

POSITION PAPER

German Agri-Food Systems Think & Do Tank (GAST)

Connecting existing capacities for resilience, competitiveness and agri-food and nutrition security

Bornimer Agrartechnische Berichte

Heft 113
Potsdam 2026

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Connecting existing capacities for resilience, competitiveness and agri-food and nutrition security

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Abstract

Germany has substantial agri-food research and innovation capabilities, but connections between evidence, decision-making and implementation across disciplines, sectors, governance levels and regions remain uneven. The German Agri-Food Systems Think & Do Tank (GAST), as an independent, cross-institutional initiative, aims at connecting existing efforts and capacities to advance resilience, competitiveness and agri-food and nutrition security in Germany. It brings together research, policy, business, practice and civil society to build a shared understanding of the agri-food system, assess future pathways and support joint action, while respecting participating institutions' mandates and responsibilities. Think and Do combine joint priority-setting, foresight, evidence synthesis and systems assessment with validation, demonstration and implementation through existing organizations. Participation is shaped by each topic, with particular attention to affected interest groups and perspectives missing from existing discussions. The joint work supports independent science-based advice and collective evidence-based advocacy. This paper sets out GAST's purpose, collaborative approach and plans for an initial demonstration program in 2027.

Keywords: agri-food systems, research and innovation, coordination, resilience, competitiveness, agri-food and nutrition security, Germany

1. Why Germany needs stronger connections between research and action

Agri-food systems encompass the interconnected stakeholders, institutions, activities and resources that shape how food and agricultural products are produced, processed, distributed, consumed and reused or disposed of, together with the resulting outcomes for human health, society, the economy and the environment (FAO, 2025). Food-system choices shape Germany's contribution to climate goals (Agora Agrar, 2026), while climate change, geopolitical disruptions, biodiversity loss and competing demands for land, water and biomass also affect production conditions (Wissenschaftsrat, 2024; Cuhls et al., 2026). High food prices can restrict access to healthy diets and increase pressure on household budgets. Diet-related diseases continue to place demands on public health, while geopolitical tensions and volatile input and output markets expose dependencies across supply chains and challenges the resilience of agri-food systems (The German Federal Government, 2024). Digitalization, demographic change and labor shortages are also reshaping food processing, business models and the organization of work (Buckwitz *et al.*, 2025). Structural change affects farms, firms and regions differently (Buckwitz *et al.*, 2025; Feindt *et al.*, 2022). Public institutions' capacity to respond also varies with their resources, organizational capabilities, mandates and access to knowledge and finance (Wittmann *et al.*, 2026). These interacting pressures require interdisciplinary and transdisciplinary work across several sectors, policy fields and territorial scales (Duncan, 2025; Wissenschaftsrat, 2023).

At the European level, assessments identify fragmented mandates and responsibilities, inconsistent indicators and limited oversight of how food-system research and innovation (R&I) investments contribute to wider outcomes (European Commission, 2023). The Food 2030 expert review finds that project outputs, including data, Living Labs, business models and practical tools, do not automatically lead to sustained uptake. It calls for closer connections between research programs, decision-makers, implementation settings and subsequent projects (Duncan, 2025).

German and European policy increasingly recognize this interdependence. Germany's transformation agenda identifies agri-food systems as a strategic field linked to climate adaptation, biodiversity, regional value creation, digitalization, healthier food provision, resilience and One Health (The German Federal Government, 2024). The new AgRI 2040 and Food 2040 approach links research with testing, investment and wider uptake (European Commission, 2026). In Germany, this requires strengthening connections among research, innovation, planning, implementation and learning across institutions and levels.

Persistent diet-related risks link food access, consumer environments and public provision with health and social policy (The German Federal Government, 2024). Innovation capacity and structural change in food processing affect products, business models, regional supply and employment (Cicek and Wolfram, 2023; Buckwitz *et al.*, 2025). For example, healthier public meals also depend on processing capacity, reliable supply and viable prices for producers and caterers.

Germany has substantial specialist expertise and competences, but the capacity to integrate it across the agri-food system remains uneven: difficulties arise when a problem crosses several disciplinary, institutional, sectoral and territorial boundaries and the relevant evidence, experience and responsibility for implementation sit in different places (Wissenschaftsrat, 2023).

Monitoring and evaluation approaches serve different purposes. Comparison and cross-case learning require attention to data fragmentation, access and interoperability where a shared question warrants joint assessment (Hunecke *et al.*, 2025; DFG-SKAE, 2026). The DFG-SKAE's 2026 position paper on diversified cropping systems illustrates the need for evidence from breeding, machinery, farm management, regional conditions and value chains to be considered together over an extended period (DFG-SKAE, 2026). Uptake can lose momentum when policy cycles, procurement requirements, business conditions or financing needs are addressed only after research has been completed (Wissenschaftsrat, 2023; Hunecke *et al.*, 2025; DFG-SKAE, 2026). Links across local, regional, national and European levels, and established methods, can be lost when project funding ends or responsibilities change (Wissenschaftsrat, 2023).

The recurring difficulty concerns the continuity of links between research and implementation. Research questions may be framed without sufficient input from those responsible for implementation, while evidence from separate sectors or domains may not be considered together when a decision crosses their mandates. Where these links are weak, trade-offs and distributional effects are harder to examine, and relevant knowledge reaches public and private decisions unevenly (Edler *et al.*, 2025). The interactions among food-system outcomes make these governance links important for assessing change across the system (Schneider *et al.*, 2025).

In this paper, integration means strengthening selected relationships among existing structures and organizations while respecting formal mandates and regional responsibilities (Gonser and Schmid, 2023). Its purpose is to ensure that issues or questions crossing institutional boundaries can draw on the relevant evidence, practical knowledge and implementation capacity, and that the resulting learning can be used across projects, regions and policy levels. This leaves room for institutional reform and complements action-oriented research and demand-driven innovation.

The paper first considers existing capacities and the coordination challenge, then sets out GAST's contribution and the compass guiding its work. It explains the vision, mission and public goals before describing the initial program and its candidate priorities. The final sections address principles, coordination and opportunities to contribute.

2. Existing capacities and the coordination challenge

Advisory bodies contribute to policy development; research alliances and departmental institutes shape research agendas and provide specialist evidence; program agencies manage funding, demonstration and European cooperation; and established data infrastructures support access, comparison and reuse. Research institutes, universities of applied sciences, federal institutions, agricultural advisory services, Living Labs, demonstration networks, research hubs, industry research associations and public-food initiatives add further capacity for implementation.

The Wissenschaftsrat has assessed this landscape, calling for stronger integration across research, transfer, data and research infrastructures, participation, science communication and policy advice, while recognizing the quality and diversity of German agricultural, food and nutritional sciences (Wissenschaftsrat, 2023, 2024). The Scientific Advisory Board on Agricultural Policy, Food and Consumer Health Protection (WBAE), the DFG Permanent Senate Commission on the Transformation of Agricultural and Food Systems (SKAE), Leibniz Strategy Forum on Sustainable Agri-Food Systems, emerging Food System Research Hubs, and the German Agricultural Research Alliance (DAFA) contribute complementary forms of advice, scientific analysis and research coordination (see Appendix A).

German organizations participate substantially in European partnerships and initiatives including FutureFoodS, the AGROECOLOGY Partnership, the Agriculture of Data Partnership (AgData), the European Partnership on Animal Health and Welfare, the EU Mission "A Soil Deal for Europe", SCAR (Standing Committee on Agricultural Research) and EIT Food. These European initiatives provide strategic agendas, research programs, networks, experimental settings and routes for transnational

exchange, although their mandates and modes of operation differ (Duncan, 2025). Coordination is generally organized within each program or partnership. Joint consideration is needed where a national cross-cutting question spans several programs or partnership agendas. Experience with implementation strategies in other countries, within and beyond Europe, can also inform work in Germany.

Place-based experimentation is also widely established through Living Labs, lighthouses, demonstration farms and regional innovation initiatives that bring research into direct contact with farms, businesses, public authorities and civil society and co-create solutions (McGreevy *et al*., 2022). They can show how novel approaches, technologies, practices and policies perform under different territorial and institutional conditions and create space for co-creation and collective learning (Cacciolatti *et al.*, 2025; Stone *et al.*, 2025; Rastorgueva *et al.*, 2026). Their influence beyond the immediate project or region depends on sustained arrangements for comparison, synthesis and uptake (SKAE & DFG, 2026). Cross-case learning must distinguish context-specific findings from transferable evidence and identify routes into policy, funding, procurement and practice (Stone *et al.*, 2025).

Implementation also involves stakeholders beyond formal research and advisory structures. Farmers, processors, retailers, caterers, technology providers, investors, consumers, buyers, public agencies and civil-society organizations influence food-system change through investment, purchasing, business models, regulation, new ways of organizing, market power and everyday practice. Appendix A maps selected structures supporting these functions and their potential connections with GAST. Strong specialist capacities can coexist with insufficient integrative capacity. The coordination challenge is to identify shared tasks that need sustained synthesis and implementation work, and to determine whether existing bodies, hubs, temporary collaborations or GAST are best placed to address them. GAST's contribution is therefore defined by the connections it can make among these capacities and the additional value of the resulting work.

3. German Agri-Food Systems Think & Do Tank (GAST)

The German Agri-Food Systems Think & Do Tank (GAST) is an independent, cross-institutional initiative connecting scientific evidence and practical experience with systems analysis and joint work through existing organizations. Its ***Think*** function brings together research, data, foresight and knowledge from policy, business, practice and civil society to frame shared priorities and assess future options. Its ***Do*** function connects this assessment with validation, demonstration and implementation through existing facilities and partner organizations. Experience from this work helps refine the shared cross-cutting questions, assumptions and pathways under consideration.

GAST provides an open, bottom-up forum for joint problem definition and exchange between research, policy, business, practice and civil society. GAST actively seeks missing perspectives, including those of people affected by the issues under discussion. Participation is shaped by the topic or question, from joint problem definition to implementation.

Universities and universities of applied sciences, research and advisory bodies, ministries, program owners, data infrastructures, Living Labs, federal states and regional stakeholders, businesses, intermediaries, agricultural practitioners, upstream actors, and civil-society organizations are asked to contribute where their knowledge or responsibilities are relevant. Statutory advisory responsibilities, funding decisions, program management, data governance, Living Lab management and formal European representation will remain with the responsible institutions.

GAST connects German needs and regional experience with the EU through FutureFoodS, AGROECOLOGY, Agriculture of Data, EUPAHW, Mission Soil and other EU strategies and agendas, including AgRI 2040 and Food 2040 (European Commission, 2026a). Recurring dialogue forums and focused meetings support both Think and Do activities and contribute to regional, national, European and international exchange.

Figure 1 presents GAST's shared public goals of resilience, competitiveness and agri-food and nutrition security, linked to affordable, safe and healthy food, economically viable farms and agri-food businesses, and protected ecological foundations. Think and Do work together through joint priority-setting, evidence and pathways, testing and learning, and implementation, with feedback

between these activities. The Compass places this work across the connected components of agri-food systems and considers their drivers, impacts and enabling conditions. Existing capacities support the work, while participating institutions retain their mandates, resources and implementation responsibilities. Expected outputs include evidence syntheses and independent science-based advice, comparative findings and implementation pathways, and usable knowledge and collective evidence-based advocacy. Monitoring, evaluation and adaptation support GAST's intended contribution: connected capacities and shared priorities, better use of evidence, and uptake and learning across regions and initiatives.

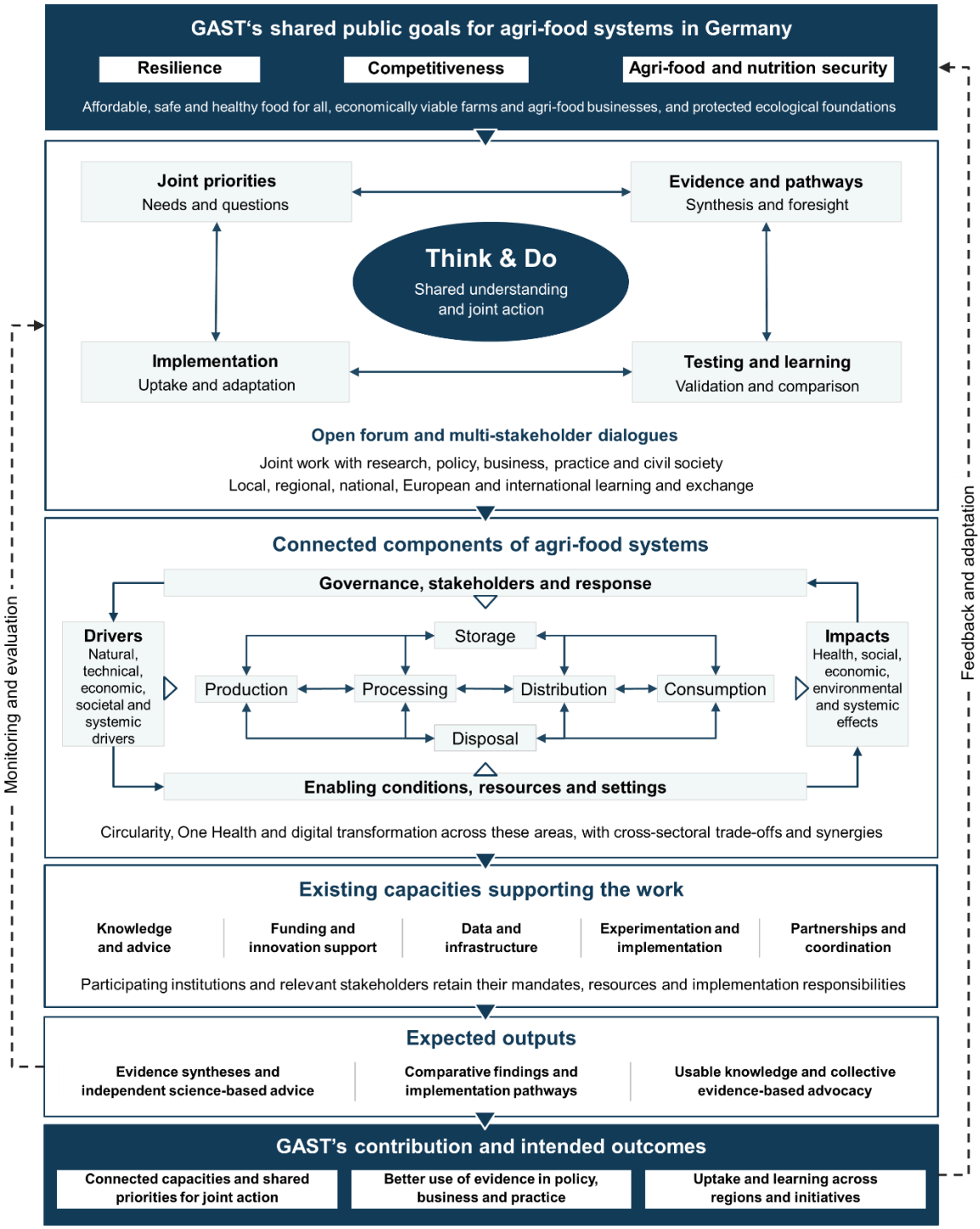


Figure 1. Compass for the German Agri-Food Systems Think & Do Tank (GAST) for demo year 2027

4. GAST's vision, mission and guiding approach

GAST's vision is a resilient, competitive and secure agri-food system in Germany that ensures access to affordable, safe and healthy food for all, supports economically viable farms, agri-food businesses, local initiatives and innovation ecosystems, and protects the ecological foundations of agri-food production. Citizens and affected interest groups can influence decisions concerning their food and livelihoods, and the system accounts for the wider consequences of Germany's production, trade and resource use. GAST advances this vision through effective collaboration, exchange and resource mobilization across sectors, institutions, governance levels and regions, supporting systemic change and contributing to national, European and international debates and agendas as well as providing evidence to inform policy priorities and decisions that support this vision.

GAST's mission is to build a shared understanding of Germany's agri-food system and its future pathways, and broad support for joint action toward greater resilience, competitiveness and agri-food and nutrition security. As an independent, cross-institutional initiative, GAST connects existing efforts and capacities across research, policy, business, practice and civil society with effective participation by relevant stakeholders, especially affected interest groups in the agri-food system. GAST supports collaboration to assess future pathways, co-create systemic solutions and develop joint activities, linking evidence and systems assessment with validation and implementation to turn shared priorities into collective action. Through recurring dialogue forums and events, GAST contributes to regional, national, European and international debates and agendas, providing independent science-based advice and collective evidence-based advocacy.

GAST's work is guided by three linked public purposes: resilience, competitiveness and agri-food and nutrition security. Across these goals, the work will advance health, fairness, food safety and biodiversity while respecting ecological limits. Resource efficiency and sufficiency provide cross-cutting criteria in a resource-constrained world.

Resilience is the capacity of agri-food systems to maintain essential functions during disruption, adapt as conditions change and reorganize when existing arrangements are no longer viable (Ingram *et al.*, 2023). Relevant current and potential future shocks and pressures include climate extremes, resource scarcity, geopolitical disruption and market or governance failures. Resilience is always context-dependent: what will be sustained, for whom, against which pressures and over what period must be made explicit (Meuwissen *et al.*, 2019). Governance shapes whose needs receive protection and whether the system can learn and change rather than simply restore the previous state (Schneider *et al.*, 2025).

Competitiveness concerns the long-term ability of farms, firms, value chains and regions to create value, innovate, invest and remain economically viable within ecological limits and with attention to health, social conditions and geopolitical risks. Prices and productivity matter alongside processing capacity, logistics, skills, infrastructure, market access and the distribution of value. Germany's transformation agenda connects future viability with regional value creation, resilience, digitalization and environmental responsibility (The German Federal Government, 2024). The European vision for agriculture and food similarly places resilience, innovation and competitiveness within a shared long-term frame (European Commission, 2025a). The wider European competitiveness agenda underlines the importance of investment conditions and the capacity to bring innovation into use (European Commission, 2025b). The Competitiveness Compass connects innovation, decarbonization and reduced dependencies (European Commission, 2025c).

Agri-food and nutrition security means that people have reliable physical, social and economic access to sufficient, safe, high-quality and nutritious food for healthy lives. Availability, access, utilization and stability remain central (FAO, IFAD, UNICEF, WFP and WHO, 2026). In Germany, the emphasis is on affordable, healthy, high-quality agricultural production and diets, agri-food environments and preparedness, rather than a general shortage of food. Cultural preferences, the consequences of German trade and resource use, consumer choices and the influence of marketing and media also matter. A One Health perspective examines links among human, animal, plant and ecosystem health (The German Federal Government, 2024). Dietary, health and ecological effects will be assessed together (Rockström *et al.*, 2025).

A mission-oriented perspective helps keep selected activities tied to explicit societal needs, intended users and realistic routes to implementation (Edler *et al.*, 2025). In this paper, mission orientation does not imply a single national mission or a centrally directed portfolio. It means selecting key questions that cross existing mandates, identifying intended users from the outset and reviewing the work as evidence and circumstances change. Practice and policy can also generate new research questions, while early signals and practical experience can prompt revision of the work.

An agri-food systems approach provides the analytical basis for this work. The entire agri-food value network, diets, trade, resource use, income, employment, innovation, institutions, food cultures, public demand and territorial conditions will be considered together where they materially affect the question under assessment. This can reveal how a production or purchasing decision changes affordability, resource pressure, market concentration and the distribution of value (Duncan, 2025).

The public goals may reinforce one another, but their relationship will vary across domains, technologies, business models, regions and policy choices. Productivity gains may improve affordability, investment capacity and supply reliability, while some forms of concentration or dependence can create new vulnerabilities (Feindt *et al.*, 2022). Measures intended to strengthen resilience or regional capacity may also affect costs, trade and the distribution of value across the chain.

5. How the demo 2027 program will work

Within an agreed demo 2027 program, GAST will work on selected priority topics matched to available capacity and with a clear route into policy, funding, procurement, business or practice. Relevant stakeholders can propose an issue through the open forum or to the coordination team. The four connected activities of Think & Do in Figure 1 will be adapted to each task, with evidence and practical experience informing the work throughout: a synthesis may need no new experiment, while validation may reveal questions requiring further analysis. Each activity will have a responsible lead, intended users and an agreed work plan covering outputs, timetable, resources and partner contributions.

Frame joint priorities

The coordination team, prospective topic lead and intended users will begin by defining the relevant agri-food system boundaries and components, the issue to be addressed and the decision or implementation process the work will inform. During scoping, they will map the relevant stakeholders, interdependencies and decision points, review available evidence and related activities, and identify perspectives or capacities that are missing. They will also consider uncertainty, competing objectives and possible distributional effects. This defines the collaborative work and whether an existing body, temporary collaboration or GAST is best placed to undertake it.

Explore evidence and pathways

Joint work will draw together scientific evidence, data, foresight, program experience and knowledge from practice to assess future options against the shared public goals. Participants will examine assumptions, uncertainties, dependencies and conditions for change, including who may benefit or bear costs. This analysis could support independent advice and identify options for validation or implementation. Universities of applied sciences and practice organizations could propose and lead activities on the same basis as other partners. The questions and pathways will be reconsidered as new evidence and practical experience emerge.

Testing and learning

Existing research facilities, Living Labs, demonstration farms, businesses, public institutions, regional initiatives and innovation networks could provide settings to test selected options and examine how they perform under different conditions. Where comparison adds value, partners could agree on limited compatible measures, using established research-data infrastructures and FAIR principles. Baselines, repeated observations and comparison settings will be used where feasible, with uncertainty and regional context documented. Intellectual property, data access, confidentiality

and publication arrangements will be agreed before work begins. Findings from validation will feed back into the assessment, refining the assumptions, options and pathways under consideration.

Enable implementation

Each activity will be developed with an identified user and a plausible next step in mind. Partners will examine the regulatory requirements, skills, infrastructure, organizational capacity, procurement rules, finance, business models, market demand and distribution of influence that affect adoption and wider deployment. The work plan will name the organizations responsible for considering findings, agreeing follow-up and recording subsequent use. Formal decisions will remain with the relevant advisory body, ministry, program owner, Länder authority, business or implementation organization. Agreed next steps could inform policy and program development, procurement, investment, practice or European partnership processes.

Expected outputs include evidence syntheses and independent science-based advice; comparative findings and implementation pathways; and usable knowledge and collective evidence-based advocacy. Teams will monitor progress and review emerging findings with intended users, adapting the work as evidence, needs or conditions change. This continuing feedback will connect Think and Do throughout each activity; Section 7 addresses the independent review of the program as a whole.

6. Initial priority topics for the 2027 demonstration program

The 2027 demonstration program will address selected questions within Germany's agri-food system, considering connections among production, processing, distribution, consumption, storage and disposal, as shown in Figure 1. Supply-chain organization affects food loss, quality and resource use (Onwude *et al.*, 2020), while governance and trust influence the durability of sustainability-oriented value chains (Grohmann *et al.*, 2023). Three candidate priority topics emerged from discussion and ranking by co-authors and partners. They provide a basis for jointly defining the initial work.

Foresight, system preparedness and pathways for resilient agri-food systems in Germany. Joint work could assess emerging risks, dependencies and future options, including how climate pressures, geopolitical disruption, changes in technology and markets, and regional and international connections affect the system. Scientific evidence and practical experience would inform scenarios and the assessment of preparedness and response options. Findings could help identify research needs and inform preparedness, policy and investment decisions, with explicit attention to resilience, competitiveness, agri-food and nutrition security, and their trade-offs.

Shared understanding of agri-food systems: definition, mapping Germany's agri-food system, and multi-stakeholder engagement for Think & Do. This work could develop a shared working definition and map relevant system components, interdependencies, existing initiatives and capacities. It would identify stakeholders, responsibilities and perspectives missing from current discussions, including affected groups and actors in rural and urban settings. Mapping and continuing engagement would support joint problem definition and practical collaboration, while findings from testing and implementation would help refine the shared understanding.

From research and innovation to implementation: scaling and deployment for a competitive agri-food system in Germany. Joint assessment could identify why relevant findings and innovations are not taken up and examine the conditions for their use and wider deployment. These include skills, infrastructure, regulation, procurement, finance, business models, incentives and market demand. The German High-Tech Agenda (HTAD) identifies innovation, transfer and commercial application as conditions for long-term competitiveness (BMFTR, 2025). Procurement can support innovation, but procedures, incentives and institutional capacity can also hinder uptake (Edler, 2026; Krieger, Prüfer and Strecke, 2024). Work with farmers, advisors, upstream operators, agri-food businesses and SMEs, public institutions and other relevant partners could connect existing evidence with validation and implementation settings. For example, partners could assess the testing, processing capacity and procurement or investment conditions needed to bring a selected research result into use. The scope includes technical, organizational, behavioral and policy changes. Findings can inform practical next steps by responsible organizations and feed implementation experience back into research and assessment.

These priorities are connected and will be developed together. System mapping and engagement will inform foresight and implementation; foresight will identify questions for testing; and experience from implementation will help revise assumptions, research questions and pathways. Think and Do will therefore contribute throughout each priority, using the process in Section 5.

Circularity, One Health and digital transformation will be considered across the priorities where relevant to the question. A One Health perspective connects human, animal, plant and ecosystem health (The German Federal Government, 2024), while dietary, health and ecological effects will be considered together (Rockström *et al.*, 2025). Digital technologies may support measurement, automation, traceability and risk management, but their use depends on infrastructure, skills, investment, data access and governance (Duncan, 2025). Assessment will examine cross-sector trade-offs, synergies and distributional effects, including costs, benefits and risks across people, businesses and regions.

Final selection and scope will be agreed collaboratively by participating partners, taking into account public relevance, multi-stakeholder perspectives, available evidence, intended users, feasibility and added value beyond ongoing activities. Concrete cases from existing initiatives and settings would be selected to answer the agreed questions.

7. Principles and coordination

The 2027 program is being prepared with the Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB) and the Hans Eisenmann-Forum for Agricultural Sciences at the Technical University of Munich (HEF@TUM) as joint administrative hosts. The University of Hohenheim and the Johann Heinrich von Thünen Institute are additional core partners. The core partners will approve an annual work and resource plan with a two-year planning outlook. A delegated steering group, including applied-research and practice expertise, will oversee delivery, supported by an analytical and coordination team and the topic leads.

GAST will complement existing bodies, with participation shaped by each task. Where an existing organization can address a matter effectively within its remit, that route will take precedence. Institutions will retain authority over their funds, contracts and formal responsibilities; participation in the open forum will not itself confer governing or financial authority.

GAST can give participating organizations access to evidence, expertise and practical settings beyond an individual project or sector. Researchers can address questions with prospective users; public authorities and program owners can examine issues spanning several responsibilities; and businesses, practitioners and civil-society groups can help shape options and assess their feasibility and effects. Joint work offers opportunities to learn across regions and initiatives and to bring relevant findings into national and European discussions. These benefits depend on addressing needs that participants recognize and producing work they can use.

Participation will reflect the substance of each activity and create practical opportunities for those affected to contribute, particularly where effects differ across regions or social groups. Roles, funding, interests and conflicts of interest will be transparent, and disagreements in evidence or interpretation will be documented. Participation does not imply institutional endorsement of collective advocacy positions. Funding and membership will confer no veto over scientific conclusions. Substantial contributions of time or expertise will be agreed and resourced in advance.

GAST will require stable support for synthesis, foresight, coordination and evaluation, alongside resources for agreed joint tasks and continuity between activities. Contributions could include funding, staff time, data, facilities or practical settings, subject to agreement. The work and resource plan will distinguish secured resources, funding proposals and voluntary in-kind contributions, including the costs of events and participation. Possible public, foundation or commissioned funding will be considered without implying commitments.

During the initial demonstration program in 2027, GAST will apply the approach in Section 5 to selected priority topics, subject to agreed resources and capacity. Teams will report progress, expenditure and follow-up through the annual program.

An independent review at the end of the demonstration phase will assess analytical quality, documented use of findings, additional value, participation burden and funding viability against criteria agreed before work starts. It will consider whether GAST improved synthesis, learning across regions and initiatives, the use of evidence in decisions or exchange between German and European processes. Early outputs cannot establish long-term health, ecological or economic effects. The findings will inform decisions on continuation, adaptation, integration into an existing structure, a separate legal form or completion of the initiative.

8. Invitation to contribute to GAST

GAST invites public authorities, research organizations and partners from business, practice and civil society to join us and help shape the 2027 program. Contributions may include a shared question selection, relevant evidence or expertise, or an existing setting for validation and implementation. Proposals will identify the need, the intended use of findings and the contribution that joint work could make. Inquiries can be directed to GAST speaker, Barbara Sturm and coordinator of GAST, Naser Reyhani (nreyhani@atb-potsdam.de).

Disclaimer: The views expressed in this paper are those of the authors and do not necessarily represent the formal positions of their affiliated institutions. Co-authorship reflects contribution to the development of this paper and does not imply or guarantee any future role, membership, responsibility, or institutional commitment within GAST. Participation, governance, roles, and membership will be discussed and agreed separately.

Acknowledgments: The authors thank the colleagues and partners who contributed to the discussions and review of this paper. Their expertise and comments helped refine GAST's purpose, the joint Think and Do approach and the candidate priorities for the 2027 demonstration program. Special thanks to ATB's press team, Ulrike Glaubitz and Jessica Lietze for the great support for publication and release.

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Appendix A

Germany's agri-food research and innovation landscape already contains substantial capacities in knowledge and advice, funding and innovation support, data and infrastructure, experimentation and implementation, and partnerships and coordination. Table 1 identifies selected structures relevant to GAST and possible connections with its joint Think & Do work.

Table 1: Key structures and interfaces relevant to GAST

Existing structure or initiative	Main role	Potential connection with GAST
Federal Ministry of Agriculture, Food and Regional Identity implementation process for agricultural, food and nutritional sciences ALE including the relevant working groups and FSRHs; and German Council of Science and Humanities - WR	Recommendations on Food Systems Research Hubs, evidence synthesis, data, research infrastructures, transdisciplinary cooperation and transfer.	Structural reference and bridge between emerging national reforms, regional implementation and European cooperation
Scientific Advisory Board on Agricultural Policy, Food and Consumer Health Protection — WBAE and German Research Foundation Permanent Senate Commission on the Transformation of Agricultural and Food Systems — SKAE	Complementary independent policy advice and science–policy work across agriculture, food and nutrition.	Exchange on shared evidence needs and cross-system questions, with existing advisory mandates retained
German Agricultural Research Alliance — DAFA	Networks publicly funded agricultural research organizations and develops shared research strategies and proposals for research funding.	Bridge between agricultural research strategy and wider food, health, implementation and European portfolios
Leibniz Strategy Forum on Sustainable Agri-Food Systems	Brings together Leibniz expertise on agri-foodsystems and how systems changes can support resilient supply, preventive health, environmental integrity and equitable society.	Systems assessment and synthesis across production and consumption with view on environment, society and health.
Federal departmental research system: Thünen Institute, Julius Kühn Institute, Friedrich-Loeffler-Institut and Max Rubner Institute	Specialist research, monitoring and policy evidence concerning rural areas and agriculture, crop health, animal health, food and nutrition.	Joint consideration of evidence across departmental mandates when questions span several parts of the agri-food system
Federal Office for Agriculture and Food — BLE	Program implementation, research and innovation funding, demonstration, knowledge transfer, food and nutrition information, and European research cooperation.	Established route for implementation, dissemination and European cooperation
Project Management Jülich — PtJ	Research program management, funding advice and coordination of German participation in several European research partnerships.	Connection to existing funding programs and partnership-specific German–EU coordination
German Network for Rural Areas and the EU Common Agricultural Policy — DVS; European Innovation Partnership for Agricultural Productivity and Sustainability — EIP-AGRI Operational Groups; BLE model and demonstration programs	Practice-led innovation, demonstration and exchange involving farms, advisors, small and medium-sized enterprises, research organizations and Länder authorities.	Implementation settings and comparative learning across regions and project portfolios

Existing structure or initiative	Main role	Potential connection with GAST
FAIRagro, Information System for Agriculture and Food Research — FISA, BonaRes Repository, BMLEH Geodata Infrastructure — GDI-BMLEH and the Common European Agricultural Data Space — CEADS	Findable, Accessible, Interoperable and Reusable research-data stewardship; research-portfolio information; specialist soil, agricultural and geospatial data services; and development of trusted agricultural data-sharing arrangements.	Basis for shared data practices, cross-domain use cases and compatibility with European data-space developments
European Digital Innovation Hubs — EDIHs and Testing and Experimentation Facilities — TEFs, including agrifoodTEF	EDIHs support digital adoption, skills and investment readiness; TEFs test and validate AI and robotics in real-world settings.	Potential support for relevant digital use cases, from testing and validation to adoption by businesses and public organizations
FutureFoodS Lighthouse Living Lab Berlin–Brandenburg (in development), ZALF's Innovation Centre for Agricultural System Transformation — IAT, and comparable Living Labs	Regional cooperation with stakeholder to co-experiment, co-design and co-test innovation for sustainable and resilient agri-food systems solutions.	Selected settings for cross-case learning and regional–national–European exchange
One Health Platform Germany	Connects research across human, animal and environmental health, supports research–practice exchange, and links national and international initiatives.	Connection to the established One Health research and practice community
IN FORM; Bundeszentrum Kita- und Schulverpflegung (Federal Center for Daycare and School Catering); Länder networking offices; German Nutrition Society — DGE	Quality standards, implementation support and peer exchange for childcare, schools and other public catering settings.	Links to implementation and learning in public procurement, food provision and catering
Research Association of the Food Industry — FEI, Fraunhofer Agriculture and Food Industry Alliance and EIT Food	Precompetitive food-industry research, applied technology transfer, entrepreneurship, investment mobilization and market scaling.	Routes from research to processors, small and medium-sized enterprises, startups, industry and investors
Standing Committee on Agricultural Research — SCAR Food Systems Strategic Working Group and Foresight Task Force	Strategic advice and coordination on food-systems research and innovation, with foresight informing European and national research agendas.	Two-way exchange on German priorities, European evidence, foresight and research agendas
European partnerships FutureFoodS, AGROECOLOGY, Agriculture of Data — AgData, and EUPAHW; EU Mission "A Soil Deal for Europe" — Mission Soil	Research, innovation and coordination on food systems, agroecology, agricultural data, animal health and welfare, and soil health, with program-specific testing and learning arrangements.	Cross-program learning and comparison where questions span several mandates and agri-food system components
German Agricultural Society — DLG	Knowledge exchange, professional networks, testing and demonstration across agriculture and food production.	Exchange with farms, food businesses and testing networks to define practical questions and support validation and uptake

The mapping is based on a targeted review of official documents, program information, evaluations and recent literature. It focuses on structures with national, cross-regional or German–European coordination and interface roles and is not intended as a comprehensive directory. Inclusion does not imply endorsement, future participation or institutional commitment.

Imprint

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November 2026

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All photographs by Naser Reyhani. Cover page design by Jessica Lietze.

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To cite

Sturm, B., Reyhani, N., et al. (2026). German Agri-Food Systems Think & Do Tank (GAST): Connecting existing capacities for resilience, competitiveness and agri-food and nutrition security [Position paper]. Bornimer Agrartechnische Berichte, Vol. 113. Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Potsdam.

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Publisher

Published by the Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), which is supported of the Federal Ministry of Agriculture, Food and Regional Identity (BMLEH) as well as of the Ministry of Science, Research and Culture of the State Brandenburg (MWFK).

Contents do not necessarily reflect the publisher or editors views in this area.
ISSN 0947-7314 Volume 113

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German Agri-Food Systems Think & Do Tank (GAST)

Bornimer Agrartechnische Berichte
ISSN 0947-7314 | Volume 113