

S.N.G.N. Romgaz S.A.

DRAFT

Candidate Profile

CONTENT

1. About the Candidate Profile
2. Description of the role derived from the contextual requirements of the public company and from the Letter of Expectations
3. Description of the selection criteria

1. Description of Candidate Profile

Pursuant to Article 14 of Government Decision No. 639/2023, the Candidate Profile is made up of two components:

- a) Description of the role, derived from the contextual requirements of the public company and the Letter of Expectations;
- b) Description of the selection criteria

2. Description of the role, derived from the contextual requirements of the public company and the Letter of Expectations

Being aware of the importance for the country and the company of the mission of S.N.G.N. Romgaz professional private management, it will undertake to ensure an efficient, transparent and effective corporate governance that will allow the company to achieve excellence in business, to become an operator recognized on the national and international gas market, a leader on the regional energy market by maximizing the existing and future opportunities, contributing to defining Romania as an important player in the field of natural gas in Europe.

The members of the Board of Directors will seek long-term maximization of company profit and consequently of the amount of the dividend. The dividend policy will be responsible, prudent and predictable, adequate to the specific situation of the company and will meet its investment needs.

Additionally, the Board members together with the executive management, must permanently ensure and improve the Quality Management System at company level. The policy concerning quality management must comply with the requirements and expectations of interested parties.

Furthermore, the Board members will promote and maintain a sustained and formalised activity of informing and familiarizing the staff with the principles and provisions of the procedural framework corresponding to the implementation of the National Anticorruption Strategy for 2021-2025, with the legislation on whistle-blowers and will act consistently to maintain integrity at company level.

The Board members will exercise their mandates with prudence and diligence, fulfilling all acts necessary to meet the scope of business of the company. In carrying out the activity, Board members will comply with the principles of ethics and integrity provided in the legislation applicable to commercial companies in general and to public companies in particular.

The Board members and the executive management will ensure maintenance and development of the Internal Management Control System (IMCS), in accordance with the standards of the *Order of the Secretary General of the Government No. 600/2018 on the approval of the Code of Internal Management Control of public companies*, as well as by assimilating good international practices as basis for ensuring transparency towards shareholders, in particular, as well as towards the stakeholders, in general.

The following selection criteria and conditions will be used among others in the selection procedures carried out in accordance with the applicable corporate governance legislation:

1. **General and specific conditions that the candidates must meet**- initial conditions whose compliance conditions the access of candidates to the selection procedure; these are general and specific conditions of the position;
2. **Selection criteria** - competences and characteristics that the candidates need to successfully fulfil their role; these are individual criteria;
3. **Criteria for the composition of the Board of Directors** - set of legal requirements imposed by the applicable legislation regarding the structure of the Board of Directors; these are collective criteria.

General conditions that candidates must meet

The conditions that must be met by all candidates are minimum conditions considered necessary and the selection criteria can help decide between candidates and select certain members of the Board of Directors with required profiles.

- a) Are not in any of the situations referred to in Article 4, Article 12 paragraph (3), Articles 30 paragraph (9) or Articles 36 paragraph (7) of Government Emergency Ordinance No. 109/2011;
- b) Are not in the situation referred to in Article 169 paragraph (10) of Law No. 85/2014 on insolvency prevention and insolvency procedures, as subsequently amended and supplemented;
- c) Are not in the situation referred to in Article 73¹ of Companies Law No. 31/1990, republished, as subsequently amended and supplemented;
- d) Are medically fit;
- e) Have full capacity of exercise;
- f) Have higher education completed at least with a bachelor's degree and a minimum of 7 years of experience in engineering, economic, social, legal sciences or in the field of activity of the public company;
- g) Have experience in running companies or autonomous regies;
- h) Meet all the conditions set out in Government Emergency Ordinance No. 109/2011 and Government Decision No. 639/2023.

SPECIFIC CONDITIONS THAT CANDIDATES MUST MEET

BOARD MEMBER A (1 position):

For the position of member of the Board of Directors authorised as financial auditor and registered in the Public Electronic Registry by the competent authority of Romania, other Member State, the European Economic Area or Switzerland or having at least 3 years of experience in statutory audit acquired by participating in statutory audit missions in Romania or in the audit committees formed at the level of boards of directors/supervisory boards of public interest companies/entities, proven with supporting documents, the following are required:

- a) to be authorised as financial auditor and to be registered in the Public Electronic Registry by the competent authority of Romania, other Member State, the European Economic Area or Switzerland or to have at least 3 years of experience in statutory audit acquired by participating in statutory audit missions in Romania or in the audit committees formed at the level of boards of directors/supervisory boards of public interest companies/entities, proven with supporting documents;
- b) to have higher education completed at least with a bachelor's degree and a minimum of 7 years of experience in engineering, economic, social, legal science or in the field of activity of S.N.G.N. Romgaz S.A.;
- c) to have experience in running companies or autonomous regies;
- d) to have at least 5 years of experience in administering, running, managing or coordinating public or private entities;
- e) to have at least 10 years of work experience.

BOARD MEMBER B (1 position):

For the position of member of the Board of Directors with higher education completed at least with a bachelor's degree and experience in engineering or economic science, the following are required:

- a) to have higher education completed at least with a bachelor's degree and at least 7 years of experience in engineering or economic science;
- b) to have experience in running companies or autonomous regies;
- c) to have at least 5 years of experience in administering, running, managing or coordinating public or private entities;
- d) to have at least 10 years of work experience.

The following persons cannot be selected, nominated, designated and appointed as Board members:

- a) senators;
- b) deputies;
- c) members of the Government;
- d) prefects and sub-prefects;
- e) mayors and deputy mayors;
- f) persons who audited the financial statements of the company in any of the last 3 financial years prior to nomination;
- g) persons who, according to the law, are incapable or were convicted for crimes against property by disregarding trust, crimes of corruption, racketeering, false in documents, tax fraud, crimes stipulated by Law No. 129/2019 on preventing and combating money laundering and terrorism financing as well as on amending and supplementing certain normative acts, as subsequently amended and supplemented;
- h) persons who cannot act as Board members or officers pursuant to Law No. 31/1990, republished, as subsequently amended and supplemented;
- i) persons who were sanctioned by the National Bank of Romania, Fiscal Administration Authority, National Securities Commission or the Insurance Administration Commission and who are listed in the registers of these institutions.

Rules for the composition of the Board of Directors by the Public Supervisory Authority

The Public Supervisory Authority will comply at least with the following rules on the composition of the Board of Directors:

- a) most of the Board members are independent pursuant to Article 138² of Companies Law No. 31/1990, republished, as subsequently amended and supplemented. Civil servants, high officials, as well as other categories of personnel within the supervisory authority or other public authorities or institutions cannot be considered independent;
- b) the Public Supervisory Authority sets objectives in accordance with the provisions of Law No. 24/2017 on issuers of financial instruments and market operations, as subsequently amended and supplemented;
- c) two of the Board members, at most, can be part of the category of civil servants or other categories of personnel within the Public Supervisory Authority or other public institutions or authorities;
- d) at least one Board member is authorised as financial auditor and registered in the Public Electronic Registry by the competent authority of Romania, other Member State, the European Economic Area or Switzerland or has at least 3 years of experience in statutory audit acquired by participating in statutory audit missions in Romania or in the audit committees formed at the level of boards of directors/supervisory boards of public interest companies/entities, proven with supporting documents.

3. Description of selection criteria

A. COMPETENCES

A 1. Competences specific to the field of activity of the Company

1.1 Capacity to understand and analyse technological and operational processes specific to the field of activity of the Company

Description: the ability to understand the structure, functioning and interdependencies of technological and operational processes and to evaluate their effectiveness in relation to the strategic and operational objectives of the organisation.

Indicators:

- familiar with the strategies and business models suitable for the sector in which the company operates;
- knows who the key industry players are and how they relate to each other;
- understands the competitive landscape and how it influences the organisation and the sector as a whole;
- familiar with the principles and technologies used in the specific field of the organization;
- familiar with industry standards, norms and best practices applicable in the industry.

1.2 Capacity to increase Company performance

Description: the capacity to identify the operational, technical and financial challenges of the business, and to contribute to the integration of effective solutions and overcome these constraints, ensuring the continuity and success of operational activities.

Indicators:

- deeply understands the interdependence between technical, operational and financial constraints and can integrate solutions to optimize these aspects at a strategic level;
- adapts quickly to legislative changes and ensures their correct implementation in the organization;
- identifies and interprets relevant legislative changes effectively integrating them into internal processes;
- takes responsibility for providing a working environment that emphasizes compliance with legislation and prevention of safety incidents.

1.3 Capacity to understand, integrate and comply with environmental requirements specific to the activity

Description: the capacity to minimize the negative impact of company activities on the environment, to propose the adoption of optimal environmental protection measures.

Indicators:

- identifies sources of funding to support environmental protection measures;
- knows the legal provisions in the field of environmental protection;
- implements the introduction of and compliance with complex environmental protection standards in the activity of the Company.

1.4 Capacity to integrate safety standards into his/her decisions and actions

Description: the capacity to understand, interpret and apply international and national requirements, regulations and practices related to the scope of work of the Company, ensuring compliance with them in all decision-making and operational processes of the organization.

Indicators:

- demonstrates a clear understanding of relevant national and international regulations and standards or national regulatory authorities;
- develops plans, procedures or policies that include clear operational safety components;
- encourages proactive attitudes towards safety among the team and partners;
- clear and open communication with regulators and other stakeholders about the adopted safety measures.

1.5 Capacity to understand the need and facilitate the investments required to achieve the strategic objectives

Description: the capacity to actively contribute to the projected adequacy of Company infrastructure.

Indicators:

- prepares/requests and correctly interprets investment needs analysis;
- prioritizes the investment effort of the Company according to the national and/or international context;
- takes the necessary steps to analyse the feasibility of planned investments;
- represents the Company internally and internationally to facilitate the approval of vital investments.

A 2. Professional competences of strategic importance

2.1 Capacity to effectively and sustainably manage the physical, financial and information resources of the organisation

Description: the capacity to manage and allocate the resources of the organisation in a way that optimizes long-term performance while complying with the principles of sustainability.

Indicators:

- coordinates the implementation of information and database management systems that support decision-making processes and allow rapid and secure access to the necessary information;
- develops and uses key performance indicators (KPIs) to assess the efficiency of the use of financial, physical and information resources;
- regularly reviews performance and identifies areas for improvement in resource management to ensure optimal and sustainable use of resources;
- integrates sustainability principles into resource management, taking into account environmental impact and the need to reduce waste and long-term costs;
- takes preventive measures to protect the resources of the organisation against loss, theft or major breakdown;
- monitors and controls financial flows, making strategic allocations and taking into account financial risks and external economic trends;

2.2 Capacity to define clear objectives, assess the business environment and implement strategies to ensure the sustainable development of the Company

Description: the capacity to formulate strategic objectives that lead to the achievement of the mission and vision of the organisation, and to develop action plans to achieve these strategic objectives.

Indicators:

- understands the competitive forces that drive strategic choices;
- formulates short, medium and long-term strategic objectives;
- forecasts the resources needed to achieve these objectives;
- forecasts the expected results.

2.3 Capacity to establish an organisational culture based on understanding and meeting customer needs, quality and performance

Description: the capacity to get the members of the organisation he/she leads to follow him/her unconditionally, to achieve the expected results by motivating and empowering employees to go beyond their performance limits to turn an operational objective into a cause to which all employees contribute with great commitment.

Indicators:

- evaluates the performance of its employees and uses the result of the evaluation both to reward them appropriately, to make promotion decisions and to motivate them to self-improve;
- often uses personal example;
- has good powers of persuasion;
- inspires its staff in their professional development;
- gives directions for action and is a driving force of the organization;
- protects their team and employees in cases of organizational conflict;
- is an advocate for change;
- is an example of integrating the organization's values.

2.4 Capacity to adapt to new economic, technological and legislative contexts and resilience to challenges;

Description: the capacity to turn a strategic plan into a budget, to consolidate and cascade budgets, to ensure compliant budget execution.

Indicators:

- analyses strategic objectives and links them to the financial and operational priorities of the organization;
- integrates individual departmental budgets into a centralized budget, ensuring their alignment with the strategic plan;
- coordinates the process of resource allocation between organizational levels to ensure budget coherence and transparency;
- defines clear mechanisms for monitoring budget execution, using regular reports and relevant financial indicators;
- works with teams to optimize processes and avoid waste or inefficient use of resources.

2.5 Capacity to understand the basic principles of corporate finance, to manage costs effectively and to identify, assess and manage risks;

Description: the capacity to perform the due diligence necessary for the organization to implement a reliable system to continuously identify potential risks and to prevent their occurrence and reduce their impact.

Indicators:

- takes a systemic approach;
- correctly understands the potential risk assessment matrix;
- empowers the organization to map risks;
- empowers the organization to create an effective system to reduce both the incidence and impact of identified risks;
- enables the organization to certify its risk management system.

2.6 Capacity to oversee the implementation and development of digitization processes, the use of advanced technologies and their integration into the Company's operations.

Description: the capacity to develop and implement relevant digital strategies and initiatives to improve organizational performance and competitiveness.

Indicators:

- evaluates and adopts the right technology solutions for the organization's needs;
- manages change and overcomes resistance to change within the organization, creating an environment that promotes adaptability and innovation;
- coordinates strategic digitization initiatives at the organizational level, ensuring that technologies are aligned with business objectives;
- constantly assess the impact of digital technologies on the organization's efficiency and performance, adjusting strategies based on feedback and results;
- identifies and uses relevant digital tools to support operational activities.

A 3. Corporate Governance Competencies

3.1 Capacity to establish and maintain constructive and transparent relations with social partners, including employees, trade unions, authorities and other stakeholders

Description: the capacity to coherently meet the social interest of the Company.

Indicators:

- constantly emphasizes and communicates the social interest which is the common ground between the business interests of the Company and the interests of the employees;

- takes an active part in social dialog-information, consultation, social negotiation;
- closely monitors social warning indicators and suggests coherent measures to defuse potential social conflicts;
- contributes to substantiation of decisions with social impact;
- advocates for empowering the Company's directors to conduct a positive and fluent social dialog.

3.2 Capacity to apply the corporate governance principles, in accordance with applicable legal provisions

Description: the capacity to understand the board's responsibilities for monitoring management's performance and monitors the organization's compliance with its legal, ethical or social responsibilities

Indicators:

- contributes to the Board's monitoring of management performance in relation to key business outcomes;
- understands the organization's legal, ethical and social responsibilities and monitors compliance;
- monitors the relationship of the management structure with key external stakeholders;
- assists the board in engaging stakeholders in appropriate ways to determine, account for and report on material economic, legal, ethical, social and environmental interests.

A 4. Social and Personal Competencies

4.1 Institutional communication skills required by the position

Description: drafting and transmission through appropriate media of information and official documents clearly and accurately prepared within the Company or externally in relation to various other entities.

Indicators:

- drafts clear and consistent documents;
- has the ability to synthesize and present information of any kind in a balanced and correct way;
- is able to correctly choose and use different institutional media channels.

4.2 Capacity to represent the Company

Description: the capacity to represent the Company in various environments it is in contact with, to inform on the achievements and good practices developed in the Company, having a contribution to creating a good image of the Company and to raising its profile.

Indicators:

- speaks positively about the Company;
- takes every opportunity to share the Company's achievements and good practices;
- takes a stance when it notices defamatory information about the Company;
- contributes with his/her personal brand to the strengthening of the Company's brand, both outside the Company in various professional circles and inside the Company in relations with various social dialog partners.

A 5. Local and International Experience

5.1 Experience in dealing with public authorities, regulatory and supervisory authorities in Company's business field

Description: the person has gained in previous positions held, experience in dealing with public authorities, regulatory and supervisory authorities in Company’s business field.

Indicators:

- experience in dealing with public authorities, regulatory and supervisory authorities in Company’s business field indicated in the CV or in other documents attached to the candidate file.

1	2	3	4	5
at least 1 year	between 1 and 2 years	between 2 and 3 years	between 3 and 4 years	above 4 years

5.2 Experience in dealing with European Institutions

Description: the person has gained in previous positions held, experience in dealing with European Institutions.

Indicators:

- experience in dealing with European Institutions presented in the CV or in other documents attached to the candidate file.

1	2	3	4	5
at least 1 year	between 1 and 2 years	between 2 and 3 years	between 3 and 4 years	above 4 years

A 6. Specific competences and restrictions for civil servants or other categories of personnel within the public supervisory authority or other public authorities or institutions

6.1 Capacity to implement and monitor public energy policies

Description: capacity to translate national and international strategic objectives into actual actions, ensuring compliance with regulations, efficient use of resources and achievement of planned results.

Indicators:

- analysis public policies and identifies strategic priorities relevant to the energy sector;
- coordinates and maintains communication with other public authorities, international organisations and te private sector to align the efforts;
- facilitates collaboration between stakeholders;
- reevaluates policies and programs in the context of economic, technological or regulatory changes;
- integrates innovative technologies and sustainable practices to optimise processes.

A 7. Alignment with the Letter of Expectations

7.1 Capacity to present specific objectives, measurable, that can be fulfilled/achieved, relevant for the company and time-bound (SMART), these shall be achieved in the next mandate

Description: capacity to refer to strategic objectives from the Letter of Expectations, to implement them by complying with rules for SMART objectives.

Indicators: refers to strategic objectives from the Letter of Expectations, to implement them by complying with rules for SMART objectives.

7.2 Capacity to present the personal profile in direct correlation with these objectives

Description: capacity to present the personal profile in direct correlation with these objectives. Summarizes comprehensively the qualities acquired during the career, corelated with objectives specified in writing and the contextual requirements.

Indicators: presents the personal profile in direct correlation with these objectives. Summarizes comprehensively the qualities acquired during the career, corelated with objectives specified in writing and the contextual requirements.

7.3 Capacity to make coherent assessments on specific challenges the company is facing in relation to the current context

Description: describes in a coherent manner the market, legislative, economic, social and financial context of the Company, making a fair correlation between this context and the Company's previous track record, showing what specific challenges it is likely to face during its next mandate and how it will address them.

Indicators: describes in a coherent manner the market, legislative, economic, social and financial context of the Company, making a fair correlation between this context and the Company's previous track record, showing what specific challenges it is likely to face during its next mandate and how it will address them.

7.4 Capacity to set SMART operational objectives

Description: capacity to determine the operational context of the company in relation to the market, competition and some operational practices in the field and sets SMART operational objectives.

Indicators: determines the operational context of the company in relation to the market, competition and some operational practices in the field and sets SMART operational objectives.

7.5 Capacity to set SMART financial performance objectives

Description: capacity to determine the financial context of the company in relation to the market, competition and some financial practices in the field and sets SMART financial objectives.

Indicators: determines the financial context of the company in relation to the market, competition and some financial practices in the field and sets SMART financial objectives.

7.6 Capacity to set SMART profitability objectives

Description: capacity to set SMART objectives related to increase of income, cost reduction and optimization of operational efficiency.

Indicators: sets SMART objectives related to increase of income, cost reduction and optimization of operational efficiency.

7.7 Capacity to set SMART objectives related to quality of services

Description: capacity to determine the company's situation related to quality of products/services, related to the manner of managing Company's infrastructure, competition and certain practices in the field and sets SMART objectives related to quality cost, number of quality incidents and asset management.

Indicators: determine the company's situation related to quality of products/services, related to the manner of managing Company's infrastructure, competition and certain practices in the field and sets SMART objectives related to quality cost, number of quality incidents and asset management.

7.8 Capacity to set SMART objectives related to the investment policy applicable to the public company

Description: takes note of the Company's investment requirements and Public Supervisory Authority expectations for investments to be realized in the next mandate and defines SMART objectives at each stage of the Company's investment plan for the next mandate.

Indicators: takes note of the Company's investment needs and Public Supervisory Authority expectations for investments to be realized in the next mandate and defines SMART objectives at each stage of the Company's investment plan for the next mandate.

7.9 Capacity to set SMART objectives that meet expectations on debt reduction

Description: takes note of the level of debts at the beginning of the mandate and presents actual, realistic and feasible actions to reduce them, setting SMART objectives in this direction for each year of the mandate.

Indicators: takes note of the level of debts at the beginning of the mandate and presents actual, realistic and feasible actions to reduce them, setting SMART objectives in this direction for each year of the mandate.

7.10 Capacity to set SMART objectives that meet expectations in the area of ethics, integrity and corporate governance

Description: contributes with his/her own beliefs to establish principles of ethics, integrity and morality, as well as to set the principles of good corporate governance of the Company, defining SMART objectives in this respect for each year of mandate.

Indicators: contributes with his/her own beliefs to establish principles of ethics, integrity and morality, as well as to set the principles of good corporate governance of the Company, defining SMART objectives in this respect for each year of mandate.

7.11 Capacity to propose indicators he/she considers appropriate for monitoring performance of the public company during the mandate, correlated with the objectives set

Description: capacity to correlate objectives that meet shareholder's expectations with performance indicators, indicating realistic targets.

Indicators: correlates objectives that meet shareholder's expectations with performance indicators, indicating realistic targets.

7.12 Capacity to outline realistically and comprehensively the picture of possible constraints, risks and limitations to be faced in achieving the proposed objectives and the action plan to reduce/eliminate them

Description: reviews the constraints generated by the context of the Company, the risks arising from them, assesses them in terms of their likelihood of occurrence and their impact, and indicates realistic counter-measures.

Indicators: reviews the constraints generated by the context of the Company, the risks arising from them, assesses them in terms of their likelihood of occurrence and their impact, and indicates realistic counter-measures.

A. CHARACTERISTICS

B 1. Personal and professional reputation

Description: the ability to have a behaviour appropriate to the position.

Indicators:

- the candidate has not been convicted of intentionally committing a crime;
- the candidate has not been deprived of liberty or has not been the subject of a preventive measure involving deprivation or restriction of liberty in criminal proceedings, where an investigation is being conducted into the intentional commission of a criminal offense;
- the candidate has not been given an additional penalty and/or an accessory penalty of disqualification from the practice of professional activities;
- the candidate was not subject to a security measure prohibiting him from exercising his profession;
- the candidate has not been disciplinary or administrative sanctioned by other Romanian or foreign authorities, institutions or bodies in the field of activity of the Company, for professional issues;
- the candidate has not been restricted to carry out activities in the field of activity of the Company by Romanian or foreign authorities, institutions or bodies in the field of activity of the Company.

B 2. Integrity

Description: the capacity to behave with integrity, honesty and transparency towards others and authority.

Indicators:

- understands and fulfils the duties and responsibilities of a board and gets professional training in this respect
- places company's interests before others;
- treats sensitive and confidential information with due discretion and in accordance with the provisions of the mandate contract.

B 3. Independence

Description: certain independence from the authority.

Indicators:

- designs action plans to implement strategies;
- supports points of view with arguments when challenged with divergent opinions;
- requests clarifications and further information in clarifying divergences.

B 4. Political exposure

Description: the candidate is exposed in political activities.

Indicators: degree to which the candidate is involved in political activities.

1	2	3	4	5
the candidate holds a leading position in a political party		the candidate is a member of a political party		the candidate is not a member of any political party

B 5. Interpersonal communication

Description: the capacity to communicate verbally, non-verbally and paraverbal correctly, fluently and coherently, to relate, argue and persuade.

Indicators:

- is able to express his/her ideas fluently and coherently;
- has an appropriate attitude for the message conveyed;
- shows that he actively listens to his interlocutors;
- uses the wording wisely;
- uses the question technique correctly;
- is able to initiate, maintain and develop relationships based on trust;
- uses the process of persuasion correctly.

B 6. Vision

Description: ability to set distinct personal purpose, identity and capacities.

Indicators:

- has a personal professional purpose;
- shows distinct professional identity;
- shows personal capabilities that lead to the goal.

B. Other criteria

C 1. Economic-financial results of companies where the candidate has been board member or director

Description: the documents of the application file, any replies to requests for clarification and the Statement of Intent show the economic and financial results of the companies in which the candidate has been board member or director.

Indicators: the documents of the application file, any replies to requests for clarification and the Statement of Intent show the economic and financial results of the companies in which the candidate has been board member or director.

Score	Description
1	The company went bankrupt/insolvency during the term of office
5	The company did not go bankrupt/insolvency during the term of office

C 2. Tax and criminal records

Description: the candidate's tax and criminal record results from the documents of the application file and possible answers to requests for clarification;

Indicators: the candidate's tax and criminal record results from the documents of the application file and possible answers to requests for clarification.

1	2	3	4	5
has records that do not allow the person to occupy the position according to the law				does not have records that forbid the person to occupy the position according to the law

C 3. Gender criteria

Description: all eligible persons, irrespective of gender, may participate in the selection process.

Indicators: male/female gender criteria

1	2	3	4	5
				M/F

Evaluation criteria, set according to GD No. 639/2023, the minimum collective threshold for each mandatory selection criterion as well as the weight of selection criteria are shown in the Board of Directors Matrix.