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Strategic PR as an Imperative of Internationalization: Mechanisms of Legitimation and Capital Attraction for High-Tech Companies in the AI, IT, and Biotechnology Sectors

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Abstract

The study focuses on how strategic PR is transformed from an auxiliary communication tool into a basic, constitutive function of the internationalization process of high-tech companies operating in the AI, IT, and biotechnology segments. Under conditions of intensifying hypercompetition for financial capital and a persistent deficit of public trust in complex, partly opaque technological solutions, classical marketing approaches lose their status as the key driver of growth. Their place is taken by PR, which begins to perform the role of the main mechanism for legitimizing technologies and business models in global markets and becomes the central channel for aligning expectations between technology companies and their stakeholders. The aim of the study is a comprehensive theoretical and applied analysis of three interrelated pillars of strategic PR: expert positioning of founders as carriers of unique knowledge and bearers of the company's value orientations; integrated communications with investors (IR), which ensure the alignment of expectations regarding risk levels and return trajectories; managed construction and maintenance of international media narratives around companies and the technologies they develop. The methodological basis of the study relies on a qualitative research design and combines a systematic literature review using the Scopus and Web of Science databases with a comparative content analysis of case studies of three representative companies — UiPath, BioNTech, and Google DeepMind. The results of the study demonstrate that PR strategies are purposefully reorganized and adapted to address the specific tasks of internationalization. Expert positioning of the founder acts as an instrument for managing the ethical and epistemic risks of black-box technologies, when the level of transparency of algorithmic decisions is fundamentally limited. The material of the article is addressed to researchers of strategic communications, founders of high-tech startups, and venture investors for whom an analytical assessment of reputational assets and an understanding of their influence on investment decisions and the internationalization trajectories of companies are of fundamental importance.

Keywords: *Strategic PR, High Technologies, Internationalization, AI, Biotechnology, Investor Relations, Expert Positioning, International Media, Reputation Management, Case Studies.*

INTRODUCTION

The modern trajectory of high-tech development is determined by a combination of unprecedentedly accelerating technological progress and intensifying competition for dominance in global markets. This dynamic is underpinned by the exceptionally high capital intensity of the industry. Forecasts for 2024–2025 clearly demonstrate the scale of structural shifts: according to Gartner (2025), aggregate global IT spending in 2025 will increase by 9.8% and reach 5.61 trillion USD [9].

The 2025 dynamics confirm an unprecedented scale of capital investment in AI infrastructure, reflecting a shift from pure algorithmic competition to a race for physical "superintelligence" assets. A key illustrative case is Meta Platforms: in July 2025, Mark Zuckerberg announced investments reaching hundreds of billions of dollars for the construction of next-generation data centers, such as the Prometheus (launched in 2026) and Hyperion (scaling up to 5 GW) "titanium clusters." These facilities, comparable in geographic footprint to Manhattan, underscore the industry's pivot from software-only solutions to the creation of a global physical infrastructure for superintelligence. Simultaneously, the fundraising capacity of Elon Musk's startup xAI, which

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secured up to $12 billion in mid-2025, solidifies artificial intelligence as the primary recipient of global venture capital [30].

In this hyper-capitalized environment, the role of strategic PR becomes paramount. These immense expenditures must be justified to stakeholders, and the potential ethical and social risks of "superintelligence" must be managed through specialized narratives. Strategic PR thus functions not as a servicing but as a constitutive function of internationalization, providing the "trust shell" necessary to sustain such massive resource mobilization.

Current growth is to a large extent fueled by a peculiar venture gold rush. The Mintz report indicates that the global volume of venture investments in companies operating in the AI sector exceeded 100 billion USD in 2024, representing an increase of more than 80% compared to 55.6 billion USD in 2023. The generative AI segment alone attracted 45 billion USD in 2024, almost doubling the 2023 figure; at the same time, the average deal size at late stages grew from 48 million USD to 327 million USD [1]. A similar sentiment background is observed in the biotechnology sector: according to Deloitte, 75% of executives of biomedical companies expect growth in 2025 [10].

At the same time, the exponential expansion of high-tech markets generates a systemic problem. Deep tech products – primarily in the fields of AI and biotechnology – are characterized by high technological and cognitive complexity, often intangible in nature, and are associated with heightened ethical, regulatory and reputational risks. In the field of AI, the black box effect persists, driven by the opacity and difficult interpretability of algorithmic decisions [11], whereas the biotechnology industry faces a persistent trust deficit: a study by Empathy First Media shows that only 16% of consumers consider the marketing communications of pharmaceutical companies to be trustworthy [2].

In this configuration, classical marketing models and traditional theories of internationalization, historically built around the promotion of tangible products and competition for market share, prove to be conceptually and instrumentally insufficient. A pronounced research gap is emerging: the role of strategic communications is systematically underestimated, since they continue to be treated predominantly as an auxiliary component of the marketing mix rather than as a central mechanism of legitimation, reduction of perceived risks, and provision of access to key resources (financial capital, regulatory approval, R&D partnerships).

The aim of the study is a comprehensive analysis of the mechanisms of strategic PR (including expert positioning of founders, investor relations practices and the management of international media narratives) that are used by high-tech companies in the AI, IT and biotechnology sectors for successful international expansion.

The authorial hypothesis is that, under conditions of intensified competition for capital [1] and a persistently low level of public trust in complex technologies [2], strategic PR functions not as a servicing but as a constitutive function of internationalization. It forms a specific trust shell, without which sustained attraction of investors, partners and regulators becomes impossible; at the same time, this shell is transformed into an intangible asset comparable in significance to the intellectual property of the company itself.

The scientific novelty of the study lies in proposing a conceptualization of strategic PR as an integrated system for managing reputational assets (founder, capital, narrative), intended to reduce risks and ensure the legitimation of the entry of deep tech companies into international markets.

To achieve the stated objective, the study is focused on seeking answers to the following research questions:

1. How does strategic PR transform from an auxiliary marketing function into a constitutive element of the internationalization process of deep-tech companies?
2. What specific founder-positioning mechanisms make it possible to effectively mitigate the ethical and epistemic black-box risks when entering global markets?
3. How does the structure of communication narratives within Investor Relations change depending on the startup's stage of maturity and the applied valuation models (Berkus Method vs VCM)?

The theoretical significance of the study lies in extending the Born-Glocal concept through the integration of theories of strategic legitimation and cognitive reputation management. The author proposes to consider PR not as a promotion tool, but as an infrastructure of trust, which constitutes a necessary condition for overcoming institutional and cognitive barriers to entry into strictly regulated markets (Biotech, AI). The study contributes to the development of international business theory by substantiating the shift from product competition to competition among legitimized narratives.

MATERIALS AND METHODS

This study is conducted within the framework of a qualitative methodological paradigm aimed at reconstructing and interpreting complex causal and functional relationships between communication strategies and internationalization processes in the high-tech sector. The methodological design is based on three interrelated and mutually reinforcing components, which together ensure both the theoretical soundness and the empirical robustness of the conclusions obtained.

First, a systematic literature review was carried out and used as a tool for identifying, critically selecting, and subsequently analytically synthesizing relevant scholarly publications. The

search strategy was implemented in leading scientometric databases: Scopus, Web of Science (WoS), IEEE Xplore, and Springer, using thematic and combined search queries.

Second, a comparative case study method was employed, which made it possible to empirically relate and partially test the applicability of theoretical models, as well as to explore specific practices of implementing PR strategies in the context of international expansion. To ensure analytical depth and variability of the empirical material, three representative cases were selected, reflecting target industries and differing development trajectories:

– IT/AI sector (successful scaling): UiPath (Romania/USA), where the focus of analysis was on the narratives accompanying funding rounds, as well as the dynamics of the formation and growth of market valuation;

– biotechnology sector (successful international alliance): BioNTech (Germany), for which the PR strategy of constructing and maintaining an international narrative was examined, along with the communication support of the alliance with Pfizer in the context of developing the COVID-19 vaccine;

– AI sector (reputational failure): Google DeepMind (United Kingdom), where the PR crisis arising from cooperation with the Royal Free NHS Foundation Trust and the subsequent erosion of trust in mechanisms for data use and processing (erosion of data trust) were analyzed.

The case selection criteria were based on purposive sampling in order to ensure maximum variability and representativeness of the data. First, companies from three critical high-tech segments (RPA/IT, BioPharma, General AI) were considered, operating at different stages of the life cycle. Second, a key criterion was the presence of an explicit internationalization strategy targeting entry into the US and EU markets. Third, the sample includes both cases of successful legitimation through alliances (BioNTech) and category leadership (UiPath), as well as a case of reputational failure (Google DeepMind), which made it possible to apply the comparative analysis method to identify the critical success factors of PR strategies.

Third, a comparative content analysis was applied, implemented through a hybrid approach (deductive and inductive coding). The analysis of industry reports (Gartner, Deloitte, Mintz) for 2023–2025 made it possible to extract and systematize quantitative indicators of the market dynamics of AI and Biotech. In parallel, a qualitative content analysis of academic publications and case studies was conducted, during which specialized communication models were deconstructed. Particular attention was paid to the operationalization of Investor Relations metrics: practices of integrating the Berkus Method into PR support for early investment rounds were analyzed, which made it possible to identify a correlation between a reduction in perceived risks and an increase in company valuation.

RESULTS AND DISCUSSION

The analysis demonstrates a qualitative change in communication tasks under the conditions of the internationalization of deep tech companies. Whereas classical B2B marketing is primarily aimed at lead generation and the monetization of an already formed product solution addressed to existing customers or those in the immediate proximity to conversion [20], for early stage startups in the fields of AI, IT, and biotechnology the priority shifts from direct sales to the institutional consolidation of legitimacy. In such cases, the product most often remains technologically incomplete, its practical applicability is not obvious to external stakeholders, and the cumulative risk, including ethical, regulatory, and technological dimensions, remains at an elevated level.

Within this logic, strategic PR performs three interrelated functions: first, the attraction of capital, that is, the formation among investors of confidence in the feasibility, sustainability, and internal consistency of the declared vision of the companys development; second, the securing of approval from regulators through the construction of systematic communication with supervisory bodies and expert structures that ensures formal and actual access to markets (for example, the FDA in the United States, EMA and HTA in the European context [22]); third, the reduction of adoption barriers, consisting in the building of trust on the part of partners and first users and, accordingly, in the minimization of resistance to the implementation of the technology.

An effective PR strategy in this segment relies on the combination of two theoretical frameworks. The first is the Born-Glocal concept [12], according to which a global technological vision (a global narrative) is formed simultaneously with its purposeful adaptation to local regulatory, cultural, and social conditions (local legitimization). The second comprises cognitive approaches to reputation management [14]. Since key stakeholders (investors, the medical community, regulatory institutions) in most cases lack the possibility to directly evaluate the technological core of the product (for example, an artificial intelligence algorithm), they construct judgments based on cognitive heuristics. It follows that the PR strategy must provide them with a set of cognitive elements embedded in social narratives [14], which, on the one hand, simplify the processing of complex information and, on the other hand, create among target audiences a feeling of involvement in the mission of the company [14].

Thus, a key causal relationship is revealed: in deep tech, what attracts the focus of capital is not the technology itself in its technical expression but a legitimized and de-risked narrative about it. Strategic PR acts as the producer and architect of this narrative. Table 1 presents a comparison of the functions of traditional marketing and strategic PR in the context of high technology internationalization.

Table 1. Comparative characteristics of the functions of traditional B2B marketing and strategic PR in the international market entry of high-tech companies (compiled by the author based on [10, 21]).

Metric	Traditional B2B marketing (based on)	Strategic PR (High-Tech Internationalization) (based on)
Main objective	Product sales, lead generation	Legitimation, capital attraction, risk reduction
Key stakeholder	Client (e.g., CIO, CTO, IT manager)	Investor (VC, Angel), Regulator (e.g., FDA, EMA), International media (KOLs)
Main barrier	Price, integration complexity, competition	Lack of understanding of the technology, ethical risk (black box), trust deficit
Key instrument	Content marketing (Case Studies, White Papers), Trade Shows	Investor Relations (IR), expert positioning of the founder, crisis management
Key KPI	Customer acquisition cost (CAC), Marketing Qualified Leads (MQLs)	Company valuation, obtaining regulatory approval, share of voice on ethical issues

In the deep tech segment, where the final product often does not have a material form or is predominantly at the stage of research and development (R&D), the figure of the founder effectively becomes the central reputational asset of the organization. The founder becomes the personalized carrier of the complex technology and the primary mediator of trust in it in the external environment. In such a configuration, the Founder Thought Leadership strategy [6] ceases to be a tool for the individual promotion of a personal brand and acquires the status of a critically important mechanism for managing ethical risks, while simultaneously providing the technology with institutional legitimacy.

The analysis of the case of the robotics startup CORE demonstrates the functioning of this mechanism in a practical dimension. The study notes that the conference presentations of the founder performed a dual function: on the one hand, they served as a channel for the presentation and promotion of the product, and on the other, they initiated the process of forming an ethical platform for the systematic study of the impact of robotics on employment. By its nature, being constructed as a PR initiative, this platform was deliberately used as a tool for lowering the barrier to adoption of the technology, namely for reducing anxiety associated with the fear of job losses [6]. Thus, the public acceptance by the founder of responsibility for the ethical consequences of implementing the solutions being developed became the basis for the recognition of the technology as legitimate in the eyes of key stakeholders.

This logic correlates with the approach of the IEEE Standards Association (IEEE-SA) [24], where an expert positioning strategy is applied to translate the complex topic of standards into categories understandable to end users and other target audiences. The founder of an AI startup entering international markets is compelled to perform a similar role: to interpret the abstraction of the black box [11] in terms of social or economic utility, while simultaneously acting as the public ethical guarantor of the technology being developed.

The process of such a transformation can be conceptualized in the form of the Founders Legitimation Model (Fig. 1).

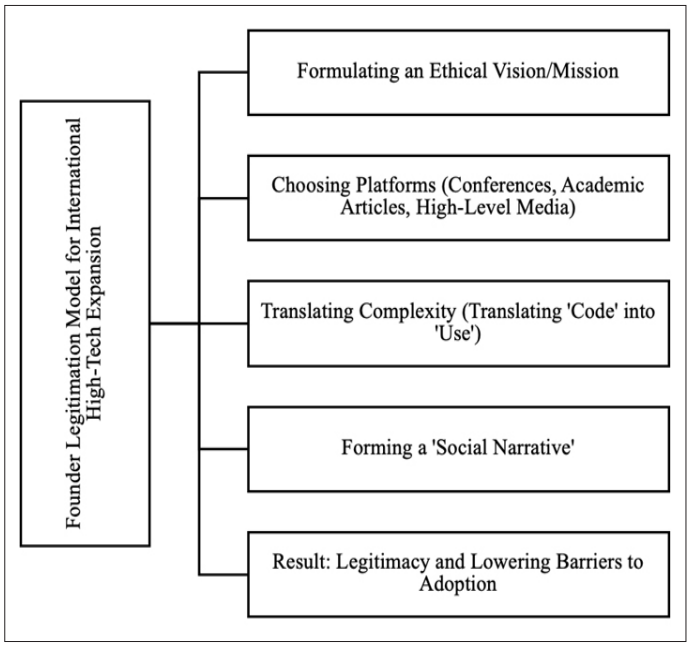

Fig. 1. Founder Legitimation Model for International High-Tech Expansion (compiled by the author based on [6, 12, 24]).

The proposed founder legitimation model (Fig. 1) visualizes the process of converting the leader's personal intellectual capital into institutional trust in the company. The model is based on three vectors:

1. Ethical guarantor: the founder assumes public responsibility for the safety of black-box technology.
2. Interpreter of meanings: translating complex scientific abstraction into the domain of socio-economic value.
3. Ecosystem architect: building around the company a pool of experts (KOLs) who confirm the scientific validity of the solutions. Under conditions of international expansion, this model enables the startup to overcome the liability of foreignness, replacing it with the authority of a globally recognized expert leader.

Under conditions of investment fever, especially in the AI sector, communications with investors (Investor Relations, IR) become the key battleground for resources. Figure 2 illustrates the scale of this competition.

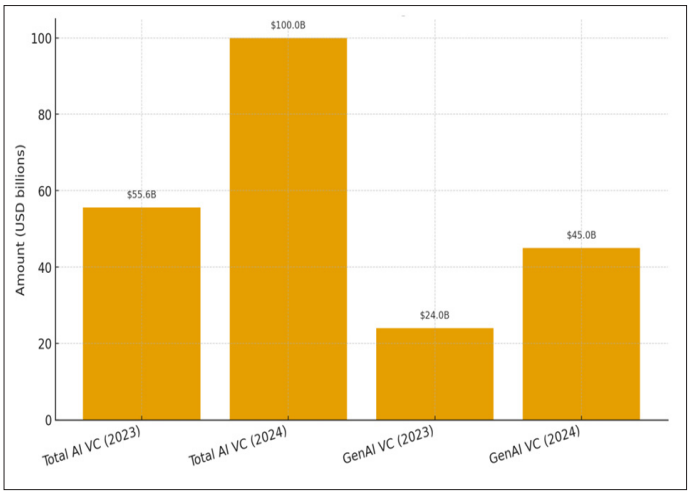

Fig. 2. Dynamics of global venture financing in the AI sector (2023–2024) (compiled by the author based on [1, 21]).

The contour of financial communications, which includes the investor relations (IR) function, is embedded in the organizational architecture of a startup as one of the primary communication subsystems [15, 26]. At the early stages of the life cycle, this function is almost never outsourced or delegated to external consultants but retains the character of the direct responsibility of the founders. In terms of the timing of institutionalization, it, as a rule, precedes the launch of systematic marketing activities and the subsequent involvement of professional PR specialists.

The key analytical conclusion is that the PR narrative aimed at investors by its very nature cannot be fixed and constructed once and for all: it must evolve depending on the degree of maturity of both the startup itself and the investment stakeholder. According to data from Utrecht University [7], at the very earliest stage (Angel Investors) the structure of communication relies predominantly on soft signals: the decisive role is played by founder chemistry and convincing founder narratives. As the company moves to institutional stages (venture funds), the center of gravity of trust shifts towards formalized indicators, namely the ability to consistently achieve target KPIs, the presence of established corporate governance structures, and sustainable trust in the team [7].

This adaptability is directly manifested in how the PR function incorporates valuation methods into the repertoire of strategic communication tools with investors.

Pre-revenue stage. At this step, qualitative approaches to valuation dominate, in particular the Berkus method (Berkus Method), which in the literature is described as a simple, straightforward, and intuitive tool that makes it possible to assess risk-reducing elements. Accordingly, during this period the PR narrative focuses not on future revenues that have not yet materialized, but on the results already achieved in derisking the project: emphasis is placed on the presence of a strong and complementary team, a completed or nearly completed product prototype, and established strategic partnerships [8].

Early-revenue stage. At the subsequent phase, the Venture Capital Method (VCM) [25] begins to be applied as the basic valuation logic, inseparably linked to the construction of detailed financial forecasts. At this moment the PR narrative communicates a shift from an appeal to abstract potential to the demonstration of scalability and empirically verifiable unit economics, that is, the ability of the business model to scale sustainably while maintaining acceptable marginal indicators.

Illustrative in this regard is the case of the Romanian-American company UiPath, which demonstrates such a transition. In 2018 the startup raised 153 million USD in a Series B round at a valuation of 1.1 billion USD [3]. Achieving this valuation level was to a significant extent the result of a PR strategy of repositioning: instead of the image of a regional IT outsourcer from Eastern Europe, UiPath was presented as an undisputed global leader in the rapidly growing category of Robotic Process Automation (RPA). This reconfigured narrative created for investors a cognitive basis for perceiving the company through the lens of a market leader and thereby legitimized the use of elevated valuation multiples typical precisely for leading players in the segment.

The corresponding adaptive PR narratives by stages of startup development and the valuation approaches applied are presented and systematized in Table 2.

Table 2. Matrix of valuation communication narratives for high-tech start-ups (compiled by the author based on [3, 8, 25]).

Stage	Target investor	Valuation method (as a PR tool)	Key PR narrative
Pre-revenue (Pre-Seed / Seed)	Business angel, seed fund	Berkus method (qualitative)	We have mitigated the risks: the narrative focuses on the quality of the team, the existence of a prototype, strategic partnerships and idea validation.
Early-revenue (Series A / B)	Venture capital fund (VC)	Venture Capital Method (quantitative)	We are scalable: the narrative focuses on product–market fit (PMF), clear unit economics, growth forecasts and market share capture (Example: UiPath).

For B2B high-tech companies, especially those operating in the fields of artificial intelligence and biotechnology, international media serve primarily not as a channel of direct promotion, but as an instrument of intellectual legitimization and education. For stakeholders, the value of the media space lies not in the volume of advertising exposure, but in

access to expert judgments and institutionally sanctioned interpretations. As follows from the data presented in Figure 3, it is precisely the B2B segments (IT services and software) that make the largest contribution to the structure of global IT expenditures, which underscores the fundamental importance of media strategies initially designed for B2B audiences.

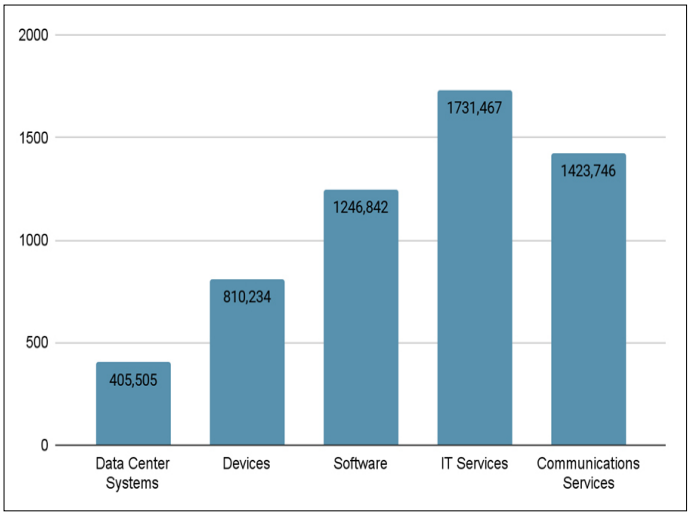

Fig. 3. Projected structure of global IT spending in 2025 (by segment) (compiled by the author based on [9]).

Traditional PR tools, relying primarily on the mechanical distribution of press releases and episodic contacts with mass media, prove conceptually untenable for the interpretation and promotion of complex, science-intensive technologies and products. An analytical review of existing approaches [19, 27] shows that under contemporary conditions a transition to the Digital PR paradigm is required, within which communication is constructed not as a set of isolated activities but as a long-term digital ecosystem. In such a configuration, PR functions as an integration of the following interrelated, complementary components:

SEO (Search Engine Optimization): the focus shifts from short-term entry into the field of vision of the audience to sustainable, systematically reproduced dominance in search results for key problem-oriented queries. These queries reflect the real pain points and practical tasks of target stakeholders that the implemented technology is intended to address.

B2B Content Marketing: a corpus of epistemically validated, authoritative and evidence-based content (white papers, academic publications, industry analytical reviews) is constructed, which does not merely indirectly support sales but in fact shapes the market itself. Such content sets the conceptual apparatus of the industry, clarifies the taxonomy of solutions and articulates the criteria for their comparative evaluation [27].

Influencer / KOL Marketing: the focus of communication shifts from reaching a mass audience through popular bloggers to working with Key Opinion Leaders (KOLs) - leading industry analysts, researchers and engineers. It is precisely their expert status and reputational weight in professional communities that become the key mechanism for generating trust and reducing perceived risk in the implementation of innovative, particularly breakthrough solutions [19].

Goal-setting within such a strategy changes fundamentally: the task is not to appear in the news once and create a short-term information spike but to occupy the position of a stable reference source that other participants in the ecosystem systematically cite. In this capacity, digital communication begins to perform the function of a validator of the technology, institutionalizing its scientific soundness and market legitimacy.

Case study: BioNTech (Germany). The success of BioNTech on the global pharmaceutical market serves as an illustrative example of a strategically constructed PR architecture [4].

Country-of-origin management: as a German biotechnology company, BioNTech was initially in a potentially vulnerable position in the United States market, which is key for the pharmaceutical industry, where local corporations dominate and regulatory, clinical and reputational standards are particularly stringent.

Strategic alliance as PR: the communicative framing of the partnership with Pfizer (United States) [4] functioned not merely as a business transaction but as a highly effective reputational instrument. On the one hand, the alliance provided BioNTech with immediate access to large-scale manufacturing capacities and an extensive clinical trial infrastructure in the United States; on the other hand, it endowed the company with substantial reputational capital. The involvement of the global pharmaceutical leader Pfizer in this alliance in effect functioned as an institutional guarantee of the quality, reliability and scientific validity of the German mRNA technology.

Narrative control: the joint PR communication of BioNTech and Pfizer was characterized by a high degree of discipline and was deliberately focused on two semantic pillars, scientific novelty (a breakthrough in mRNA technologies) and effectiveness (95%). At the same time, topics of commercial benefit, political aspects and national differences were consciously minimized and bracketed out. This configuration made it possible to form a unified, depoliticized and globally scalable narrative of trust [4].

Entry into international markets for deep tech companies is associated with specific risks that are heightened compared to other sectors, both regulatory and reputational, and the management of these risks naturally becomes one of the central functions of PR.

Barriers in biotechnology: the biotechnology sector faces a multi-level and fragmented system of regulatory constraints, especially in the European context (GDPR, Health Technology Assessment (HTA)) [22]. An additional complicating

dimension is the need to translate highly technical, often strictly specialized data into communication formats that are accessible and relevant not only to domain experts but also to regulators, patient organizations, as well as financial and strategic investors [23]. Against this background, the trust deficit becomes a key resource constraint [2]. The strategic task of PR in biotechnology consists in the systematic prevention of excessive hype (Avoid Overhyping), in the formation of realistic, empirically grounded expectations and in the parallel construction of empathic communication that emphasizes the human dimension of scientific developments and their impact on quality of life (BusinessWire, 2024) [23].

Barriers in AI: in the field of artificial intelligence, ethical and social risks come to the forefront. Among them are the opacity of algorithms and models (black box) [11], structural biases embedded in training datasets and algorithmic procedures, as well as the potential of AI technologies to reinforce and scale disinformation [28]. The combination of these factors forms a kind of reputational time bomb: the effects of undermined trust may manifest with a delay but have extremely large-scale consequences for individual companies and for the industry as a whole.

The Google DeepMind and Royal Free case study constitutes an almost textbook example of a strategic PR failure arising from a profound misalignment between the publicly constructed narrative and the actual architecture of medical data use.

PR Narrative: In its official communications, DeepMind consistently asserted that access to the data of 1.6 million NHS patients had been granted solely for the development of the clinical application Streams, aimed at the early detection of acute kidney injury (AKI) [5].

Analysis of the failure: In the case of Google DeepMind and their project with the Royal Free NHS Foundation Trust, the critical PR error lay in the illusion of transparency. The development of the Streams application was presented as a humanitarian initiative; however, the PR function failed to proactively comment on the transfer of data without explicit consent. As a result, when the Information Commissioner's Office (ICO) deemed the arrangement legally untenable, a domino effect emerged: trust was undermined not only in DeepMind, but also in the very concept of using AI in healthcare in the UK. This confirms the thesis that in Deep Tech, the PR narrative must be narrower than the legal boundaries of permissibility in order to preserve an ethical margin of safety.

PR crisis: Once the gap between the declared and the actual regimes of data handling became a matter of public debate, there was a rapid erosion and subsequent collapse of trust in data. DeepMind, which had been building an identity as a normative-ethical leader in the field of AI, effectively lost the ability to manage the interpretation of what had happened and to control its own narrative, which was captured by the media and key stakeholders [13, 16].

The lesson of this case is that, in the context of high-tech companies, PR positioning and public commitments should be more restrained and narrower in their substantive scope than the legal scope of rights codified in contractual language, rather than the other way round. In an ideal configuration, the strategic function of the PR department should have manifested itself in blocking such an agreement already at the stage of its negotiation as one that was manifestly reputationally toxic and generated long-term risks for trust in the company and in the regime governing the handling of its data [5].

Traditional PR metrics, including indicators such as the number of media mentions, in the context of legitimation tasks and investor relations, almost completely lose substantive analytical significance: they primarily reflect the scale of the information noise surrounding the company, but provide almost no insight into the degree of institutional trust or into how the organization is perceived by key stakeholders. As a result, there emerges a need for a radical revision and redefinition of the system for measuring PR effectiveness, which can be conceptualized as unfolding in two interrelated stages.

Shift of emphasis towards business KPIs: The PR function is forced to demonstrate its significance in coordinates directly linked to product economics and the company's growth trajectory. A more relevant analytical framework is the assessment of the impact of PR activity on the basic business indicators of a start-up: reduction of Customer Acquisition Cost (CAC), acceleration of Monthly Recurring Revenue (MRR) dynamics, and improvement of Customer Retention Rate (CRR). It is precisely changes in these metrics that make it possible to interpret PR not as a cost-intensive image center but as a measurable driver of scalable company growth [18].

Shift of emphasis towards predictive KPIs: The upper level of the evolution of the measurement system is the use of AI itself as an instrument for assessing and optimizing PR in AI companies. The MIT Sloan Management Review report [17] shows that organizations implementing AI technologies to revise and calibrate their KPIs are three times more likely to record substantial financial gains compared to those that do not. The integration of AI makes it possible to construct predictive (prognostic) and prescriptive (normatively prescriptive) KPIs that model and identify reputational risks before they materialize, thereby moving PR management from a reactive fire-fighting mode to a proactive, risk-oriented format of strategic management of how the company is perceived.

MANAGERIAL IMPLICATIONS

Practical recommendations for executives of high-tech companies are reduced to the need to integrate the PR

function into strategic planning from the earliest stages (Pre-seed). Founders should regard the building of Thought Leadership not as an image project, but as a process of creating an intangible asset that directly affects valuation multiples. Investments in expert content and an ethical audit of communications should precede large-scale expenditures on lead generation.

For investor relations (IR) professionals, the key conclusion is the need for an adaptive narrative. At early stages, communication should be structured around risk minimization (team, patents, partnerships), using the logic of the Berkus Method. When transitioning to Series B rounds and above, the focus should shift toward proven scalability and unit economics. A mistake is to use the visionary language of early stages when communicating with institutional funds that require verifiable data.

In the context of international expansion, managers are recommended to use a reputation landing strategy—entering into alliances with leading local players (as in the BioNTech–Pfizer case). This makes it possible to borrow the trust of the local market and the regulator, significantly reducing the time required to legitimize the technology. In this case, PR serves as a bridge connecting global innovation with the local context of safety and regulation.

Finally, the implementation of predictive KPIs for assessing reputation is necessary. Management should move away from reach metrics (Reach) toward metrics of share of voice in ethical discourse (Share of Voice in Ethics) and sentiment analysis of statements by key opinion leaders (KOLs). The use of AI tools to monitor weak signals of dissatisfaction in professional communities will make it possible to prevent crises similar to the DeepMind case before they enter the mass media space.

RESEARCH LIMITATIONS

The limitations of the study are обусловлены by the qualitative nature of the design and the focus on the Western business model of internationalization (the US and the EU). The findings may have limited applicability to markets with other types of institutional environments (for example, China or Southeast Asian countries), where legitimation mechanisms depend more on state guarantees than on public PR positioning. In addition, the high dynamism of the AI sector may lead to a rapid transformation of the identified trends in the area of Investor Relations.

CONCLUSION

The analysis conducted shows that in the sectors of artificial intelligence, information technology, and biotechnology, strategic PR functions not as an auxiliary activity, but as one of the key system-forming mechanisms of internationalization. Under conditions of increasing technological complexity, intensifying ethical and legal conflicts, and growing competition for capital, it is PR that begins to perform a constitutive role in shaping the legitimacy of the company and trust in the technologies it employs on the part of external stakeholders.

Achievement of the research objective was ensured through the analytical decomposition of this constitutive function into three fundamental mechanisms.

Expert positioning of the founder is identified as the central tool for managing ethical risks. The figure of the founder in high-tech companies becomes a personalized communicative interface between the black box of a complex technology and the external environment, including investors, regulators, the professional community, and the general public. In this way, the founder acts as a public ethical guarantor and interpreter of the value created by the technology, translating abstract technical solutions into comprehensible categories of responsibility, safety, and social significance.

The system of Investor Relations is identified as an early strategic resource based on adaptive narratives. PR communications are embedded in the process of constructing the perception of the company's value, serving as a link between valuation models and market expectations. At the pre-revenue stage, qualitative approaches (the Berkus Method) play a key role, allowing the level of uncertainty and perceived investment risks to be reduced by articulating factors of value that cannot yet be monetized. At subsequent stages of the company's development, as stable financial indicators emerge, quantitative models (VCM) acquire dominant importance, allowing scalability, market capacity, and growth potential to be demonstrated in a logical and well-substantiated manner.

International media and strategic alliances (using the BioNTech case as an example) function as a mechanism for achieving educational dominance in the chosen niche and simultaneously verifying the technology through the authority of the partner. This mechanism acquires particular significance in situations where the perception of the product is substantially influenced by the reputation of the country of origin and the quality of its institutional environment. Under these conditions, PR policy must take into account that trust in the product is partially mediated by the image of the national jurisdiction, while international partnerships and media platforms become channels for recoding this image.

The hypothesis advanced by the author, namely that PR constructs a specific trust shell without which neither sustainable growth nor successful international expansion of high-tech companies is possible, has been fully confirmed. The illustrative failure to form such a shell, demonstrated in the Google DeepMind case, shows that even radical technological superiority is not automatically converted into market or regulatory dominance. The gap between the external public narrative and the internal organizational reality leads to an irreversible collapse of trust in data and

undermines the legitimacy of both the technology and the organization, which is particularly critical for AI companies.

Prospects for further research are associated with an in-depth study of the possibilities of using AI models for predictive and prescriptive management of ethical and reputational risks within PR activities. In this way, a closed loop can be formed in which advanced technologies are used to manage the perception of advanced technologies themselves, ensuring continuous calibration of trust and legitimacy in a rapidly changing institutional and market environment.

With regard to the author's contribution, the study makes a fundamental contribution to the theory of strategic communications and international business by proposing a radical revision of the hierarchy of functions within a high-tech company. It is demonstrated that under Deep Tech conditions, narrative legitimacy becomes an asset equivalent in significance to intellectual property (IP). A shift is postulated from competition in technical characteristics to competition among systems of trust. The practical significance of the work lies in providing founders and investors with a verified toolkit for de-risking international startups. The developed models make it possible to transform PR from a cost item in the budget into a strategic lever for managing company value, ensuring business resilience under conditions of high uncertainty and a deficit of public trust in the technologies of the future.

Further development of this topic is seen in a transition from qualitative case analysis to the development of quantitative models measuring the correlation between the parameters of the trust envelope and the market capitalization of deep-tech companies. A promising vector is the study of the influence of generative AI on the processes of automated formation of reputational narratives and risk management in PR. Research may be focused on the development of algorithmic systems for monitoring the ethical gap, which will enable startups to calibrate their communications in real time depending on changes in the regulatory environment of different jurisdictions. Comparative analysis of legitimation strategies under different sociocultural paradigms also warrants attention, in particular, comparing the Western model of transparency with Eastern models of state–private trust.

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