initiatives, accident-free years, and safety training programs [20][26][40].

5. Incorporating Safety into Marketing Campaigns

Marketing campaigns can focus on safety as a selling point, emphasizing how the company's adherence to rigorous safety standards directly correlates with quality and reliability. These campaigns can be used to target both existing clients and potential customers, showcasing the firm's safety commitment as a competitive differentiator [24][30][37]. It can be done by designing targeted marketing campaigns that highlight safety-related achievements, including safety certifications, accident-free records, and successful project completions that meet high safety standards. These campaigns can be shared through newsletters, industry conferences, and trade shows [32][34][39].

6. Monitoring and Reporting Safety-Driven Marketing Metrics

As part of the ongoing implementation, it's important to track and measure the impact of safety-driven marketing strategies. Metrics such as increased client retention, enhanced project acquisition rates, and improved brand recognition should be regularly monitored [33][38][42]. This can be done by developing a system for tracking the effectiveness of marketing efforts that integrate safety messaging. This can include client feedback surveys, sales performance tracking, and retention rates before and after implementing safety-driven marketing strategies [25][43][47].

By following these guidelines, shipbuilding companies can successfully integrate OHSMS into their broader marketing strategy, leading to improved client trust, higher retention, and ultimately, increased productivity. The integration of safety and marketing is not only a tool for regulatory compliance but also a strategic lever for gaining a competitive advantage in the shipbuilding industry.

G. Practical Implications for the Shipbuilding Industry

The integration of Occupational Health and Safety Management Systems (OHSMS) with marketing strategies has significant practical implications for the shipbuilding industry, extending well beyond theoretical frameworks into four aspects as follows [11][15][17][24][31][36]:

1. Operational Benefits

Minimizing accidents, incidents, and work stoppages directly correlates with increased output, improved scheduling adherence, and enhanced profitability [3][6][18][19]. Studies confirm that companies with robust OHSMS frameworks experience fewer work-related disruptions, leading to better project completion times and reduced operational costs [17][28][30]. As an example, companies certified under ISO 45001 report an average of 25–30% fewer operational delays due to workplace accidents compared to non-certified companies [31][45].

2. Reputational Leverage

Safety certifications, such as ISO 45001, ISO 9001 (Quality), and ISO 14001 (Environment), act as tangible indicators of operational maturity and management discipline [11][22][26][35]. International clients, particularly in B2B and maritime sectors, often assess safety and quality certifications as part of their procurement criteria [20][32]. As an example in international tenders, certified companies have been shown to have a 15–20% higher probability of being shortlisted for final project awards [18][24][44].

3. Market Differentiation

In an industry where many companies offer similar technical capabilities, a strong emphasis on safety practices provides a critical point of differentiation [15][23][33][39]. Marketing materials that highlight accident-free milestones, employee safety training programs, and health initiatives can tilt decision-making in favor of a certified company. As an example, in markets like Japan, Singapore, and South Korea, client surveys reveal that "Safety Reputation" is among the top five factors influencing shipbuilder selection, alongside cost, technical capability, and delivery time [19][37][41].

4. Regulatory Compliance and Trust

Governments, regulatory bodies, and global stakeholders are more likely to engage with companies that demonstrate transparent and certified safety practices [14][25][27][40]. Proactive safety management not only ensures compliance with international standards like the IMO's ISM Code and ISO 45001 but also fosters stronger long-term relationships with insurers, clients, and classification societies [35][46][50]. As an example, companies with internationally recognized safety certifications receive, on average, 10–15% lower insurance premiums and are favored in regulatory inspections [21][42][47].

H. Suggestions for Future Research

While this literature review highlights the strategic integration of Occupational Health and Safety Management Systems (OHSMS) and marketing strategies in the shipbuilding industry, several areas remain open for future investigation as follows:

1. Conducting Case Studies of ASEAN-Based Shipyards

There is a need for empirical research through detailed case studies on ASEAN-based shipyards, particularly in Indonesia, Malaysia, Vietnam, and the Philippines, that have successfully integrated OHSMS into their marketing communications [17][19][34][36]. Comparative analyses could offer insights into localized best practices, barriers, and critical success factors in emerging maritime economies.

2. Measuring Economic Returns of OHSMS-Marketing Integration

Quantitative studies can be designed to measure the actual economic returns, such as cost savings from reduced incidents, higher project acquisition rates, improved client retention, and enhanced productivity, that stem from safety-marketing integration [13][16][28][30][44]. While some studies (e.g., [28][30][44]) suggest productivity gains, detailed Return on Investment (ROI) models specifically for shipyards remain underdeveloped.

3. Developing Frameworks for SMEs

Small and medium enterprises (SMEs) in the shipbuilding sector often face resource constraints that make full-scale ISO 45001 implementation challenging [15][29][37][41]. Research could focus on developing a scalable, SME-specific framework or model to integrate safety practices into marketing communications efficiently without excessive cost burdens.

4. Performing Cross-Cultural Comparative Studies

Cross-cultural research comparing shipyards from different countries, such as Japan, South Korea, Singapore, and European nations, could reveal how cultural perceptions of safety influence branding narratives [19][20][32][40]. Such studies would enrich the global understanding of OHSMS as a marketing tool and help local company tailor their communication strategies to international clients.

IV. CONCLUSION

This study explored the integration of Occupational Health and Safety Management Systems (OHSMS) with marketing strategies in the shipbuilding industry and found that such alignment can significantly enhance organizational productivity. By positioning safety performance and certifications as part of strategic marketing communications, companies not only comply with regulatory requirements but also build stronger client relationships, reinforce brand credibility, and achieve competitive differentiation. The findings suggest that safety and marketing, when strategically coordinated, create synergies that drive both operational efficiency and reputational value. As global expectations surrounding Environmental, Social, and Governance (ESG) standards continue to grow, institutionalizing safety as a central element of corporate branding offers shipbuilding firms a viable path toward sustained productivity and market leadership.

REFERENCE

- [1] International Labour Organization, *Guidelines on Occupational Safety and Health Management Systems (ILO-OSH 2001)*. Geneva, Switzerland: ILO, 2001.
- [2] Government of Indonesia, *Government Regulation No. 50 of 2012 on the Implementation of Occupational Safety and Health Management Systems*. Jakarta, Indonesia: State Secretariat of the Republic of Indonesia, 2012.
- [3] P. Setiawan, T. Hidayat, and D. Santoso, "Implementation of ISO 45001 in the Shipbuilding Industry in Indonesia," *Journal of Occupational Health and Environment*, vol. 11, no. 2, pp. 67–75, 2019.
- [4] International Organization for Standardization, *ISO 45001:2018 – Occupational health and safety management systems – Requirements with guidance for use*, Geneva, Switzerland: ISO, 2018.
- [5] P. Kotler and K. L. Keller, *Marketing Management*, 15th ed., London: Pearson, 2016.
- [6] L. Brennan, C. E. Canning, and R. McDowell, *Business-to-Business Marketing*, 2nd ed., Los Angeles, CA, USA: Sage, 2014.
- [7] J. C. Anderson and J. A. Narus, *Business Market Management: Understanding, Creating, and Delivering Value*, 2nd ed., Upper Saddle River, NJ, USA: Prentice Hall, 2004.
- [8] B. Syahputra, "Branding Strategy Based on Occupational Safety and Health (OSH) Performance in the Shipbuilding Industry," *Maritime Industry Journal*, vol. 5, no. 1, pp. 22–30, 2022.
- [9] D. Kusumawardani, R. Prabowo, and L. Andini, "Client Trust and Safety Communication in Industrial Marketing," *Indonesian Journal of Marketing Science*, vol. 3, no. 4, pp. 112–124, 2021.
- [10] M. Maulana, "Barriers to the Integration of Safety and Marketing Divisions in the Heavy Industry," *Journal of Operations Management*, vol. 9, no. 1, pp. 55–62, 2021.
- [11] Syahputra, R., "ISO 45001 Certification in Marketing," *Journal of Business Safety*, vol. 15, no. 4, pp. 123–130, 2022.
- [12] Lee, S., et al., "Safety Certification & Marketing," *Safety Management Journal*, vol. 20, no. 2, pp. 45–58, 2017.
- [13] Health and Safety Executive (HSE), *Costs of Poor Safety Practices in Shipbuilding*, Industry Report, 2015.
- [14] Government of Indonesia, *OHSMS Regulations*, Government Publication, 2012.
- [15] P. Kotler and K. Keller, *Marketing Management*, 15th ed., Pearson, 2016.
- [16] P. Kotler and G. Armstrong, *Principles of Marketing*, 17th ed., Pearson, 2018.
- [17] H. Setiawan, et al., "OHSMS Evaluation in Shipbuilding," *Journal of Maritime Safety*, vol. 12, no. 3, pp. 215–228, 2019.
- [18] A. Kusnadi and D. Rahman, "Marketing Strategies and ISO Certification," in *Proc. Int. Conf. Business and Industrial Safety*, 2020, pp. 110–115.
- [19] F. Maulana, *Integrating Safety and Marketing in Shipbuilding*, Industry Report, 2021.
- [20] R. W. Griffin and G. Moorhead, *Organizational Behavior: Managing People and Organizations*, 11th ed., Cengage Learning, 2014.
- [21] M. Jensen and M. McMillan, "Shipyards Safety Regulations," *Marine Policy Journal*, vol. 32, no. 2, pp. 142–155, 2017.
- [22] S. Jung and J. Park, "Safety Performance in Shipbuilding," *Safety Science*, vol. 89, pp. 223–231, 2016.
- [23] Occupational Health and Safety Administration, *Workplace Safety & Regulations*, Government Publication, 2019.
- [24] World Health Organization (WHO), *Workplace Safety and Health Standards*, Industry Report, 2018.
- [25] G. Ahlers and C. Kogler, "Safety Culture and Marketing Integration," *Journal of Business Research*, vol. 102, pp. 238–245, 2018.
- [26] P. F. Drucker, *Management Challenges for the 21st Century*, Harper Business, 2014.
- [27] European Agency for Safety and Health at Work, *Effectiveness of OHSMS and Marketing Strategies*, Industry Report, 2020.
- [28] L. Yang and F. Wang, "Impact of Safety on Shipyards Productivity," *Journal of Industrial Engineering*, vol. 27, no. 4, pp. 312–320, 2020.
- [29] S. Jafari and B. Zarei, "Role of Safety in Organizational Performance," *International Journal of Occupational Safety and Ergonomics*, vol. 25, no. 1, pp. 50–58, 2019.
- [30] M. Taylor and P. Roberts, "Safety Records and Client

- Acquisition," *Journal of Business and Industrial Marketing*, vol. 32, no. 6, pp. 820–827, 2017.
- [31] ISO 45001 Standards Committee, *Occupational Health and Safety Management Systems (OHSMS) Guidelines*, Industry Report, 2018.
- [32] P. Roberts and L. Jackson, "Connecting Safety and Marketing Strategies," in *Proc. Int. Conf. Safety and Industrial Management*, 2018, pp. 201–206.
- [33] M. E. Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Free Press, 2008.
- [34] P. Brown and S. Davidson, "Safety and Marketing Synergy in Shipbuilding," *Journal of Safety Research*, vol. 68, pp. 52–60, 2021.
- [35] International Maritime Organization (IMO), *Maritime Safety and Environmental Standards*, Government Publication, 2015.
- [36] K. Lee and S. Choi, "Marketing and Productivity Improvement in the Maritime Industry," *Asian Journal of Shipping and Logistics*, vol. 37, no. 2, pp. 95–104, 2021.
- [37] J. Thomas and R. Thomas, "Strategic Marketing in High-Risk Industries," *Journal of Strategic Marketing*, vol. 28, no. 7, pp. 574–587, 2020.
- [38] S. P. Robbins and T. A. Judge, *Organizational Behavior*, 18th ed., Pearson, 2019.
- [39] International Labour Organization (ILO), *Global Safety and Marketing Standards*, Industry Report, 2017.
- [40] A. Solis and L. Perkins, "Role of Safety in Competitive Industries," *Journal of Business Safety Management*, vol. 14, no. 2, pp. 112–119, 2020.
- [41] V. Kumar and R. Soni, "Marketing Strategies in High-Risk Industries," in *Proc. Global Conf. Marketing and Industrial Safety*, 2021, pp. 145–150.
- [42] M. Hu and D. Liu, "Department Collaboration in OHSMS Integration," *Journal of Occupational Health and Safety*, vol. 66, no. 1, pp. 32–41, 2018.
- [43] R. M. Grant, *Contemporary Strategy Analysis*, 9th ed., Wiley, 2016.
- [44] Safety and Health Council, UK, *Impact of Safety Measures on Business Performance*, Industry Report, 2016.
- [45] R. Johnson and L. Smith, "Impact of ISO 45001 on Shipyard Marketing," *International Journal of Maritime Business*, vol. 15, no. 3, pp. 210–219, 2020.
- [46] C. Walker and K. Dawson, "Integrating Safety and Marketing in Manufacturing," *Journal of Manufacturing Technology Management*, vol. 30, no. 8, pp. 1120–1133, 2019.
- [47] Lloyd's Register, *Safety in Shipbuilding and Operational Efficiency*, Industry Report, 2021.
- [48] S. Yip and X. Huang, "Workplace Safety and Its Role in Industry Marketing," *Journal of Industrial Marketing Management*, vol. 98, pp. 150–157, 2021.
- [49] L. Turner and M. Moffat, "Safety and Marketing as a Strategy," *Business Strategy Review*, vol. 31, no. 1, pp. 44–53, 2020.
- [50] National Safety Council (NSC), *Safety Strategies to Improve Shipyard Productivity*, Industry Report, 2019.