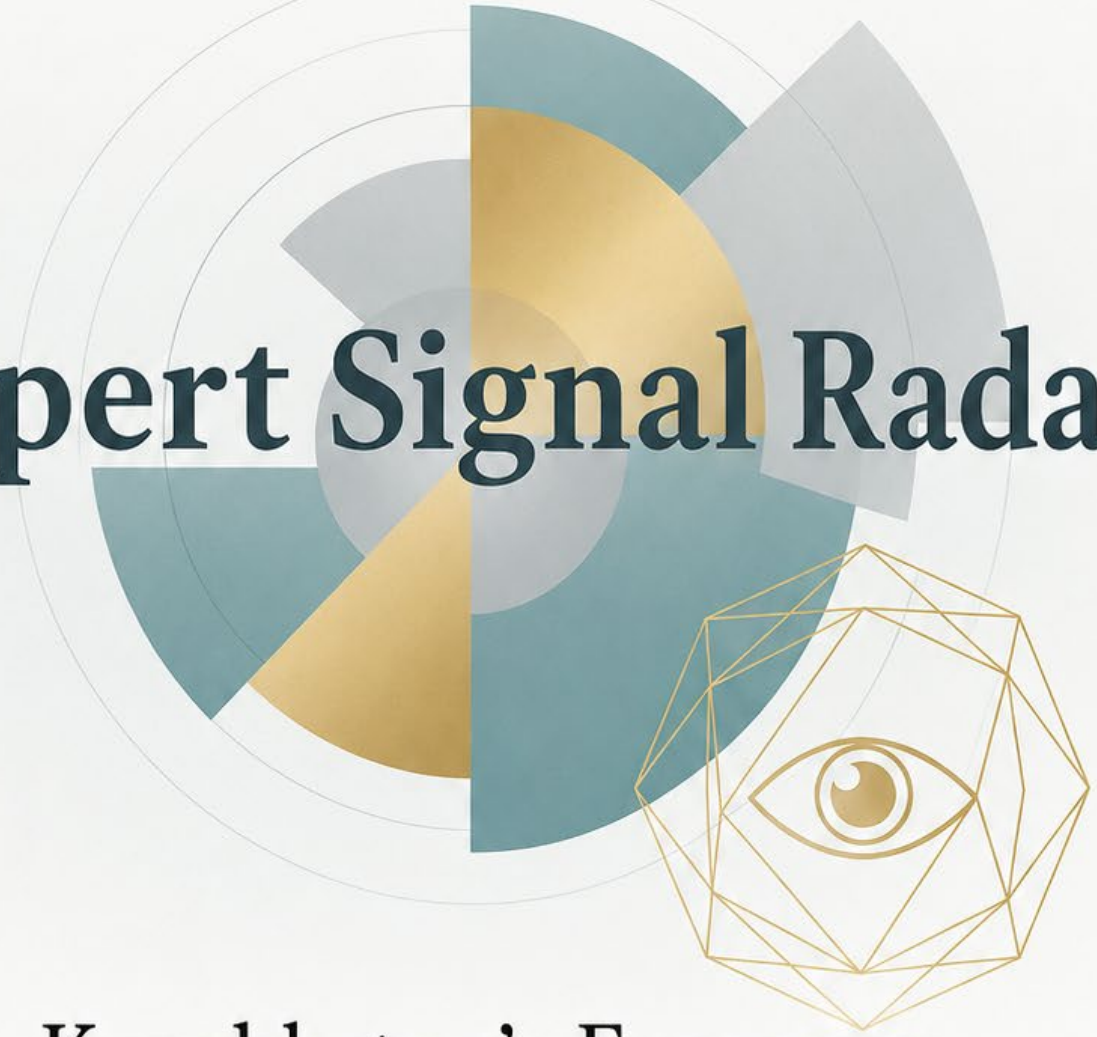
TALAP

Center for Applied Research

Strategic Foresight in Kazakhstan



Expert Signal Radar

Kazakhstan's Economy

Q1 2026

First baseline reading • Five expert lenses • Over 300 publications

Pilot Issue (MVP)

1. Why Kazakhstan Needs Strategic Foresight

The world in which public and corporate decision-making could rely on linear forecasts, relatively stable scenarios and responses to events that had already materialized is receding into the past.

Uncertainty is no longer a temporary deviation from normal conditions. It has become a permanent feature of decision-making. Economic shocks, technological disruptions, sanctions constraints, energy imbalances, logistics failures and social tensions may unfold simultaneously, reinforce one another and make it difficult to manage development on the basis of a single predetermined scenario.

Under these conditions, **strategic foresight** is becoming part of the modern decision-making cycle.

- **The European Union** is developing foresight as an element of resilience policy, enabling earlier assessment of long-term risks and the adaptation of economies, institutions and infrastructure to prolonged turbulence.
- **The OECD** promotes anticipatory governance practices, in which public decisions are assessed for their robustness under different scenarios before they are implemented.
- **In the corporate sector**, the international standard ISO 56006:2021 establishes strategic intelligence as a regular process for identifying external changes, risks and opportunities.
- **The United Nations** has incorporated strategic foresight into the UN 2.0 architecture as one of the five key capabilities required for work in crisis-prone and rapidly changing environments.

For Kazakhstan, developing its own strategic foresight capacity is becoming an important condition for managing national development in a more volatile external environment. Commodity cycles, export routes, sanctions regimes, energy constraints, technology chains, investment expectations and changes in neighboring markets are largely shaped beyond the country's direct control. At the same time, they quickly affect the domestic economy, fiscal sustainability, business activity and public expectations. Strategic foresight is a tool that can help Kazakhstan assess in advance how external changes may affect domestic processes, strengthen national adaptive capacity and improve the ability of institutions to act proactively.

The TALAP Center for Applied Research has developed an expert-based strategic foresight methodology grounded in international experience and adapted to Kazakhstan's context.

This document is the **pilot issue** of the Expert Signal Radar. It does not claim to provide a representative measurement of the entire economic agenda and does not replace a macroeconomic forecast. Its purpose is to demonstrate how an expert source base can be used to identify early signals, connect them into systemic nodes and model possible cascades of change.

2. What Solution TALAP Proposes

The methodology developed by the TALAP Center for Applied Research is based on the analysis of expert opinions, which are integrated through the analytical language of strategic foresight and artificial intelligence.

- **Expert lens.** TALAP proceeds from the view that an expert is a professional shaped by long-term immersion in a sectoral environment. Experts continuously compare official statistics with observed practice, and formal declarations with informal signals emerging from their professional environment. Each expert develops an expert lens: a professional view of how facts, constraints, risks and consequences are connected within the context of real events.
- **The language of strategic foresight.** Traditionally, different expert views are either averaged or described through their differences. The new methodology proposes integrating different expert lenses through the analytical language of strategic foresight and modern technologies. This language makes it possible to compare expert views through signals, nodes, cascades and degrees of manifestation.
- **Artificial intelligence tools.** AI is used as part of a computational pipeline that provides scale and speed in collecting and processing input data, structuring it and supporting selected stages of preliminary analytical processing. Substantive oversight and validation of results remain the responsibility of experts.

The combination of these three elements forms an independent methodological solution developed by TALAP.

3. Pilot Testing Methodology

The proposed solution is based on international experience and scientifically grounded approaches adapted to the needs of expert analysis in Kazakhstan. At the pilot stage, the methodology underwent internal testing on a limited data set.

- **Adaptation of international experience.** TALAP conducted a preliminary review of classical approaches to strategic foresight and recent work in this field over the past three years, including materials on mechanisms for embedding foresight into public-sector and corporate decision-making practices.
- **Modular analytical synthesis.** The methodology includes nine sequential stages, as shown in the diagram below. This makes it possible to use AI effectively for specific tasks, ensure expert validation at each stage and scale the research model in the future.
- **Validation.** The methodology was tested on a limited data set. Based on the testing results, a detailed report was prepared, describing the actions and outputs at each of the nine stages. Final methodological decisions, including prompts for artificial intelligence, were documented. The results of the pilot testing were presented and discussed at an expert meeting.

Methodology of the Expert Signal Radar

1. Expert source base
publications, analytical texts, expert comments

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2. Individual expert lenses
reconstruction of each expert's professional view
facts, causes, constraints, risks, consequences

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3. Quarterly facts and markers
creation of the evidence panel
figures, events, decisions, external assessments

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4. Key storylines of the quarter
integrated synthesis of storylines and identification of key ones
basis for identifying signal nodes

↓

5. Integrated synthesis of expert lenses
multidimensional comparison of expert lenses
integrated signal nodes

↓

6. Signal node matrix
creation of the final signal node matrix
signal, rationale, radar sector, radar ring, related cascade

↓

7. Integrated Signal Radar
visual map of signals: radar, matrix
structural analysis

↓

8. Cascades of systemic vulnerability
trajectories of possible stress transmission
analysis of dynamic risks

↓

9. Policy-relevant interpretation
linking cascades to decision-making logic
transition to other strategic foresight methods

4. Results of the Pilot Study

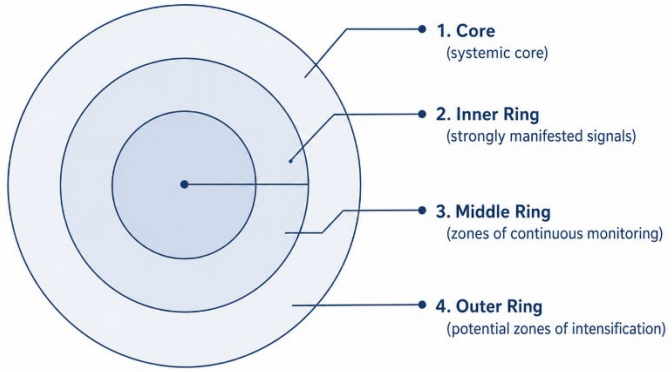
As part of the testing process, TALAP processed an expert source base of over 300 publications, messages and comments by economic experts collected in the first quarter of 2026. The source base was formed to test and refine the methodology, rather than as a representative sample of all expert positions.

The input data went through all stages of processing: from the reconstruction of expert lenses and the identification of the factual layer to the formation of signal nodes, the Integrated Signal Radar and cascades of possible change.

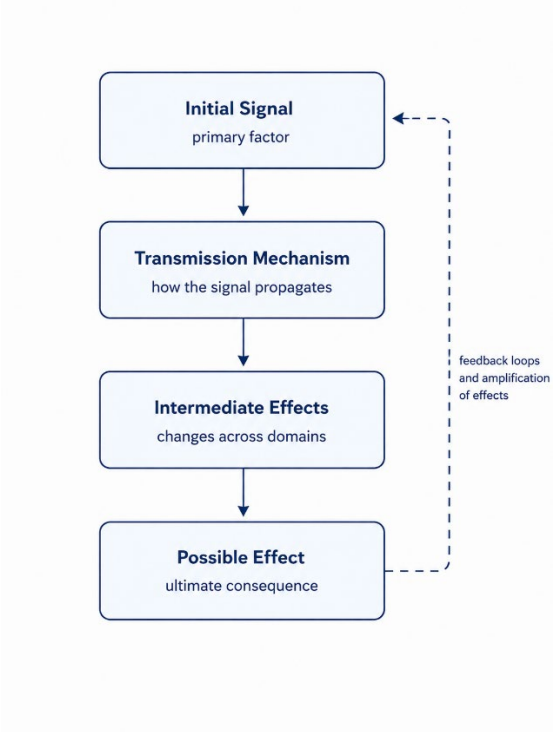
The pilot issue produced two interrelated analytical products:

- **Signal Radar of Kazakhstan's economy.** An integrated expert monitoring scheme that places forty key signal nodes across six substantive economic sectors and four rings of manifestation — from the systemic core at the center to areas of potential intensification on the outer ring.
- **Cascades of possible change.** Models of possible trajectories through which stress may be transmitted across economic and governance domains. Based on the results of the first quarter, six mutually reinforcing cascades were identified: social-consumption, credit-financial, institutional-investment, export-resource, political-economic and geoeconomic.

Signal Radar



Cascades of possible change



5. Signal Radar

The configuration of signals shows that experts were concerned above all with two issues: Kazakhstan's ability to convert accumulated potential into development outcomes, and the shift from a growth-oriented economic model toward an adaptation-oriented one.

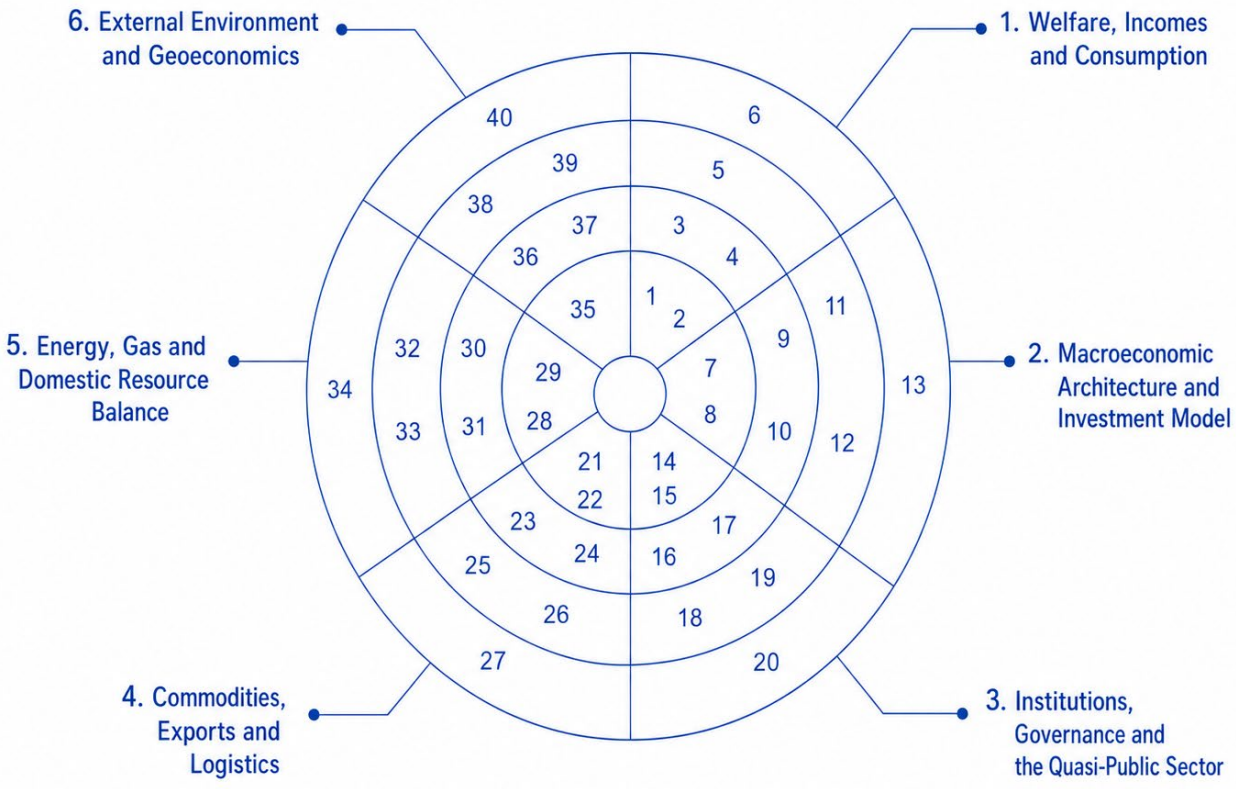
1. The challenge of converting potential into development outcomes.

Kazakhstan retains significant resource, financial and institutional potential. However, the transmission of this potential into sustainable outcomes remains limited. A similar gap appears across different sectors: economic growth has limited transmission into household welfare; financial-sector profits do not adequately translate into real investment; the commodity base does not sufficiently support diversification; and programs and institutions do not consistently translate into the quality of implementation.

2. Narrowing policy space and the rising cost of adaptation.

The outer rings of the radar capture the accumulation of constraints: credit risks, energy limits, sanctions and logistics pressure, and growing demand for accountability. These constraints narrow the room for maneuver and raise the cost of adaptation for the state, business and society.

Signal Radar, economic, the first quarter of 2026



Matrix of economic signals (part 01)

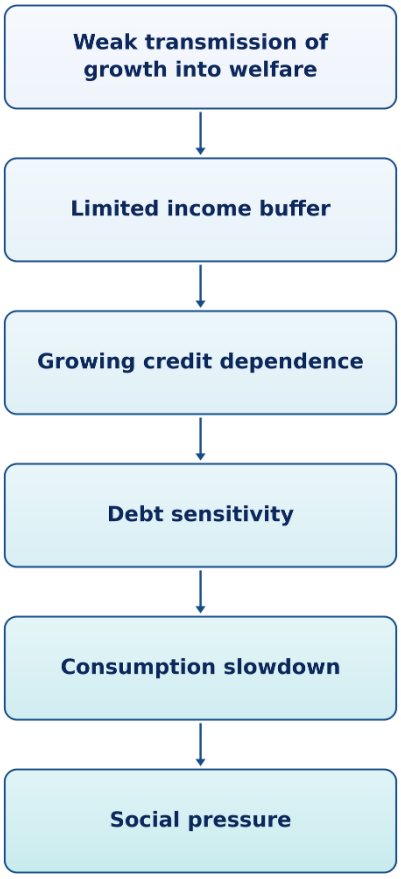
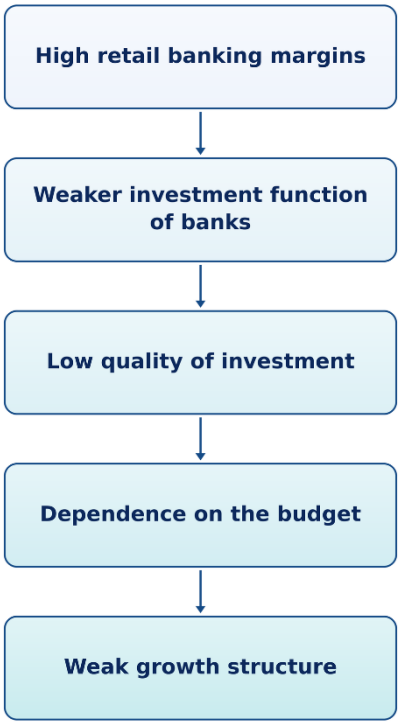
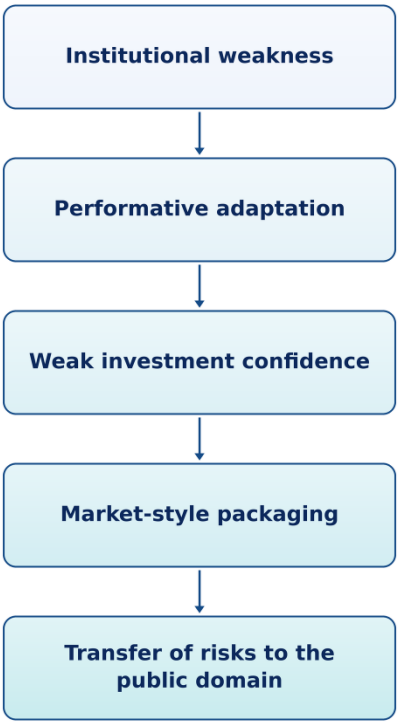
Sector	Core	Inner Ring	Middle Ring	Outer Ring
Welfare, incomes and consumption	1. Economic growth without welfare growth	3. Vulnerability of the middle class and limited household resilience	5. Consumption slowdown	6. Shift from debt-based adaptation to social frustration
	2. Consumption sustained by credit	4. Poverty and inequality as a self-reproducing loop		
Macroarchitecture and investment model	7. Macroeconomic growth with limited transmission into incomes	9. Low quality of investment	11. Statistical opacity of socially sensitive indicators	13. Potential credit-financial cascade
	8. Institutionally weak growth structure	10. Weak investment confidence among businesses	12. Bank profits as a function of a state-created macroeconomic environment	
Institutions, governance and the quasi-public sector	14. Institutional weakness of the model	16. Market-style packaging without institutional readiness for systemic decisions	18. Weak integration of science and analytics into decision-making	20. Growing demand for accountability and transparency
	15. Overloaded and opaque quasi-public sector	17. Performative adaptation instead of correcting underlying mechanisms	19. Fiscal-regulatory shift without a full implementation infrastructure	

Matrix of economic signals (part 02)

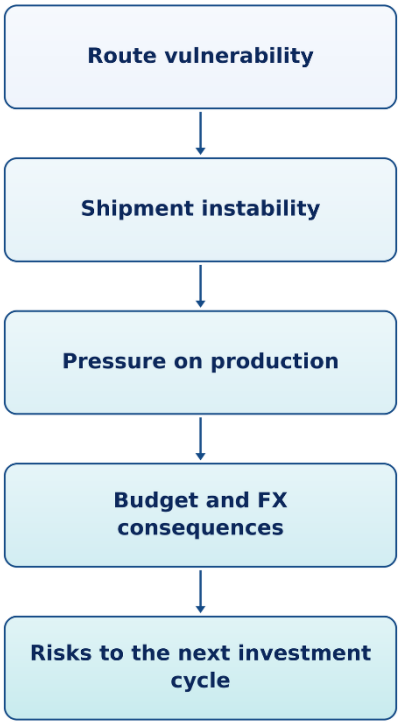
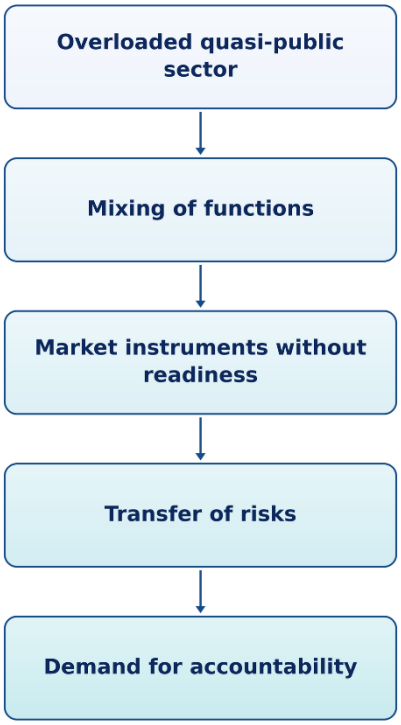
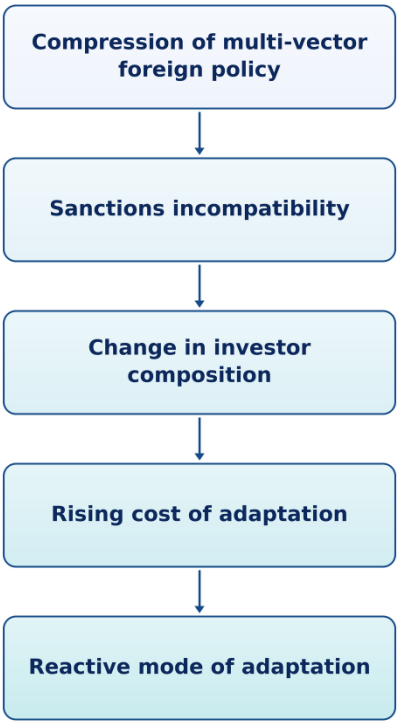
Sector	Core	Inner Ring	Middle Ring	Outer Ring
Commodities, exports and logistics	21. Commodity dependence and weak diversification	23. Contestation over oil and gas rent and the quality of control over it	25. Weak foundations for the next phase of resource sustainability	27. Reassignment of projects and investors under sanctions pressure
	22. Stress test of the export model	24. Vulnerability of the export model to external shocks	26. Incomplete alternative logistics capacity	
Energy, gas and the domestic resource balance	28. Gas and electricity as the central domain of domestic vulnerability	30. Growing gas deficit and competition among consumption priorities	32. End of the era of cheap energy	34. Energy transition as a delayed systemic shock
	29. Gap between strategic ambitions and the actual resource base	31. Limits of existing energy support structures	33. Oil refining as an indicator of accumulated strategic mismatch	
External environment and geoeconomics	35. Compression of multi-vector foreign policy as an economic resource	36. Foreign-policy-driven economic vulnerability	38. Logistics and transit as a field of external competition, not only opportunity	40. Shift toward adaptation under external pressure
		37. Less favorable external environment for the commodity-based model	39. Economic openness as a channel for importing external shocks	

6. Cascades of Possible Change*

Cascades are evidence-based analytical hypotheses that show how stress may be transmitted across different domains of the economy. They support the development of foresight hypotheses and help link early signals to decision-making.

Cascade 1. Social-consumption	Cascade 2. Credit-financial	Cascade 3. Institutional-investment
		
Weak growth in real incomes forces households to sustain consumption through retail credit. This creates high debt sensitivity and weakens demand in trade and among small and medium-sized businesses. As the debt buffer is depleted, financial stress may turn into social pressure.	Banks' focus on high retail margins preserves the financial system's bias toward consumption rather than business financing. This weakens the investment function of banks and makes the investment cycle dependent on the budget. As a result, the economy reproduces a weak growth structure from cycle to cycle.	Instead of correcting underlying conditions, the state responds to problems by creating new organizational layers. This reduces investment confidence among private businesses. As a result, large assets are brought to the market without sufficient institutional readiness, transferring risks to the fiscal and pension domains.

Cascades add dynamic logic to the radar. While the radar shows the location of signals by sector and level of stress, cascades capture possible trajectories of their development: from an initial signal to secondary consequences and decision-making junctions.

Cascade 4. Export-resource	Cascade 5. Political-economic	Cascade 6. Geoeconomic
		
Infrastructure disruptions are not merely operational failures; they reveal the dependence of the commodity-based model on incomplete alternative logistics. Instability in shipments affects production volumes and leads to direct losses in foreign exchange earnings and fiscal revenues. Together with sanctions pressure, this creates uncertainty for the next investment cycle.	Quasi-public structures simultaneously perform commercial, social and political functions. The launch of market instruments, such as IPOs and privatization, under conditions of opacity does not resolve structural problems. Instead, it transfers risks to the pension and fiscal domains. This strengthens economic demand for transparency and accountability in decision-making.	Constraints on foreign-policy room for maneuver narrow the choice of partners and routes. Sanctions risks force changes in investors and in the terms of major projects. The rising cost of adaptation shifts economic management into a reactive mode: responding to external pressure rather than shaping the agenda proactively.

** The cascade logic reflects Kazakhstan's structural profile: a resource-dependent transit economy with a large quasi-public sector, a managed multi-vector foreign policy and high sensitivity to external logistics, commodity, sanctions and investment cycles.*

7. Policy-Relevant Interpretation

The modelling of cascade effects links the signal map to decision-making logic and shows how separate areas of stress may affect the stability of the economic system. The six cascades are labelled C1–C6 below. Taken together, the cascades reveal two cross-cutting themes of the radar: the weakened conversion of potential into development outcomes, and the narrowing of policy space as the cost of adaptation rises. The six cascades are labelled C1–C6 below.

- **C1. Welfare and household debt burden.** Macroeconomic growth indicators, including GDP, provide an incomplete picture unless they are analyzed together with real incomes and the structure of household spending. When growth has limited transmission into welfare, retail lending shifts from being a driver of demand to a trigger of social sensitivity. This moves the focus from abstract growth rates to the parameters of effective consumer demand.
- **C2. The investment function of banks.** High profitability in the financial sector does not, in itself, indicate its contribution to the development of the real economy. The current concentration of banks on high-margin retail lending limits long-term financing for businesses. This preserves the dependence of the investment cycle on direct budget subsidies and quasi-public sector injections.
- **C3. Institutional readiness for reforms.** Responding to systemic barriers by creating new organizational layers tends to mask underlying problems rather than resolve them, while preserving weak investment confidence among private capital. The use of market instruments, such as IPOs and privatization, without prior changes to the regulatory environment transfers operational risks to the public and pension domains.
- **C4. Geographic vulnerability of exports.** The stability of logistics routes is not merely an infrastructure factor; it is a first-order macroeconomic variable. Route vulnerability directly affects the sustainability of foreign exchange earnings and the parameters of the state budget, making the diversification of export routes an element of financial security.
- **C5. Institutional design of large assets.** The chronic mixing of commercial, social and political functions within quasi-public structures blurs operational accountability. Bringing such assets to the market without a strict preliminary audit and a clear separation of functions means that the state becomes a recurrent insurer of inefficient management risks through the budget.
- **C6. External compatibility of investment.** Under sanctions pressure, major projects depend not only on their domestic profitability. Investment design comes to the fore: the structure of partners, ownership jurisdiction, insurance arrangements and the overall resilience of the project to changes in the foreign-policy environment.

8. Conclusions and Development Directions

In 2026, TALAP began building strategic foresight capabilities. This work included an analysis of existing methodological solutions used internationally and an assessment of how they could be adapted to Kazakhstan's context.

One of the outcomes of this work is the pilot issue of the Expert Signal Radar, which completed the testing stage of a hybrid methodology on a real source base of public expert commentary in Kazakhstan.

Going forward, TALAP sees the development of its strategic foresight platform along three interconnected directions:

- **Development of public discourse.** Introducing foresight practices and work with early signals into Kazakhstan's regular expert and public discussion. This direction will be based on quarterly issues of the Signal Radar, the preparation of open thematic materials, and broad expert discussions aimed at validating signals and jointly analyzing emerging trends.
- **Methodological and technological improvement.** This direction involves the gradual expansion of the expert pool, further development of analytical algorithms and calibration of artificial intelligence tools for the preparation of regular analytical products. As the methodology develops, the volume of processed data will increase, the diversity of data types will expand, and expert validation of results will be strengthened.
- **Building an applied track.** The developed toolkit opens opportunities for addressing specific research and decision-making tasks that require strategic foresight.

As the Signal Radar is designed as an evolving instrument, **feedback** is important for TALAP. We invite interested organizations and experts to take part in this process by sending comments on the radar, participating in discussions of its findings and identifying topics for thematic analytical materials. This format will help gradually form a sustainable practice of strategic foresight in Kazakhstan.