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## THE ALGORITHMS FOR INCORPORATING SUSTAINABLE DEVELOPMENT INDICATORS INTO INTEGRATED REPORTING

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### **Krutova A. S., Nesterenko O. O. The Algorithms for Incorporating Sustainable Development Indicators into Integrated Reporting**

The aim of this article is to address the methodological challenge of reliably developing indicators for integrated reporting, taking into account the need to present a comprehensive picture of the process of value creation by an economic entity in the short and long term while adhering to the fundamental goals of sustainable development. An original classification of quantitative, qualitative, and financial performance indicators of an economic entity subject to disclosure in the company's integrated reporting has been developed, organized by sections of the integrated report. A unified set of indicators has been compiled by sections of the integrated report, with indicators categorized by type (e. g., quantitative, qualitative, and financial), a description of the information they characterize, and an identification of the Sustainable Development Goal (SDG) that the indicator represents to determine the enterprise's contribution to achieving it. An algorithm has been developed to determine the feasibility of calculating and including an indicator in the integrated report depending on its impact on decisions made by interested users, the complexity of the calculation, and the mandatory nature of disclosure in accordance with GRI requirements. The developed methodological toolkit eliminates uncertainty regarding the preparation of integrated reports by economic entities, establishes a theoretical foundation for assessing the appropriateness of disclosing indicators in an integrated report, and enhances the reliability of the integrated report.

**Keywords:** sustainable development; integrated reporting; financial and non-financial indicators; algorithms for determining the appropriateness of disclosing indicators in an integrated report; international standards for integrated reporting.

**Fig.: 1. Tabl.: 1. Bibl.: 16.**

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### **Крутова А. С., Нестеренко О. О. Алгоритми розкриття показників сталого розвитку в інтегрованій звітності**

Метою статті є вирішення методологічної проблеми достовірного формування показників інтегрованої звітності, з урахуванням необхідності відображення цілісної картини опису процесу створення вартості суб'єктом господарювання в коротко- та довгостроковому періоді з дотриманням основних цілей сталого розвитку. Розроблено авторську класифікацію кількісних, якісних і фінансових показників діяльності суб'єкта господарювання, що підлягають розкриттю в інтегрованій звітності компанії в розрізі розділів інтегрованого звіту. Сформовано уніфікований альбом показників за розділами інтегрованого звіту з розподілом показників за видами (наприклад, кількісних, якісних і фінансових) та описом інформації, яку вони характеризують, а також з визначенням цілі глобальної програми сталого розвитку, яку характеризує показник для визначення внеску підприємства в їх досягнення. Розроблено алгоритм визначення доцільності розрахунку та наведення показника в інтегрованому звіті залежно від його впливу на рішення, які приймаються зацікавленими користувачами, складності розрахунку та обов'язковості до розкриття відповідно до вимог МСІЗ. Сформований методичний інструментарій усуває невизначеність у питаннях формування інтегрованої звітності суб'єктів господарювання, створює теоретичну основу для оцінювання доцільності розкриття показників в інтегрованому звіті та підвищує його достовірність.

**Ключові слова:** сталий розвиток; інтегрована звітність; фінансові та нефінансові показники; алгоритми доцільності розкриття показників в інтегрованому звіті; міжнародні стандарти інтегрованої звітності.

**Рис.: 1. Табл.: 1. Бібл.: 16.**

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An important role in establishing the accounting and analytical process for economic entities implementing an innovative project to develop integrated reporting is played by the development of metric systems and methodologies for evaluating the financial and non-financial indicators of the integrated report, which will allow for the most accurate and reliable assessment of the company's performance across various areas. The coordination and implementation in the economic entity's practical activities of the data collection process for calculating and describing indicators can significantly affect the time required to prepare the integrated report. Therefore, the aim of this article is to address the methodological challenge of reliably developing integrated reporting indicators, taking into account the need to present a comprehensive picture of the economic entity's value creation process in the short and long term while adhering to the core objectives of sustainable development.

### ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

In an increasingly complex business environment where financial success is intertwined with environmental, social, and governance (ESG) factors, conventional reporting methods are often inadequate in capturing the full scope of corporate value creation. Integrated Reporting, as conceptualized by the International Integrated Reporting Council (IIRC), provides a more comprehensive disclosure framework that combines financial and non-financial information to offer a holistic view of an organization's performance [1].

An analysis of global trends in the development of integrated reporting suggests that convergence is taking place and that there is a gradual shift from competition among key organizations in the field of standards development over spheres of influence toward establishing a dialogue between them aimed at unifying, standardizing, and harmonizing existing reporting concepts. On the other hand, there is a trend toward the development of integrated reporting that takes into account industry-specific characteristics, which necessitates the development of industry-specific standards for integrated reporting [2]. At the same time, integrated reporting is still not widely adopted, and its quality is generally low due to a number of issues: a lack of alignment between strategy, business model, performance, and prospects; limited availability of descriptions and diagrams; lack of information regarding corporate governance, stakeholder relations, and the materiality process; insufficient use of external audit practices [3].

Integrated Reporting fundamentally reshapes the information landscape by reducing uncertainty,

clarifying risk exposures, and illuminating long-term value drivers beyond traditional financial metrics. Future research should focus on empirically examining the long-term financial and non-financial impacts of IR adoption, particularly in emerging market contexts where evidence remains fragmented. Studies could explore sector-specific implications, such as the role of IR in energy, manufacturing, and financial services, to determine whether the benefits of enhanced governance and transparency differ across industries [4].

Among the main challenges of implementing integrated reporting, N. Yershova cites striking a balance between compliance with transparency requirements and the risks of additional information disclosure; lack of support from senior management; ensuring alignment between the processes of preparing integrated and financial reports; the need to improve the quality of human resources; time constraints; and insufficient consulting support from organizations specializing in the development of standards and regulatory frameworks for integrated reporting [5]. As part of the "Reporting 2025" project, analytical materials titled "Trends in Sustainable Development and Reporting in 2025: Preparing for the Future," which, in terms of general trends in reporting, outline a strengthened response to misinformation by ensuring a balance between accurate, verifiable data and its contextual description [6].

An analysis of the challenges involved in calculating and disclosing integrated reporting indicators, conducted by a team of researchers led by Sandra Cruz, led to the conclusion that the content and quality of integrated reporting have a significant impact on the quality and soundness of managerial decisions made by a company's corporate management. The results confirmed the benefits a company can derive from adopting high-quality integrated reporting. It fosters a long-term vision of corporate management, enhances the dissemination of a culture of sustainability within the company, and promotes integrated thinking, an innovative strategic and cultural approach to corporate management. The limitations associated with adopting integrated reporting were also highlighted [7]. Teresa Izzo and others found that the practice is almost equally balanced between qualitative and quantitative approaches, with stakeholder theory most often used to examine the benefits of IR in managing stakeholder relationships as part of corporate strategy. They highlighted the importance of considering the needs and expectations of various stakeholders in driving the effectiveness of IR [8]. Thomas Gutmayer, Dannielle Cerbone and Warren Maroun examined companies' business model disclosures in their integrated reports and explored the possible determinants

of more detailed business model disclosures [9]. Mohd Simpol and Ali Khan emphasized that qualitative techniques, including interviews, participant observations, ethnography, and action research, should be employed to gain rich, contextual insights into the dynamics of IR development and implementation, underlying challenges, integrated thinking, organizational change, and stakeholder engagement [10]. Besides, in the new tech-empowered era, accountants are not just number-crunchers but also strategic advisors, amplifying their capabilities, calling for a deeper understanding of modern practices and their applications in reporting [11].

Thus, trends in the development of accounting theory and practice indicate a growing interest among stakeholders in the disclosure of quantitative and qualitative indicators in the integrated reporting of economic entities, which requires the development of a generalized model for the formulation of integrated reporting indicators and algorithms for assessing the appropriateness of their disclosure.

#### **IDENTIFICATION OF PREVIOUSLY UNRESOLVED ASPECTS OF THE OVERALL PROBLEM AND THE AIM OF THE RESEARCH**

After the cross-sectoral working group has compiled a preliminary list of integrated reporting indicators, the cost and sequence of collecting information to determine each indicator must be established based on the corporate database of integrated reporting indicators and those proposed by interested users, and only then should a decision be made regarding the appropriateness of disclosing them in the integrated report. The idea of disclosing a particular indicator may be interesting and may characterize the level of sustainable development of the entity's operations, but it may turn out that there is a high probability of certain financial or other difficulties arising that entail excessive risks during the process of collecting information for the indicator's disclosure.

At the same time, when determining the content of the integrated report, members of the cross-sectoral working group should focus not so much on the volume of information disclosed as on ensuring that the integrated report provides a comprehensive picture of the economic entity's value creation process in the short and long-term periods, in accordance with the main goals of sustainable development. Quite rightly, Prof. N. O. Lokhanova highlights the challenges of preparing integrated reports regarding their content, which lie in the difficulty of ensuring the materiality of information; the need to strike a balance between disclosing necessary but not excessive information; and the difficulty of meeting the requirements of various user groups [12].

To avoid the issues identified by the researcher, it is advisable to disclose the rationale for including specific indicators in the integrated report within the integrated accounting policy. This will facilitate a transcendental apprehension of the integrated reporting process by both interested users and its preparers. Transcendental apperception is interpreted by Immanuel Kant as an activity of pure intellect, through which it is using the forms of thought inherent within it, can create the entire range of conceptions and representations from the perceived material of impressions. The eminent philosopher Johann Gottlieb Fichte referred to apperception as the productive power of imagination (*produktive Einbildungskraft*). From the perspective of applying this term in accounting, it is most thoroughly explained by Y. V. Sokolov [13] and I. A. Smirnova, M. V. Stadnyk [14]. In their view, the main difficulty in applying any information system is limited by the apperception of information users. Considering the influence of the subjective factor on the degree of usefulness of accounting information, I. A. Smirnova, M. V. Stadnyk formulate the following rule: the effectiveness of an accounting system is directly proportional to the level of its users' apperception [14].

Consequently, the researchers conclude that the greater the gap between the system's complexity and the users' level of apperception, the less efficient, unnecessary, and even harmful the system becomes. Thus, if a specific indicator in the integrated report does not have a material impact on the decisions made by interested users, is difficult to understand, and is not required to be disclosed under IFRS, the cross-sectoral working group on the development of integrated reporting, through the creation of algorithms and the application of professional judgment, must decide on the appropriateness of calculating it and including information about it in the integrated report. Solving this task requires the development of methodological principles for the calculation and disclosure of integrated reporting indicators in accordance with the conditions of the entity's operations.

#### **METHODS OF THE RESEARCH**

The methodological basis of the study consists of the comprehensive application of systematization methods to develop a multi-criteria classification; comparative analysis to identify the characteristics of accounting representation for different typological groups; structural-logical modeling to construct a scheme for identifying the transition point between creation stages; and generalization to formulate methodological recommendations for the recognition and evaluation of research objects.

## MAIN RESEARCH MATERIAL PRESENTATION

The transition from traditional financial reporting to an integrated approach requires significant organizational changes, including restructuring disclosure practices, enhancing data collection methodologies, and aligning reporting frameworks with globally recognized standards such as the Global Reporting Initiative (GRI) and the Task Force on Climate-Related Financial Disclosures. [1]. Furthermore, companies adopting IR must ensure that their reporting practices provide both qualitative and quantitative insights into corporate performance, enabling investors, regulators, and other stakeholders to make informed decisions. Existing literature suggests that firms implementing IR frameworks experience improvements in financial transparency, risk management, and corporate governance. However, challenges such as regulatory fragmentation, varying stakeholder expectations, and the costs associated with implementation continue to hinder widespread adoption.

Taking into account the range of characteristics of an economic entity's operations and corporate management culture will be facilitated by applying the methodological principles for developing algorithms for deriving indicators in an integrated report, as shown in *Fig. 1*.

After determining the appropriateness of including an indicator in the integrated report, a cross-sectoral working group on integrated reporting should develop a unified set of indicators organized by sections of the integrated report, with indicators categorized by type (e. g., quantitative, qualitative, and financial), and a description of the information they characterize, as well as a definition of the Sustainable Development Goal (SDG) that the indicator represents to determine the enterprise's contribution to achieving it. The integrated report indicator album allows for the distribution of responsibilities for defining indicators among working group members, the development of information reporting schedules, and the establishment of an accounting and analytical process at the enterprise that will meet the requirements of integrated reporting (*Tbl. 1*). It is advisable to present the integrated report indicator album as an appendix to the draft integrated accounting policy, and to disclose the calculation methodology for all indicators listed in the album directly in the methodological section of the order.

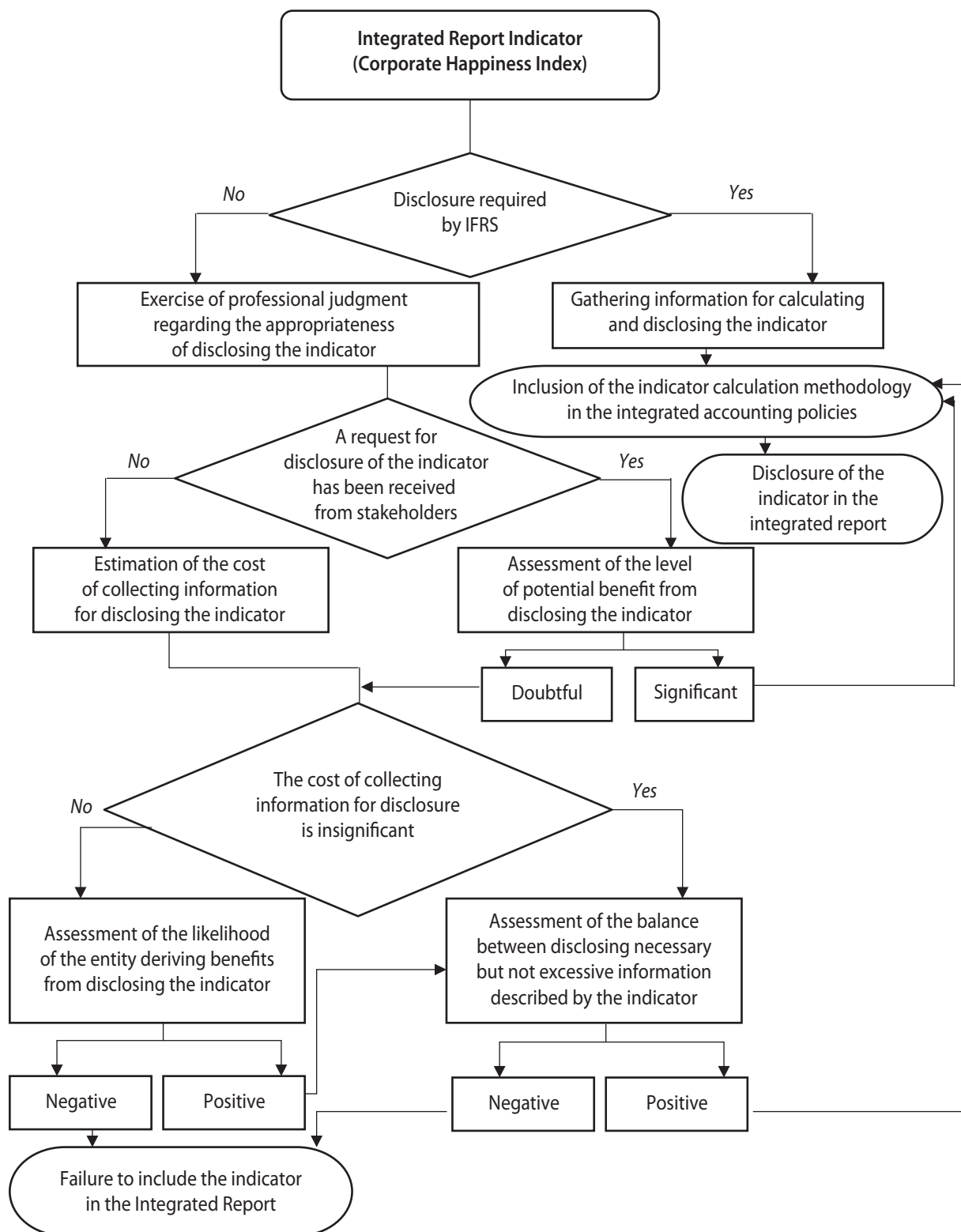
Even during the implementation of an innovative project to develop integrated reporting, changes may be made to the unified set of indicators in the integrated report (such as increasing or decreasing the number of indicators, modifying them, etc.), which must be disclosed in the integrated accounting policies. The content of the unified portfolio of integrated report

indicators will be unique for each economic entity, as it depends on the industry, the size of the enterprise, support for and implementation of sustainable development goals, the content of the integrated report as approved and disclosed in the integrated accounting policy, the information requirements of interested users (potential investors) and actual providers of financial capital to the economic entity, the characteristics of the business model and the availability of capital by type and its use in the value creation process, the variety of risks affecting the economic entity's operations during the reporting period, whether they may influence the entity's strategy and resource allocation in the future, the level of information openness and transparency of the entity, the development of electronic data exchange formats within the enterprise, the qualifications and competencies of members of the cross-sectoral working group on integrated reporting, etc.

The use of the "Unified Album of Integrated Report Indicators" allows for the automatic import of information to calculate indicators into spreadsheets and databases, and for its use in comparative and analytical work by management and accounting/analytical staff, for assessment activities and informed decision-making by stakeholders and financial capital providers. Incorporating the "Unified Album of Integrated Report Indicators" into the integrated accounting policy allows for the design of the form and structure of integrated reporting; to determine the degree of regulation and standardization of information flows; to ensure synergistic interaction among members of the cross-sectoral working group on the development of integrated reporting; to create an automated data processing center infrastructure for calculating and describing the indicators of the integrated report.

## CONCLUSIONS

In recent years, attention to this new reporting tool has grown in both professional and academic fields. However, despite past research that has analyzed many aspects of integrated reporting, the integrated reporting and its determinants are still little explored [15]. The research highlights that Integrated Reporting (IR) has emerged as a transformative framework that redefines the scope and purpose of corporate reporting by bridging financial and non-financial dimensions of performance. The analysis revealed that IR strengthens governance by enhancing board accountability, transparency, and ethical leadership, which are fundamental to sustainable corporate cultures in both developed and emerging markets. Furthermore, IR mitigates information asymmetry, fostering investor confidence and enabling more informed capital allocation decisions.



**Fig. 1. Algorithm for determining the appropriateness of including an indicator in the integrated report**  
Source: developed by the authors.

Table 1

Unified Album of Integrated Report Indicators

| No.                        | IR Section                            | Integrated Report Indicators                                                |                                                           |                                                                          | Information Characterized by the Section's Indicators |                      |                                                                                                                                                                                              | SDG No. |
|----------------------------|---------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                            |                                       | Qualitative                                                                 | Quantitative                                              | Financial                                                                |                                                       |                      |                                                                                                                                                                                              |         |
| 1                          | 2                                     | 3                                                                           | 4                                                         | 5                                                                        | 6                                                     | 7                    |                                                                                                                                                                                              |         |
| Senior Management Messages |                                       |                                                                             |                                                           |                                                                          |                                                       |                      |                                                                                                                                                                                              |         |
| 1                          | CEO Messages                          | Acknowledgments to Employees and Investors                                  | Number of countries in which the company operates         | Annual revenue and % change                                              |                                                       | 8, 9                 | Management Responsibility, Achievements in Economic, Environmental, and Social Areas of Activity for the Reporting Period, etc.                                                              |         |
|                            |                                       | Significant events during the reporting period (both positive and negative) | The company's market share (%)                            | Amount of tax payments                                                   |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | .....                                                                       | .....                                                     | .....                                                                    |                                                       |                      |                                                                                                                                                                                              |         |
| 2                          | Company's General Info                | Contact Information and Background                                          | Number of companies included in the consolidated business | Amount of authorized capital                                             |                                                       | 8, 9, 10, 11, 12, 17 | Whether the company has established production and the ability to operate profitably, management oversight of the company's core business areas, the company's access to key resources, etc. |         |
|                            |                                       | Regions of operation and offices of the economic entity                     | Number of branches                                        | EBITDA (earnings before interest, taxes, depreciation, and amortization) |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | Form of ownership                                                           | Number of jobs                                            | Total assets                                                             |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | Main business areas and segments                                            | Number of full-time employees                             | Capital investment                                                       |                                                       |                      |                                                                                                                                                                                              |         |
|                            | General Information About the Company | Organizational management structure                                         | Number of employees                                       | Portfolio of international orders                                        |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | Membership in organizations                                                 | Share of total Ukrainian production                       | Sales structure by product category or services provided                 |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | Company values and mission                                                  | Percentage of the population that prefers the products    | Operating costs / expenses                                               |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | Stakeholders and mechanisms for cooperation with them                       | Number of foreign and domestic investors                  | Structure of investments from financial capital providers                |                                                       |                      |                                                                                                                                                                                              |         |
|                            |                                       | .....                                                                       | .....                                                     | .....                                                                    |                                                       |                      |                                                                                                                                                                                              |         |

Table 1 continued

| 1 | 2                                           | 3                                                                                                                                                         | 4                                                                                    | 5                                                                                | 6                                                                                                                                                                                                                                         | 7          |
|---|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 3 | Characteristics of the external environment | Overview of the industries to which the enterprise or joint business belongs                                                                              | Structure of production capacity by region of Ukraine                                | Financial independence ratio                                                     | Impact of external environmental factors on the economic entity's operations: economic, political, regulatory, environmental, social, and others                                                                                          | 10, 11, 12 |
|   |                                             | Key laws and regulations governing the economic entity's operations and their amendments                                                                  | Inflation rate and its impact on pricing                                             | Financial stability ratio                                                        |                                                                                                                                                                                                                                           |            |
|   |                                             | Political influence on operations                                                                                                                         | Price levels for similar products                                                    |                                                                                  |                                                                                                                                                                                                                                           |            |
|   |                                             | Development of ICT and its impact on operations                                                                                                           | Number of competitors and their activity                                             |                                                                                  |                                                                                                                                                                                                                                           |            |
|   |                                             | Credit policy                                                                                                                                             | Number of taxes and tax rates                                                        |                                                                                  |                                                                                                                                                                                                                                           |            |
|   |                                             | Population mobility and educational level                                                                                                                 | Number of regular customers and their structure                                      |                                                                                  |                                                                                                                                                                                                                                           |            |
|   |                                             | .....                                                                                                                                                     | .....                                                                                | .....                                                                            |                                                                                                                                                                                                                                           |            |
| 4 | Corporate Governance                        | Composition of governing bodies and breakdown of employees by gender, age, membership in minority groups, and other diversity indicators                  | Number and structure of business processes subject to mandatory review by management | Corporate Governance Quality (CGQ) Index                                         | Assessment of the protection of shareholder rights, the efficiency of the board of directors and the executive board, the implementation of transparency regarding ownership structure, the gender composition of senior management, etc. | 5, 16      |
|   |                                             | Articles of Incorporation and internal documents                                                                                                          | Educational background of management personnel by age, gender, and position          | Integrated Corporate Governance Index of the Ukrainian Institute for Development |                                                                                                                                                                                                                                           |            |
|   |                                             | Dividend Policy                                                                                                                                           | Number of corporate conflicts and methods of their resolution                        | Amount of dividends paid to management personnel                                 |                                                                                                                                                                                                                                           |            |
|   |                                             | List and description of regulations aimed at combating corruption, detecting fraud, and mitigating the negative impact of potential conflicts of interest | Number of calls to the company's "hotline"                                           | Amount of expenses for corporate governance                                      |                                                                                                                                                                                                                                           |            |
|   |                                             | .....                                                                                                                                                     | .....                                                                                | .....                                                                            |                                                                                                                                                                                                                                           |            |

Table 1 continued

| 1   | 2                                 | 3                                                                                               | 4                                                           | 5                                                                          | 6                                                                                                                                                                                                                                                                          | 7        |
|-----|-----------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 5   | Value Creation and Business Model | Characteristics of the basic elements of a company's business model                             | Number of business models of the enterprise                 | Amounts of capital involved in the value creation chain                    | Value creation chain, long-term value creation strategy, business model management system, business model products and services, results of value creation activities and their contribution to long-term capital growth, business model infrastructure and security, etc. | 8, 9, 12 |
|     |                                   | Performance criteria for business model processes                                               | Number of business model products and services              | Return on capital                                                          |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Quality of technological processes based on the results of technological discipline monitoring  | Growth rate of production volumes                           | Capital adequacy                                                           |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Quality of Purchased Products                                                                   | Rate of labor productivity growth                           | Supply of necessary raw materials, materials, and components to production |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Adherence to the equipment maintenance and repair schedule                                      | Rate of progress toward the cost reduction plan             | Net profit of the business model                                           |                                                                                                                                                                                                                                                                            |          |
| 6   |                                   | Description of key technological cycles                                                         | Structure of product and service deliveries                 | Return on invested capital                                                 | Cash flow generated by the business model                                                                                                                                                                                                                                  |          |
|     |                                   | Description of the management system aimed at maximizing the efficient use of available capital |                                                             |                                                                            |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Description of factors affecting value                                                          |                                                             |                                                                            |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Interrelationship of business processes                                                         |                                                             |                                                                            |                                                                                                                                                                                                                                                                            |          |
|     |                                   | .....                                                                                           |                                                             |                                                                            |                                                                                                                                                                                                                                                                            |          |
| 6   | Capital Management:               |                                                                                                 |                                                             |                                                                            |                                                                                                                                                                                                                                                                            |          |
| 6.1 | Financial Capital                 | The set of conditions for the formation of financial capital                                    | The level of expected returns on invested financial capital | EBITDA                                                                     | Structure of financial capital, the process of formation and reproduction of financial capital, functions of financial capital, key financial performance indicators, financial budgets, etc.                                                                              | 8, 12    |
|     |                                   | Sources and directions of financial capital formation                                           | Rate of change in equity                                    | EBIT                                                                       |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Directions of financial capital utilization                                                     | Payback period of the core business model                   | EBT                                                                        |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Financial sustainability line of the business model                                             | Return on investment of the core business model             | NOPAT                                                                      |                                                                                                                                                                                                                                                                            |          |
|     |                                   | Financial policy                                                                                | Return on investment                                        | OIBDA                                                                      |                                                                                                                                                                                                                                                                            |          |
|     |                                   | .....                                                                                           | .....                                                       | .....                                                                      |                                                                                                                                                                                                                                                                            |          |

Table 1 continued

| 1   | 2                    | 3                                                           | 4                                                                        | 5                                                                | 6                                                                                                                                                                                                             | 7                    |
|-----|----------------------|-------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 6.2 | Productive capital   | Physical Composition of Working Capital                     | Share of non-core assets                                                 | Return on own production capital                                 | Fulfillment of production plans, production safety, structure of production capital, production flow indicators, results of production activities, technical condition of production capital components, etc. | 8, 9, 12             |
|     |                      | Sources and directions of formation                         | Degree of utilization of production capital                              | Cost of non-current assets                                       |                                                                                                                                                                                                               |                      |
|     |                      | The role of production capital in the business model        | Volume and structure of own working capital                              | Volume of capital investments                                    |                                                                                                                                                                                                               |                      |
|     |                      | Payback period (term) of capital investments                | Proportion of the working capital component                              | Expected financial consequences of using working capital         |                                                                                                                                                                                                               |                      |
|     |                      | Technical level of the active portion of working capital    | Return on investment of working capital components                       | Volume of leased working capital                                 |                                                                                                                                                                                                               |                      |
| 6.3 | Intellectual capital | .....                                                       | .....                                                                    | .....                                                            | Main areas of R&D, description of the legal framework for innovation, key elements of intellectual capital, their role in the business model, valuation, utilization metrics, etc.                            | 4, 8, 9              |
|     |                      | Inventive activity                                          | Number of patents, utility models, etc.                                  | Value of intellectual capital components                         |                                                                                                                                                                                                               |                      |
|     |                      | Provision of scientific and technical information           | Number of R&D projects                                                   | Investments in intangible assets                                 |                                                                                                                                                                                                               |                      |
|     |                      | Description of industrial property objects                  | Share of new goods and services                                          | Investments in R&D                                               |                                                                                                                                                                                                               |                      |
|     |                      | Description of copyrighted works                            | Share of new intellectual property elements                              | Amount of additional profit generated from intellectual property |                                                                                                                                                                                                               |                      |
| 6.4 | Natural capital      | Submission of copyright applications                        | IRR Efficiency Ratios                                                    | Depreciation of IR components                                    | Environmental protection activities, the role of natural capital in economic processes of supply and production                                                                                               | 6, 7, 11, 13, 14, 15 |
|     |                      | .....                                                       | .....                                                                    | .....                                                            |                                                                                                                                                                                                               |                      |
|     |                      | Plans for the consumption of eco-resources and eco-services | Share of profits allocated to the ongoing restoration of natural capital | Value of natural capital components                              |                                                                                                                                                                                                               |                      |
|     |                      | Environmental policy                                        | Number of environmental protection facilities                            | Costs of acquiring non-current and current natural capital       |                                                                                                                                                                                                               |                      |
|     |                      | Description of energy resources used in operations          | Payback period for environmental protection investments                  | Extent of natural capital consumption in production              |                                                                                                                                                                                                               |                      |

Table 1 continued

| 1   | 2                               | 3                                              | 4                                                                                         | 5                                                                                | 6                                                                                                                                                                                                                                                                                                                                                                        | 7                       |
|-----|---------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
|     |                                 | Environmental protection plans                 | Number of certificates confirming compliance with environmental standards                 | Revenues and expenses from the use of natural capital                            | Sales, energy efficiency of the business model, greenhouse gas emissions, water consumption, and air pollution; current and projected environmental impacts of operations                                                                                                                                                                                                |                         |
|     |                                 | Environmental usage standards                  | Mass of production waste                                                                  | Volume of capital investments in environmental protection                        |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | .....                                          | .....                                                                                     | .....                                                                            |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Union Committee                                | Percentage of women in the workforce                                                      | Budgets for social programs and charity                                          |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Distribution of employees by age               | Number of sick days (average per employee)                                                | Percentage of women in the workforce                                             |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Distribution of employees by employment status | Number of employees with special needs                                                    | Wage fund                                                                        |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Distribution of employees by gender            | Employee turnover                                                                         | Employee training costs                                                          |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Breakdown of employees by specialization       | Average number of training hours per employee per year (broken down by employee category) | Sales volume per employee                                                        |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Distribution of employees by company           | Injury rate, occupational disease rate, of lost days and absenteeism rate                 | Expenses for additional staff incentives                                         |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | .....                                          | .....                                                                                     | .....                                                                            |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Brand portfolio                                | Diversity of management personnel (age, experience, gender, nationality)                  | Goodwill (value of business reputation)                                          |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Stakeholder ranking map                        | Customer retention rate                                                                   | Marketing and after-sales service costs                                          |                                                                                                                                                                                                                                                                                                                                                                          |                         |
|     |                                 | Key stakeholder interests                      | Credit rating                                                                             | Amount of funds allocated to support culture, sports, and municipal institutions |                                                                                                                                                                                                                                                                                                                                                                          |                         |
| 6.5 | Human capital                   |                                                |                                                                                           |                                                                                  | Qualitative characteristics of human capital, quantitative and structural values, the impact of investments in human capital development on the efficiency of its reproduction, corporate happiness index, expenditures on personnel wages, training, professional development, insurance, insurance premiums, and payroll taxes, changes in the volume of human capital | 1, 2, 3, 4, 5, 8, 9, 12 |
| 6.6 | Social and Reputational Capital |                                                |                                                                                           |                                                                                  | Degree of integration of social and reputational capital into corporate strategy, corporate social responsibility, engagement with key stakeholders, metrics for valuing elements of social and reputational capital,                                                                                                                                                    | 1, 2, 3, 4, 5, 8        |

| 1  | 2                                            | 3                                                       | 4                                                    | 5                                                                                                                 | 6                                                                                                                                                                                                              | 7                       |
|----|----------------------------------------------|---------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
|    |                                              | Description of corporate social responsibility          | Percentage of funds allocated to social expenditures | Amount of tax payments to various budgets                                                                         |                                                                                                                                                                                                                |                         |
|    |                                              | Methods of engagement with stakeholders                 | Return on investment in the company's shares         | Expenses for maintaining medical clinics, recreational facilities, and cultural and sports events; employee meals | and the use of social and reputational capital resources to achieve strategic goals and the sustainable development of the business model                                                                      |                         |
|    |                                              | .....                                                   | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
|    |                                              | Risk Classification                                     | Risk Trends                                          | Total Reserves for Risky Operations                                                                               | Information on risks that affect the organization's ability to create value in the short-, medium-, and long-term and on corporate governance mechanisms, as well as the impact of risks on the business model | 1, 2                    |
| 7  | Risks and Opportunities                      | Risk Matrix                                             | Probability of risk occurrence                       | Risk insurance coverage                                                                                           |                                                                                                                                                                                                                |                         |
|    |                                              | Risk management measures                                | Severity of risk impact                              | Risk appetite                                                                                                     |                                                                                                                                                                                                                |                         |
|    |                                              | Description of key opportunities                        | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
|    |                                              | .....                                                   | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
| 8  | Strategy and Resource Allocation             | Description of the company's mission and values         | Number of strategies                                 | Capital required to implement the strategy                                                                        | Information on the company's short-term, medium-term, and long-term strategic goals, and the allocation of resources the company uses to implement its strategy                                                | 8, 12                   |
|    |                                              | Relationship between strategy and capital and resources | Percentage increase in performance indicators (%)    | Volumes of required resources                                                                                     |                                                                                                                                                                                                                |                         |
|    |                                              | .....                                                   | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
| 9  | Operating results                            | Impact on capital across the entire value chain         | Number of acknowledged awards and awards received    | Revenue growth resulting from efforts to improve capital quality                                                  | Qualitative and quantitative information on the results of implementing the business model, key performance indicators, and changes in capital                                                                 | 8, 12                   |
|    |                                              | Links between past and future performance               | Performance trends across all areas                  | Revenues from the implementation of the business model                                                            |                                                                                                                                                                                                                |                         |
|    |                                              | .....                                                   | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
| 10 | Future prospects                             | Expected qualitative indicators for all capital         | Expected quantitative indicators for all capital     | Expected financial indicators for all capital                                                                     | Description of expectations regarding the external environment in the short, medium, and long term                                                                                                             | 1, 2, 3, 4, 5, 8, 9, 12 |
|    |                                              | .....                                                   | .....                                                | .....                                                                                                             |                                                                                                                                                                                                                |                         |
| 11 | Conclusion on the verification of the report | Assurance of qualitative indicators                     | Assurance of quantitative indicators                 | Assurance of financial indicators                                                                                 | Information on the attestation of report indicators by the internal and external audit systems and stakeholders                                                                                                | 1                       |

Source: developed by the authors.

An important role in establishing the accounting and analytical process for economic entities implementing an innovative project to develop integrated reporting is played by the development of metric systems and methodologies for evaluating the financial and non-financial indicators of the integrated report, which will allow for the most accurate and reliable assessment of the company's performance across various areas. The coordination and implementation in the economic entity's practical activities of a unified set of integrated report indicators and an algorithm for determining the appropriateness of their disclosure will significantly impact the time required to prepare the integrated report and provide all stakeholder groups with high-quality information for making informed managerial decisions.

Besides we also have to acknowledge the challenges and considerations associated with AI adoption in accounting, including data security, ethical AI use, and bias mitigation [16]. Organizations must implement robust measures to safeguard sensitive financial information, ensure responsible AI use, and address potential biases in AI algorithms to maintain trust and integrity not only in financial, but in integrated reporting as well. ■

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