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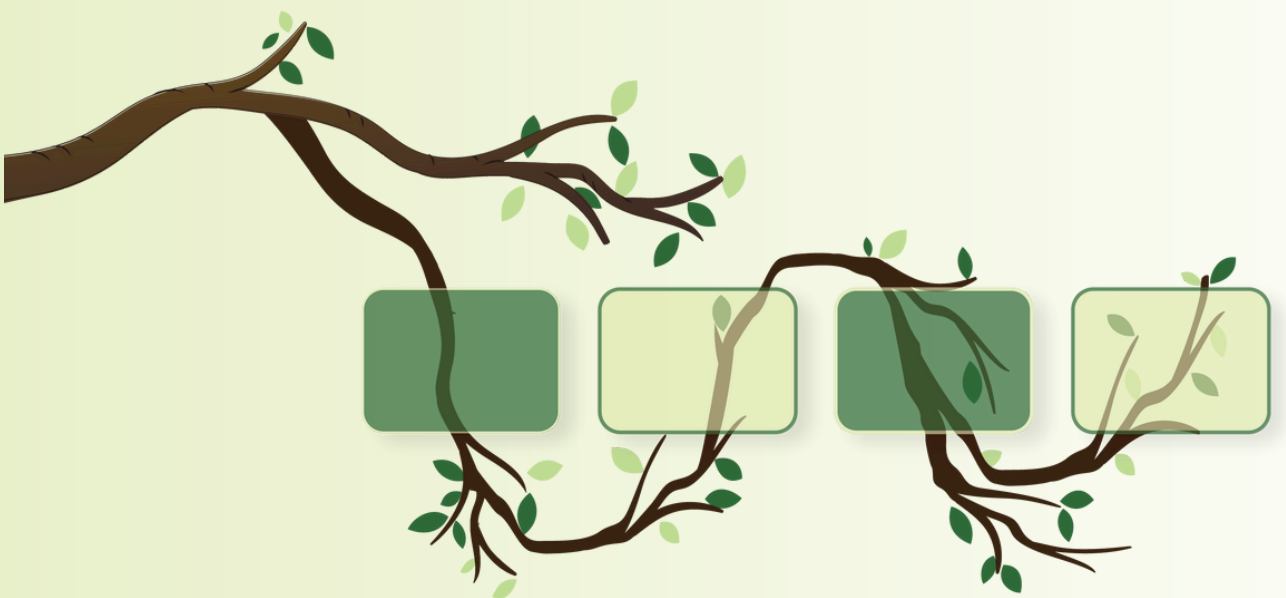
NGO Associations

Action Pathway towards New Genomic Techniques (NGTs)



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PRO CONSULTING

Authors: Xenia Schneider
Elena Aristodemou
* based on stakeholder co-created statements

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Executive Summary

This Action Pathway, part of the GeneBEcon Transition Action Plan (TAP), is a targeted roadmap to guide NGO Associations in responsibly engaging with New Genomic Techniques (NGTs) and to enable them to communicate accurate, science-based information about NGTs while addressing misinformation, ethical concerns, and stakeholder skepticism. As key influencers in public discourse, NGOs are uniquely positioned to foster trust and enhance understanding of how NGTs contribute to food security, environmental sustainability, and climate resilience

Why NGTs Matter

NGTs have the potential to:

- Enhance food quality and nutrition.
- Increase crop yields and resilience to climate change.
- Reduce pesticide and fertiliser usage.
- Lower greenhouse gas emissions.
- Promote circular bioeconomy solutions.

The Need for a Transition Action Plan (TAP)

Despite their advantages, NGTs and NGT products face skepticism from consumers due to misinformation and fragmented regulatory landscapes. The change that the NGTs innovation brings needs to be better managed. The GeneBEcon project, with active stakeholder involvement, has worked to facilitate this change and improve public understanding.

Transition Action Plan (TAP) Development

A structured, Responsible Research and Innovation (RRI) approach was used to develop the TAP across three phases:

- Mapping the NGT Landscape – Identified barriers and stakeholder needs.
- Co-developing SMART Actions – Created actionable, measurable strategies.
- Validating and Finalising TAPs – Developed tailored plans for six stakeholder groups.

Transition Action Plans (TAPs)

Each TAP is an actionable pathway tailored to a key stakeholder group. Each pathway includes practical, specific and measurable strategy for awareness, education, collaboration, and communication, enabling a unified transition toward NGT desirability and integration.

Consumer Associations
National Policymakers
Breeder Associations
Farmer Associations
The Food Industry
NGO Associations

To access all Transition Action Plans, please visit the link https://genebecon.eu/transition-action-plans-taps/

The Role of NGO Associations

NGOs are critical in shaping perceptions and guiding ethical decision-making.The NGO Associations TAP is split into two implementation phases and guides NGOs to:

- Develop effective, values-based communication strategies.
- Launch targeted education campaigns and visual content.
- Organize informal roundtables and NGO co-branding opportunities.
- Use influencer campaigns to increase NGT visibility.
- Analyze consumer perception data to inform outreach.
- Highlight cost advantages of NGTs over conventional products.

Each TAP action includes Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) steps to ensure impact and accountability. The SMART actions can be adjusted by the NGO Associations to fit their goals and own information strategy.

Conclusion

The NGO Associations Action Pathway empowers NGO Associations to act as ethical stewards in the transition to responsible biotechnology. Through science-based advocacy, stakeholder collaboration, and transparent communication, NGOs can ensure that NGTs are deployed in ways that uphold public trust, environmental values, and long-term sustainability goals.

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Section I. General: Introduction and methodology

Why NGTs?

New Genomic Techniques (NGTs): A Path to Sustainable Agriculture & Food Security

New Genomic Techniques (NGTs) are modern breeding methods that allow scientists to precisely edit the genetic material of plants and other organisms to improve their traits. Unlike traditional breeding, which relies on crossbreeding and takes many years to develop improved crops, NGTs can speed up the process by making targeted, natural-like modifications. Unlike transgenic genetically modified organisms (GMOs), NGT-derived products do not carry transgenes. This helps develop crops that are more resistant to pests and diseases, require fewer chemicals, and are better suited to climate change, making food production more sustainable, efficient, and secure. Nevertheless, the NGTs method is one of the many tools used for breeding.

A Smarter Approach to Agriculture 🌱

New Genomic Techniques (NGTs) provide precise genetic improvements that can boost crop yields, enhance resistance to pests and diseases, and reduce reliance on chemical inputs. Unlike traditional breeding, NGTs allow targeted modifications that support climate-resilient, resource-efficient, and sustainable farming. As Europe transitions to a bio-based economy, NGTs offer a way to secure food production while minimizing environmental impact.

Better Food for Consumers 🥦

NGTs can improve food quality, sustainability, and affordability by increasing nutritional value and reducing the need for chemical treatments. Research from GeneBEcon shows that while public awareness of NGTs is still low, **consumers become more open to NGT-derived products when given clear, science-based information**[1]. This highlights the key role of consumer associations in bridging the information gap and ensuring informed choices.

Benefits for a Sustainable Food System 🌍

✅ **Farmers & Breeders:** Stronger crops, reduced pesticide and fertilizer use, and higher yields for more resilient farming in less breeding time.

✅ **Food Industry:** Longer shelf life, better product quality, and more efficient resource use, supporting a circular bioeconomy.

✅ **Consumers:** Access to healthier, sustainable food choices with reduced environmental impact.

To fully unlock the potential of NGTs, industry, policymakers, and the public shall align efforts to ensure these innovations are accessible, appropriately-regulated, reliably and widely accepted. With transparency and trust, NGTs can help shape a more sustainable, resilient, and efficient food system for the future.

1 https://genebecon.eu/wp-content/uploads/2024/10/GeneBEcon_Deliverable1.2.pdf

Advantages and Challenges

NNGTs: Unlocking a More Sustainable & Resilient Food System

🔹 **What are the benefits of NGTs?**

New Genomic Techniques (NGTs) offer a range of benefits for agriculture, the food industry, and consumers:

✅ Healthier & More Nutritious Crops – NGTs can improve the nutritional quality of food, making it more beneficial for consumers.

✅ Less Dependence on Chemicals – By making crops naturally more fertilizer efficient, or resistant to pests and diseases, NGTs reduce the need for pesticides, lowering agriculture's environmental footprint.

✅ Faster Adaptation to Climate Change – Plant breeding can take years, the NGTs may help plants to better respond to changing climate conditions and thus enhancing food production.

✅ Lower Greenhouse Gas Emissions – Reducing chemical inputs and improving resource efficiency can help cut emissions from farming, supporting EU climate goals.

✅ Higher yields – Increasing pest and disease resistance can contribute to increasing yields by reducing yield loss. For example, the virus resistant potato developed by GeneBEcon.

✅ Conserve biodiversity - Environmental benefits by enabling gene drives to control invasive species or disease vectors and providing tools to restore endangered species.

🔹 **Why is consumer desirability and acceptance important?**

Consumers stand to benefit from healthier and tastier food choices, better food security, and more sustainable production. However, studies from the GeneBEcon project show that many people are unfamiliar with NGTs or mistakenly associate them with traditional GMOs. Key concerns include:

🛑 Lack of Awareness – Without clear information, consumers may not understand the benefits of NGTs. In the GeneBEcon consumer survey, an explanatory video enabled consumer understanding.

🛑 Misinformation & Trust Issues – Skepticism remains high, partly due to misunderstandings about genetic modification.

🛑 Ethical & Safety Concerns – While scientific studies confirm the safety of NGTs, people need transparent communication and clear regulations to feel confident about them.

🛑 Regulatory Gridlock in the EU – Divided voting behaviour among EU countries for risk management makes it difficult for NGT products to reach the market.

🔹 **What needs to be done?**

🌍 Enabling regulations – Regulatory hurdles and uncertainty in the EU remains a significant barrier, creating difficulties in market access and product approval.

📢 Better public communication – Providing transparent, fact-based, easy to understand, information will help consumers distinguish more precisely NGTs from older genetic modification techniques.

🛒 Affordable & accessible products – Studies, including GeneBEcon's own consumer survey, show that price incentives can encourage consumers to choose NGT-derived foods.

🔬 Building trust in oversight – Strengthening regulatory transparency will help NGT-product users make informed choices.

For NGTs to succeed, farmers, policymakers, industry, and consumer groups must collaborate. Clear communication, strong governance, and public engagement are essential for a healthier, more sustainable, and resilient food system— the goal of this NGT Transition Action Plan.

Benefits of NGT-plants and products

New Genomic Techniques (NGTs), such as plant gene editing, offer major opportunities for agri-food systems and the bioeconomy.

The GeneBEcon project has demonstrated their potential with two key examples: virus-resistant potato with an optimized tuber starch quality and microalgae producing healthy carotenoids.

Healthier, More Sustainable Potato Production 🥔

NGT potatoes can help reduce pesticide use and increase crop resilience. For example, by introducing resistance to the potyvirus PVY, gene-edited potatoes limit disease spread by aphids, cutting pesticide use across 1.7 million hectares (equivalent to Switzerland area) of European potato production by approximately 850,000 kg of active ingredients. This not only protects the environment but also secures the livelihoods of 1.5 million potato farmers.

Beyond pest resistance, NGTs can improve the starch quality of potato tubers, eliminating the need for chemical modifications during processing. This innovation could save up to 75,000 tonnes of chemicals and 7.5GWh energy annually, lowering production costs and reducing environmental impact.

Gene-Edited Microalgae: A Sustainable Bioeconomy Booster 🌿

NGTs can also enhance microalgae's ability to produce high-value compounds, such as:
✅ Omega-3 fatty acids for food and nutrition.
✅ Antioxidant pigments, such as carotenoid lutein, for cosmetics and pharmaceuticals.

Microalgae also act as natural CO_2 absorbers, turning atmospheric CO_2 into valuable organic compounds. This makes them a climate-friendly production system, reducing greenhouse gas emissions while promoting sustainable innovation.

A Circular Approach: Zero Waste, More Value ♻️
NGT microalgae can maximize resource use by repurposing residual biomass as a high-quality poultry feed. This provides a sustainable alternative to legume-based feed ingredients, reducing reliance on traditional crops while enhancing animal nutrition and health. Increased microalgae production could generate economic gains of €11.2 million across Europe.

Conclusion
These examples from GeneBEcon show how NGTs can improve food and industrial production by enhancing crop resilience, reducing environmental impact, and supporting a circular bioeconomy. By integrating NGT innovations, Europe can achieve sustainable, resource-efficient agriculture while fostering economic growth. To realise these benefits though, it is necessary to either develop new enabling legislation or to modify the implementation of existing legislation. Under the current circumstances, NGT-derived potato and microalgae have an extremely low chance of getting commercialized in the EU.

Relevance to European Policies

NGTs offer a significant opportunity to enhance **food security, sustainability, and consumer benefits** in Europe. These advanced breeding methods improve **crop resilience**, reduce the need for **chemical inputs**, and support **environmentally friendly food production**. For consumers, this means access to healthier, more sustainable, and potentially more affordable food products.

NGT products can support the newly defined **Vision for Agriculture and Food** for a competitive, resilient, future-oriented, and fair EU food production system contributing to EU's food security. NGTs also align with key EU policies, including the **European Green Deal** and the **Farm to Fork Strategy**, by ensuring that food systems are resilient, resource-efficient, and capable of mitigating climate change.

NGTs support the EU's target of halving pesticide use by 2030 by reducing dependency on chemical pesticides and fertilisers. Enhancing plant resilience through NGTs also lowers agricultural emissions, mitigates climate change impacts, and strengthens food security. However, consumer desirability and acceptance remain critical for market integration, requiring clear communication about the benefits and safety of NGT-derived products.

NGTs promote resource efficiency and waste reduction, aligning with the **EU Circular Economy Action Plan**. Enhanced plant traits can extend shelf life, improve durability and optimise the use of agricultural by-products, supporting circularity across food and industrial value chains. However, farmer and public awareness campaigns are necessary to inform about these environmental and economic benefits of NGT-derived products.

NGTs contribute further, to the **EU Zero Pollution Action Plan**, by minimising pollution from agriculture and industry. NGT-bred crops may require fewer synthetic inputs, reducing soil, water, and air contamination. As with other policies, gaining consumer confidence is crucial.

NGTs can drive progress in the **EU Bioeconomy Strategy**, facilitating the development of bio-based materials, sustainable biofuels, and innovative bioproducts. By improving microbial strains and plant-based resources, NGTs boost resource efficiency, reduce fossil fuel dependency, and contribute to a more sustainable bioeconomy. Ensuring market acceptance of bio-based innovations through regulatory clarity is essential for the European bioeconomy.

NGTs can also provide solutions in the context of the EU biotechnology and biomanufacturing initiative. Innovation in biotechnology can be an important building block in the efforts to reduce the overall environmental footprint of agri-food production systems making them more resilient and supportive to reach the EU's climate neutrality goal and to provide more sustainable and some healthier foodstuffs[2].

Overall, NGTs align with EU sustainability goals by fostering innovation, reducing environmental footprints, and supporting resilient and resource-efficient systems across agriculture, industry, and the bioeconomy. To unlock their full potential, transparent communication, trust, and regulatory clarity will be essential for their successful integration into the European agricultural, industrial and bioeconomy strategies.

2 Nature-based solutions - European Commission (europa.eu) COM(2024) 137 Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU

About GeneBEcon

GeneBEcon: Advancing Sustainable Agriculture & Bioeconomy with NGTs

The **GeneBEcon project** (2023-2025), funded by the Horizon Europe Research & Innovation Programme under the Clean Environment Zero Pollution Initiative, focuses on **sustainable, bio-based solutions** for agriculture and industry. The GeneBEcon consortium is multidisciplinary bringing together experts from agricultural research, biotechnology, economy, food law, policy, social sciences and representatives of the whole agro-food value chain.

The Challenge and Solutions:
NGTs have great innovation potential, but their success depends on balanced regulations, economic support, and public trust. GeneBEcon tackled this by:

- ✅ **Developing virus-resistant potatoes** to improve starch quality and reduce chemical processing.
- ✅ **Enhancing microalgae-based production** of valuable compounds while repurposing biomass as animal feed.
- ✅ **Using precise gene-editing techniques** to create targeted modifications with minimal unintended effects.
- ✅ **Advancing molecular analytical tools** to support risk assessment and regulation.
- ✅ **Collaborating with businesses** to bridge research and real-world implementation, promoting **low-input, energy-efficient agriculture** and streamlined industrial processing.

Evaluating Regulatory & Economic Impact:
GeneBEcon **evaluated different regulatory options** to assess their impact on European agriculture, the economy, and biosafety. The project demonstrated how s**cientific knowledge can inform better policies** by comparing NGT plants with conventional varieties in terms of biosafety requirements.
To understand the **economic and social impact of NGTs**, the project:

- 📊 **Used an investment evaluation method** to assess the economic impact of regulating NGTs on the investment decisions of plant breeders in the EU.
- 📊 **Applied a socio-economic model** to calculate the global cost of delaying the adoption of NGTs.
- 🛒 **Surveyed 5,000 consumers**, finding that once people understood the benefits of NGTs, they were more willing to purchase NGT-based products.

An indirect but significant impact of the GeneBEcon project lies in its potential to enhance consumer trust. When consumers are presented with NGT products that demonstrably offer improvements over conventional alternatives, their willingness to consider and adopt such products is likely to increase.

Responsible Research & Public Engagement
GeneBEcon applied **Responsible Research and Innovation (RRI)** by prioritising **ethics, inclusivity, and transparency**. Through six stakeholder workshops, the project:

- 🤝 Fostered open discussions and **built trust** in science and innovation.
- 📢 Gave a voice to **underrepresented stakeholders** in research and policy debates.
- 🔍 Ensured that research remains **socially relevant, sustainable, and aligned with public values.**

With its pioneering work in potatoes and microalgae, GeneBEcon has demonstrated how **precision breeding can drive sustainable agriculture and bio-based industries**, shaping a resilient and forward-thinking European bioeconomy.

Why do we need a TAP in EU?

The introduction and acceptance of New Genomic Techniques (NGTs) in the European Union requires a comprehensive and coordinated **Transition Action Plan (TAP)** to guide and align the diverse range of stakeholders, including consumers, farmers, breeders, the food industry, NGOs, and policymakers. Such a plan is essential to bridge the gap between scientific advancements and societal expectations, ensuring that innovation supports the EU's sustainability goals while maintaining public trust and regulatory coherence. TAP goals are:

Consumer Guidance and Trust Building
Public acceptance is pivotal for the success of NGTs. Many consumers do not have a clear attitude to biotechnology due to concerns around safety, ethics, and potential environmental impacts. A Transition Action Plan would facilitate transparent communication and provide science-based information. Educational campaigns and dialogue with citizens are crucial to building trust and demonstrating how NGTs align with health, sustainability, and climate resilience goals.

Farmer and Breeder Support
Farmers and breeders need clear frameworks for NGTs to enhance productivity, reduce input costs, and support climate adaptation. The Transition Action Plan can offer access to tailored training, financial incentives, and knowledge-sharing platforms to ensure that these stakeholders will have the necessary tools and confidence to adopt NGTs responsibly and effectively.

Engaging the Agri-Food Value Chain
The agri-food industry plays a key role in the NGT transition by incorporating NGT-derived ingredients and products into the supply chain. The Transition Action Plan would outline strategies to foster cooperation between producers and retailers, ensuring that NGT products meet quality, safety, and sustainability standards, while addressing evolving consumer preferences and ethical concerns.

Addressing NGO Concerns
Environmental and consumer protection NGOs often express caution or opposition towards NGTs. A structured Transition Action Plan would promote ongoing dialogue, transparency in risk assessment, and independent scientific evaluations to address concerns related to biodiversity, ecosystem health, and corporate control over genetic resources.

Policy Coordination, Regulatory Clarity and Legal Certainty
Policymakers need a coherent framework and legal certainty to align NGT adoption with EU agri-food strategies. A Transition Action Plan would streamline regulatory processes, ensure alignment with sustainability targets, and foster harmonized policies across Member States, balancing innovation with precautionary principles.

In sum, a well-structured Transition Action Plan is key to create a shared vision for NGT acceptance across all sectors, ensuring that innovation serves public good, environmental sustainability, and economic resilience while fostering trust and transparency in the EU's food and agricultural systems.

Methodology for developing the NGTs Transition Action Plans

Every innovation to succeed requires an effective change management approach and a clear transition plan to address stakeholder's values and interests. As part of of Responsible Research and Innovation (RRI), the GeneBEcon project developed the NGTs Transition Action Plan (TAP), enabling agri-food and feed stakeholders to navigate the changes brought by NGTs. This structured, participatory approach was led by XPRO Consulting Limited, applying its proprietary RRI Roadmap©™ methodology.

Developing the NGTs Transition Action Plans: A Phase-Oriented, Inclusive Approach

The GeneBEcon project followed a structured, multi-stakeholder approach to develop actionable NGTs Transition Action Plans, ensuring broad engagement across policymakers, industry, food and feed producers/traders, and consumer groups. This process unfolded in four key phases, each refining strategies for responsible NGT adoption.

Phase 1 and 2: Understanding the NGT Landscape – 1st RRI Workshop (Nov 2023)

After an internal workshop, the first stakeholder workshop mapped the state of NGTs in Europe and examined key challenges and opportunities in the agri-food sector. Stakeholders conducted a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) to assess regulatory, technological, and societal factors impacting NGT adoption.

Key Outcomes:

✅ Identified six key stakeholder groups: 1) policymakers, 2) consumer associations, 3) the food industry, 4) breeder associations, 5) farmer associations, and 6) NGOs, along with their specific needs and concerns.

✅ Recognized misinformation and regulatory uncertainty as two major barriers to public acceptance.

✅ Brainstormed potential transition pathways, laying the foundation for the next phase.

Methodology for developing the NGTs Transition Action Plans

Phase 3: Co-Developing SMART Actions – 2nd RRI Workshop (Mar 2024)
Building on insights from the first workshop, this session took a solution-oriented approach, using the I-SMART framework (Impactful, Specific, Measurable, Attainable, Realistic, Time-bound) to design targeted actions addressing barriers to NGT adoption.
Key Outcomes:
✅ Defined stakeholder-specific transition pathways tailored to policymakers, industry, farmers, breeders, NGOs and consumers.
✅ Prioritized empowerment actions, such as targeted awareness campaigns, regulatory alignment strategies, and investment in detection technologies.
✅ Established an initial Stakeholder NGT Transition Action Plan, outlining concrete actions for transitioning towards responsible NGT adoption.

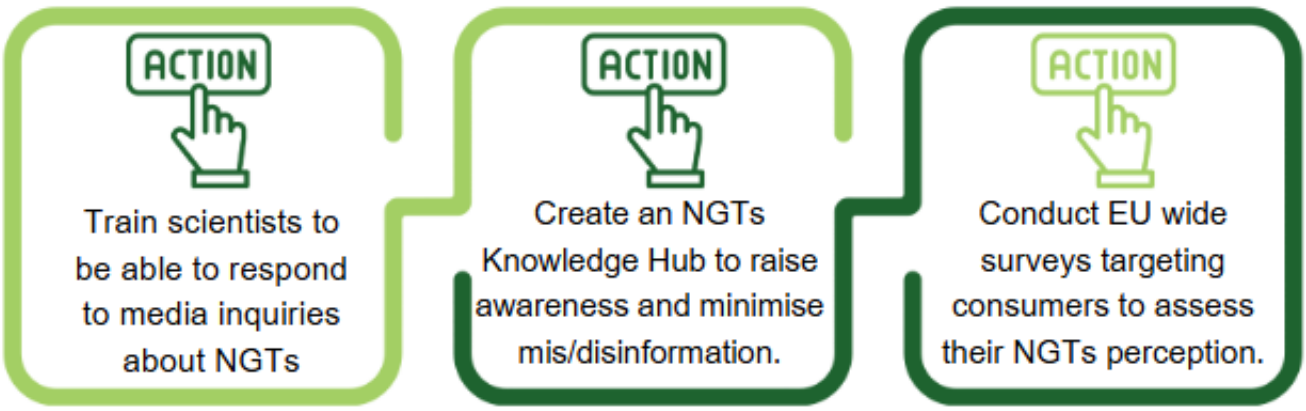
Phase 4: Finalising the Transition Action Plans – 3rd RRI Workshop (Oct 2024) until May 2025
The third workshop validated and refined the proposed Transition Action Plans, ensuring their feasibility, alignment with EU policy goals, and concrete implementation steps. A major focus was on building trust and multi-stakeholder collaboration. To strengthen the credibility and applicability of the plans, they were reviewed by external stakeholder groups, including regulatory bodies, industry representatives and consumer organizations.

Key Outcomes:
✅ Finalized six distinct Transition Action Plans, one for each stakeholder group, with I-SMART actions to address regulatory, social, and economic challenges.
✅ Developed strategies for dissemination and policy integration, ensuring that the results contribute to shaping future EU regulatory frameworks on NGTs.

Conclusion: A Responsible and Inclusive Transition
By applying a phase-oriented, co-creative approach, the GeneBEcon project ensured that the NGTs Transition Action Plans were stakeholder-driven, scientifically grounded, and policy-relevant. The iterative engagement process across the three RRI workshops allowed for the progressive refinement of strategies, resulting to a set of actionable and widely supported pathways for the responsible adoption of NGTs in the European agri-food sector.

Core Actions

The core actions serve as the foundation of the NGT Transition Action Plan, outlining initiatives to be carried out by NGT specialists that are relevant across all NGTs Transition Action Plans. These actions provide the essential foundation for the commencement and execution of the six NGTs Transition Action Plans.



The three actions shall be implemented in parallel!

Train scientists to be able to respond to media inquiries about NGTs

S

Step: Develop and deliver a tailored training program for scientists, focusing on science communication, handling media interviews, and crafting clear, non-technical messages about NGTs.
Objective: Equip scientists with the skills and confidence to effectively engage with journalists and the public.

M

Step: Conduct four training workshops for 30 scientists within six months, with at least 10 participants per session.
Objective: Achieve an 85% satisfaction rate based on post-training feedback and ensure 75% of participants demonstrate improved media communication skills in a simulated interview assessment.

A

Step: Partner with experienced media trainers and science communicators to deliver the training sessions.
Objective: Certify at least 30 scientists as "Media-Ready Experts on NGTs" by the end of the training program.

R

Step: Focus the training on **addressing common public misconceptions, emphasizing the societal benefits of NGTs** (e.g., sustainable agriculture, food security, climate resilience).
Objective: Ensure that 50% of trained scientists participate in media interviews, public forums, or outreach events within six months of completing the program.

T

Step: Launch the training program within two months and complete all workshops within six months.
Objective: Publish a directory of "Media-Ready Scientists" by the end of Q4 to facilitate media engagement and promote public understanding of NGTs.

SMART (Specific, Measurable, Achievable, Relevant, Time-Bound) is defined and explained in the next section under the paragraph “How to use the Pathway”.

Create an NGTs Knowledge Hub to raise awareness and minimise misinformation/disinformation.

S

Step: Develop an online NGTs Knowledge Hub that serves as a centralized platform offering accurate, up-to-date information on NGTs, including scientific studies, international and EU policy briefs, EU-funded projects, FAQs, videos, and infographics.
Objective: Provide a reliable resource for policymakers, farmer, breeder and consumer associations, NGOs and the food industry to access verified information and counter misinformation about NGTs.

M

Step: Populate the hub with at least 50 high-quality content pieces (e.g., scientific studies, international and EU policy briefs, EU-funded projects, FAQs, videos, and infographics) within six months of launch.
Objective: Achieve 10,000 unique visitors and a 20% increase in time spent on the site within six months, with 80% of users reporting the content as "helpful" or "very helpful" in post-visit surveys.

A

Step: Collaborate with experts, research institutions, and communication professionals to curate and create content.
Objective: Ensure that 90% of the hub's content is peer-reviewed or verified by subject-matter experts before publication.

R

Step: Align the hub's content with current debates, societal concerns, and EU priorities such as food security, climate change, bio-economy strategy paper and sustainability.
Objective: Ensure the Knowledge Hub is cited in at least five key policy discussions, media articles, or scientific forums within six months of launch.

T

Step: Launch the NGTs Knowledge Hub within four months, with ongoing updates and content additions every two weeks.
Objective: Evaluate the hub's impact through analytics and user feedback, producing a report on its effectiveness in countering misinformation by the end of the first year.

Conduct EU-wide surveys targeting the public to assess their NGTs' perception.

S

Step: Design and execute a survey that targets the public across all 27 EU member states to evaluate their awareness, understanding, and opinions about NGTs.
Objective: Collect data on the public's knowledge, perceived benefits, concerns, and trust in NGT-related applications.

M

Step: Gather responses from at least 10,000 people across the EU, ensuring a representative sample by including a diverse range of demographics such as age, gender, education, and geographic location.
Objective: Achieve a minimum 80% completion rate for the survey and analyze data by the end of the campaign.

A

Step: Collaborate with professional survey organizations and local partners to translate and distribute the survey in all official EU languages.
Objective: Launch the survey within two months and ensure at least 90% of EU member states meet their target response quota within four months.

R

Step: Include questions that align with the EU's current debates on NGTs, such as sustainability, food safety, and ethical concerns, to gather insights that can inform policy and communication strategies.
Objective: Use survey results to create a report with actionable insights to be presented to stakeholders (e.g., policymakers, industry leaders) within two months of survey completion.

T

Step: Roll out the survey within three months and collect all responses within six months.
Objective: Deliver a comprehensive analysis and publish findings by the end of Q3, ensuring the data is timely for ongoing legislative discussions on NGTs.

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Section II: Specific Action Pathways for NGO Associations

Transitioning NGOs towards NGTs

NGOs play a vital role in shaping public perception and ensuring accurate, accessible information on New Genomic Techniques (NGTs). NGO Associations have an ethical responsibility to avoid spreading misinformation or disinformation to consumers.

Humans have been selecting genetic traits for millennia by breeding plants, with the aim to either enhance crop yields or improve food quality. The findings made in modern biology have allowed to refine this process by using New Genomic Techniques (NGTs). NGTs is part of the bioeconomy, which aims to enable Europe to achieve food and nutrition security, natural resources sustainability, mitigate and adapt to climate change, achieve circularity, and strengthen economy and social fairness. To achieve these strategic goals, all Europeans must be involved to transition towards these innovations. In this respect, NGO Associations play a crucial role for informing and guiding consumers to make informed decisions and choices.

The GeneBEcon project has worked throughout its duration with consumer associations and studied consumer trends. During this work, the project has identified two major issues that impair transitioning due to lack of information and understanding and due to non-factual or erroneous information. The goal of this document is to enable NGO Associations to consider specific actions to help their members in better understanding NGTs, what they mean for our wellbeing, quality of life and for our sustainability.

Finally, this NGTs Transition Pathway has been developed through active stakeholder engagement, including input from NGO Associations, as part of GeneBEcon's Responsible Research and Innovation activities.

How to use the Pathway

Who implements the Pathway? NGO Associations

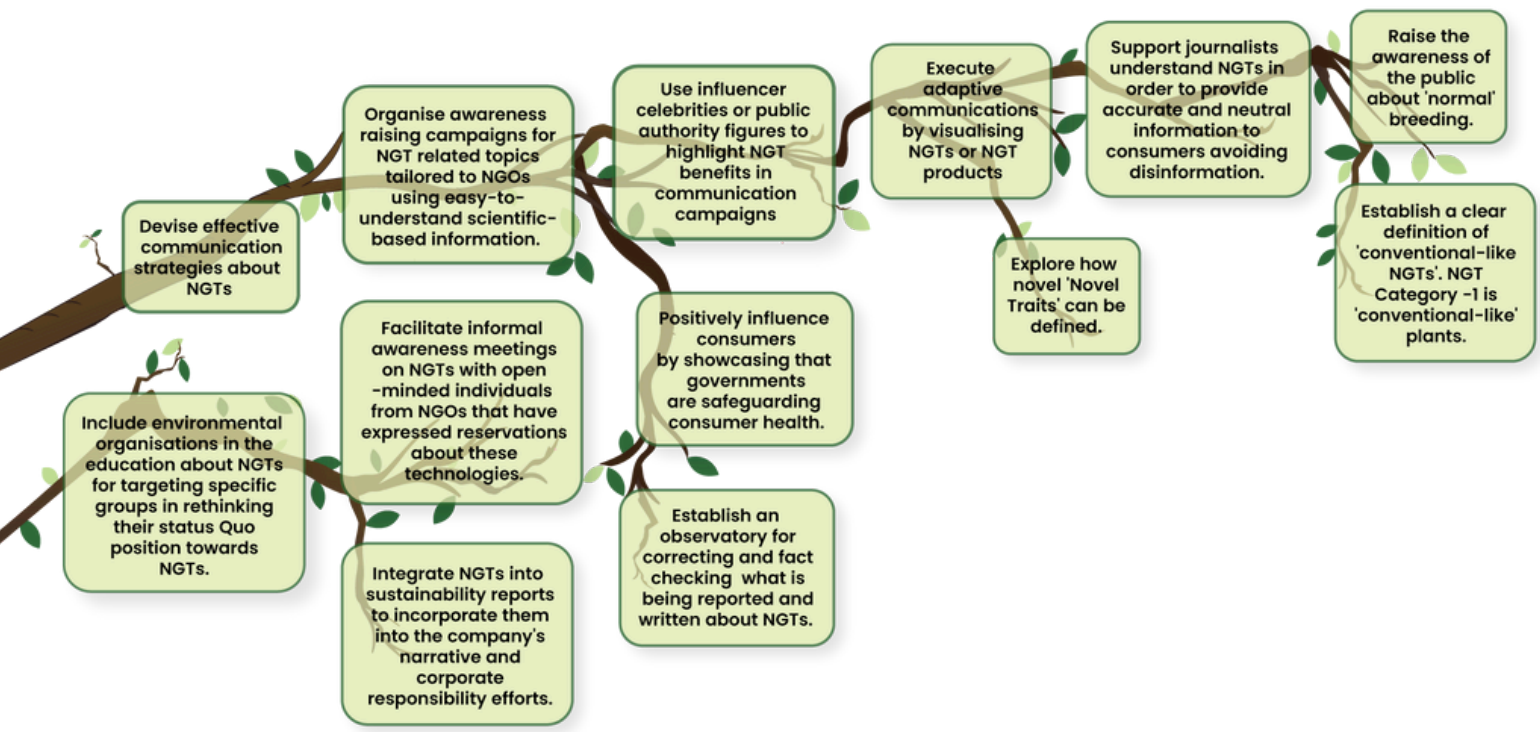
This pathway is organised into two linked phases, Phase 1 and Phase 2. Each phase consists of a series of interlinked actions. The pathway shows the logical sequence that these actions should be implemented. Actions that are illustrated in the same vertical line (top of each other) show that they are equally interdependent to each other and that they can be executed in parallel. The interdependence of the actions has been specified through a specialised algorithm and checked by stakeholders and NGO Associations.

Each action is defined based on the I-SMART principle with steps with steps and objectives to make each action impactful.

S pecific:	Clearly outlines what is to be achieved, who is involved, and why it is important.
M easurable:	Includes criteria to track progress and determine success.
A chievable:	Realistic and feasible given the resources, constraints, and context.
R elevant:	Aligned with broader goals or priorities, ensuring it contributes meaningfully to the overarching objective of a consumer association.
T ime-bound:	Includes a deadline or timeline to create urgency and accountability.

The pathway is ready for implementation, and it is up to the NGO Association, executing it, to adjust the objectives of each step to better fit its goals, for example the metrics and time frames mentioned in the step by step explanations. The pathway is a guidance document, and the implementation and subsequent results are the sole responsibility of the NGO Association and its actors.

Phase 1



Devise effective communication strategies about NGTs

S

Step: Develop tailored communication materials (e.g., infographics, briefing documents, and case studies) that explain NGTs in the context of sustainability, food security, and environmental impact.
Objective: Ensure the messaging aligns with the core values and missions of NGOs, such as biodiversity protection or climate change mitigation.

M

Step: Host at least five workshops or webinars for NGOs within six months to present NGT-related information and address concerns.
Objective: Achieve 80% satisfaction among attendees, as measured through post-event surveys, and track increased engagement in follow-up discussions.

A

Step: Collaborate with at least three leading NGOs to co-create communication strategies and resources that reflect shared goals and address misconceptions about NGTs.
Objective: Finalize and distribute co-branded materials within four months.

R

Step: Focus the strategy on areas where NGTs align with NGO priorities, such as reducing pesticide use, promoting climate-resilient crops, and advancing sustainable agriculture.
Objective: Demonstrate the potential of NGTs to contribute to NGOs' advocacy efforts and program goals, fostering greater support for these technologies.

T

Step: Launch the communication strategy within three months and monitor its effectiveness through feedback and outreach metrics (e.g., event attendance, resource downloads, and NGO endorsements) over a 12-month period.
Objective: Secure public endorsements or collaborative initiatives from at least two prominent NGOs within one year.

Include environmental organisations in the education about NGTs for targeting specific groups in rethinking their status Quo position towards NGTs.

S

Step: Partner with environmental organizations to co-develop educational campaigns that focus on the environmental benefits of NGTs, such as reduced pesticide use, climate resilience, and biodiversity conservation.
Objective: Align NGT education with the core missions of environmental organizations to enhance credibility and acceptance.

M

Step: Conduct at least 10 joint educational sessions (webinars, workshops, or panel discussions) with environmental organizations over 12 months.
Objective: Reach a minimum of 1,000 participants from targeted groups, with at least 70% reporting increased awareness of NGTs' environmental benefits through post-event surveys.

A

Step: Provide environmental organizations with science-based resources, such as explainer videos, infographics, and policy briefs, tailored to their audiences.
Objective: Deliver and distribute these materials within three months and track engagement through metrics like downloads, shares, and feedback.

R

Step: Focus educational efforts on specific groups, such as sustainability advocates, policymakers, and young environmentalists, where shifting opinions on NGTs can have a meaningful impact.
Objective: Foster at least three new public endorsements or statements from environmental organizations in support of exploring NGT applications within one year.

T

Step: Launch the collaboration with environmental organizations within two months and conduct a mid-term review after six months to evaluate progress and make adjustments.
Objective: Achieve measurable changes in perception among targeted groups, as evidenced by survey data, by the end of the first year.

Organise awareness raising campaigns for NGT related topics tailored to NGOs using easy-to- understand scientific-based information.

S

Step: Design and implement a campaign targeted at NGOs to raise awareness about the environmental, societal, and agricultural benefits of NGTs, using simplified scientific explanations and case studies.
Objective: Equip NGOs with accurate information to better understand and potentially advocate for NGTs.

M

Step: Create and distribute campaign materials, such as infographics, explainer videos, and white papers, to at least 50 NGO organizations within six months.
Objective: Track engagement metrics, aiming for a 70% response rate (downloads, views, or participation in campaign events).

A

Step: Host five interactive webinars or Q&A sessions within the first six months, featuring scientists and subject-matter experts to address NGO-specific questions and concerns.
Objective: Attract at least 500 participants across all events, with 80% rating the events as "useful" or "very useful" in post-event surveys.

R

Step: Focus the campaign on issues that align with NGO priorities, such as reducing environmental impact, promoting sustainability, and increasing food security, to ensure the information resonates with their missions.
Objective: Demonstrate how NGTs align with NGO goals and address key challenges, securing active engagement from at least 10 prominent NGOs within one year.

T

Step: Launch the awareness campaign within three months and conduct a mid-term review after six months to evaluate impact and refine strategies.
Objective: Achieve measurable improvement in NGO perception of NGTs, with at least 30% expressing openness to NGTs in follow-up surveys by the end of the first year.

Facilitate informal awareness meetings on NGTs with open-minded individuals from NGOs that have expressed reservations about these technologies.

S

Step: Organize small, informal gatherings such as roundtable discussions, coffee chats, or private forums to engage open-minded individuals from NGOs in constructive conversations about NGTs.
Objective: Provide a platform for addressing concerns, sharing accurate information, and discussing potential benefits of NGTs in a non-confrontational setting.

M

Step: Conduct at least 10 informal meetings within one year, each involving 5–10 participants from NGOs who have expressed reservations about NGTs.
Objective: Gather feedback through surveys, aiming for 70% of participants to report an improved understanding or shift in perspective about NGTs.

A

Step: Collaborate with neutral facilitators or respected third-party mediators to ensure a balanced and respectful dialogue during the meetings.
Objective: Ensure at least 80% of attendees feel the discussions were fair, transparent, and informative, as measured by post-meeting feedback forms.

R

Step: Focus the discussions on topics that align with the values of the NGOs, such as environmental sustainability, biodiversity, and social impact, to make the dialogue more meaningful and relatable.
Objective: Address at least three key concerns commonly raised by NGOs during the meetings, backed by scientific evidence and case studies.

T

Step: Launch the initiative within two months, holding one meeting every month thereafter, with a mid-term review after six meetings to assess progress and refine the approach.
Objective: Achieve tangible outcomes, such as commitments from at least 3 NGO representatives to further explore NGTs or engage in follow-up discussions, within one year.

Integrate NGTs into sustainability reports to incorporate them into the company's narrative and corporate responsibility efforts.

S

Step: Collaborate with NGOs and corporate sustainability teams to include sections in their sustainability reports that highlight the role of New Genomic Techniques (NGTs) in achieving environmental, social, and governance (ESG) goals.
Objective: Position NGTs as tools for advancing sustainability initiatives, such as reducing pesticide use, improving food security, and mitigating climate change.

M

Step: Work with at least 10 organizations (NGOs or corporations) to ensure NGT-related achievements or goals are featured in their sustainability reports within one year.
Objective: Track the inclusion of NGT references in at least 80% of these reports by the end of the reporting cycle.

A

Step: Develop standardized, science-based content templates (e.g., data visuals, case studies, and key messaging) to facilitate easy integration of NGTs into sustainability reporting.
Objective: Deliver these templates to target organizations within three months and offer support in customizing them for specific contexts.

R

Step: Focus on highlighting the alignment of NGTs with global frameworks like the UN Sustainable Development Goals (SDGs) and the Paris Agreement to demonstrate their relevance to NGO and corporate missions.
Objective: Showcase at least three specific examples of how NGTs contribute to these global goals in each sustainability report.

T

Step: Launch the initiative within three months, starting with a pilot program involving three organizations, and scale it up based on feedback.
Objective: Achieve widespread integration of NGTs into sustainability reports across 10 or more organizations within 12 months.

Use influencer celebrities or public authority figures to highlight NGT benefits in communication campaigns

S

Step: Identify and engage influential celebrities, social media influencers, or public figures known for their support of sustainability, science, or agriculture to participate in NGT-focused communication campaigns.
Objective: Use their platforms to amplify messages about the benefits of NGTs, such as sustainability, food security, and climate resilience.

M

Step: Launch a communication campaign featuring at least five influencers or public figures, targeting a combined audience of 5 million people within six months.
Objective: Track engagement metrics (e.g., likes, shares, comments) to ensure the campaign achieves at least 1 million interactions across all platforms.

A

Step: Provide influencers with clear, engaging, and scientifically accurate content (e.g., talking points, videos, or infographics) to share on their platforms.
Objective: Equip influencers with campaign materials within two months and support their posts or events with paid media promotion if needed.

R

Step: Focus the campaign on topics that resonate with the influencers' audiences, such as sustainable agriculture, eco-friendly food production, and climate solutions, while tying these themes to NGTs.
Objective: Ensure that the messaging aligns with influencers' established brand or advocacy to maintain authenticity and credibility.

T

Step: Launch the campaign within three months, with content posted by influencers over a six-month period, and assess the campaign's impact through post-campaign surveys and data analysis.
Objective: Achieve a measurable increase in public awareness and positive perception of NGTs, with at least 30% of survey respondents indicating improved understanding of NGT benefits.

Positively influence consumers by showcasing that governments are safeguarding consumer health.

S

Step: Develop a communication campaign highlighting government regulations, safety evaluations, and policies ensuring that NGT-derived products meet stringent health and safety standards before reaching consumers.
Objective: Build consumer trust by emphasizing the role of government oversight in safeguarding public health.

M

Step: Create and disseminate at least 10 pieces of content (e.g., videos, infographics, press releases) explaining government safeguards for NGTs across various media channels (social media, websites, public forums) within six months.
Objective: Achieve at least 1 million views and a 10% engagement rate (likes, shares, or comments) across all content.

A

Step: Collaborate with government agencies, regulators, and scientific bodies to ensure the information is accurate and transparent.
Objective: Secure official endorsements or participation from at least three government or regulatory bodies within three months to lend credibility to the campaign.

R

Step: Tailor messaging to address key consumer concerns, such as product safety, transparency in regulation, and traceability of NGT-derived products, using real-world examples.
Objective: Conduct a consumer survey within three months of campaign launch, aiming for at least 70% of respondents to report increased confidence in NGTs and government oversight.

T

Step: Launch the campaign within three months and track its impact over a 12-month period through consumer sentiment analysis and engagement metrics.
Objective: Demonstrate a measurable improvement in consumer perception, with at least 25% of surveyed participants indicating greater trust in NGT-related policies by the end of the campaign.

Establish an observatory for correcting and fact checking what is being reported and written about NGTs.

S

Step: Set up an independent observatory team composed of scientific experts, media analysts, and communication professionals to monitor, verify, and correct misinformation or inaccurate reporting about NGTs.
Objective: Ensure that accurate, science-based information is widely available and misinformation is promptly addressed.

M

Step: Fact-check and respond to at least 50 instances of misinformation or inaccurate reporting about NGTs within the first 12 months of operation.
Objective: Publish corrections or clarifications on a dedicated website, social media platforms, and directly with media outlets, aiming for 70% acknowledgment or correction by the original source.

A

Step: Develop and launch a digital platform within four months that serves as a hub for tracking misinformation, publishing corrections, and providing verified information about NGTs.
Objective: Attract at least 10,000 monthly visitors to the platform within the first six months after launch.

R

Step: Focus on addressing misinformation that has significant implications for public perception, such as health risks, environmental concerns, and regulatory policies surrounding NGTs.
Objective: Prioritize correcting misinformation in high-visibility media outlets and widely circulated content to maximize impact.

T

Step: Launch the observatory within six months, with quarterly progress reviews to measure effectiveness in identifying and correcting misinformation.
Objective: Demonstrate a measurable reduction in the spread of misinformation about NGTs, with at least 20% of surveyed stakeholders (e.g., journalists, NGOs, policymakers) reporting improved understanding by the end of the first year.

Execute adaptive communications by visualising NGTs or NGT products

S

Step: Develop visually engaging content such as videos, animations, infographics, and 3D models to illustrate how NGTs work and the benefits of NGT-derived products (e.g., improved crops or sustainability).
Objective: Achieve a 10% engagement rate (likes, shares, comments) on visual content and a 20% increase in positive sentiment about NGTs in audience surveys.

M

Step: Produce and distribute at least 15 pieces of visual content across digital platforms within 12 months, targeting a combined audience reach of 2 million people.
Objective: Reach at least 100,000 consumers, with 20,000 engagements (likes, shares, comments) and a 30% increase in positive sentiment about NGTs, as measured by pre- and post-campaign surveys.

A

Step: Partner with graphic designers, video production teams, and agricultural experts to create high-quality, scientifically accurate visual materials.
Objective: Complete content creation for the first 5 visuals within three months, ensuring they are both scientifically accurate and audience-friendly.

R

Step: Focus visualizations on topics that directly address consumer concerns, such as reduced pesticide use, improved nutritional quality, and climate resilience of NGT products.
Objective: Highlight the direct benefits of NGT products to consumers, ensuring that at least 60% of surveyed viewers report an improved understanding of NGTs.

T

Step: Launch a campaign featuring the visual content within three months and monitor its effectiveness monthly through analytics and surveys.
Objective: Demonstrate measurable impact by the end of the first year, with at least 25% of surveyed participants expressing a more favorable opinion of NGTs after exposure to the visuals.

Support journalists understand NGTs in order to provide accurate and neutral information to consumers avoiding disinformation.

S

Step: Organize workshops, webinars, and Q&A sessions with scientists and regulatory experts to educate journalists about the science, safety, and societal benefits of NGTs.
Objective: Build journalists' understanding of NGTs, enabling them to report accurate and balanced stories while avoiding disinformation.

M

Step: Conduct at least 10 educational sessions for journalists within 12 months, aiming to train a minimum of 150 journalists across various regions.
Objective: Measure success by conducting post-session surveys, with at least 80% of participants reporting improved understanding of NGTs and their implications.

A

Step: Provide journalists with resources such as fact sheets, explainer videos, and access to a dedicated helpline or expert database for queries related to NGTs.
Objective: Distribute these materials to at least 200 journalists within six months and ensure at least 50 inquiries are addressed through the helpline.

R

Step: Focus on key issues such as the distinction between NGTs and GMOs, regulatory frameworks, and the benefits of NGTs for sustainability and food security.
Objective: Ensure that at least 70% of participants in the sessions demonstrate an understanding of these issues in post-training assessments.

T

Step: Launch the initiative within three months, with quarterly progress reviews to refine the training program and assess its impact.
Objective: By the end of one year, track the media coverage of NGTs and aim for at least a 30% increase in accurate, neutral reporting on NGTs compared to the previous year.

Raise the awareness of the public about 'normal' breeding.

S

Step: Develop a public education campaign using infographics, videos, and webinars to explain the traditional breeding processes (e.g., cross-breeding, selective breeding) and how they have been used historically to improve crops and livestock.
Objective: Highlight the similarities and differences between "normal" breeding and newer technologies like NGTs, building a foundation for understanding.

M

Step: Create and distribute at least 10 educational materials (e.g., videos, brochures, and articles) across social media, websites, and public forums, aiming to reach 1 million people within six months.
Objective: Track engagement metrics (views, shares, likes) and conduct pre- and post-campaign surveys to assess at least a 20% increase in public knowledge about traditional breeding.

A

Step: Collaborate with agricultural experts, universities, and science communicators to create easy-to-understand, scientifically accurate content.
Objective: Launch the first wave of materials within three months and partner with at least five reputable institutions to amplify the message.

R

Step: Focus on showing the role of traditional breeding in addressing societal needs, such as improving food security, enhancing crop resilience, and supporting biodiversity.
Objective: Relate traditional breeding techniques to familiar foods and environmental benefits to make the content more relatable and engaging.

T

Step: Roll out the campaign within three months, with monthly performance evaluations to adjust messaging and channels based on audience response.
Objective: Achieve measurable improvement in public awareness of traditional breeding, with at least 30% of survey respondents indicating they have a better understanding of the topic by the end of one year.

Establish a clear definition of 'conventional-like NGTs'. NGT Category -1 is 'conventional-like' plants.

S

Step: Convene a working group of experts in genetics, plant science, regulatory affairs, and policy to draft a scientifically and legally sound definition of "conventional-like NGTs."
Objective: Provide a clear and precise definition that distinguishes Category-1 NGTs from traditional GMOs and aligns with EU regulatory frameworks.

M

Step: Publish a position paper defining "conventional-like NGTs" within six months, backed by at least 10 supporting scientific studies or references.
Objective: Share the definition with 20 key stakeholders, including EU policymakers, scientific organizations, and industry associations, ensuring at least 80% endorsement or acknowledgment.

A

Step: Host three expert roundtables or workshops within three months to gather consensus on the key characteristics and criteria for "conventional-like NGTs," including equivalence to traditional breeding outcomes.
Objective: Finalize a draft definition based on consensus from at least 15 participants representing diverse stakeholder groups.

R

Step: Focus the definition on traits, processes, and outcomes that mimic those achievable through traditional breeding methods, ensuring it addresses regulatory and consumer trust concerns.
Objective: Align the definition with EU regulatory priorities, making it suitable for inclusion in legislative proposals or guidance documents.

T

Step: Complete the drafting process within six months, followed by a three-month public consultation period, and finalize the definition within nine months.
Objective: Ensure the definition is adopted or referenced in at least one EU regulatory or policy document within 12 months.

Explore how novel 'Novel Traits' can be defined.

S

Step: Assemble a multidisciplinary task force of geneticists, agronomists, regulatory experts, and policymakers to review existing definitions and scientific criteria for novel traits in plants and animals.
Objective: Draft a comprehensive framework outlining the parameters and criteria for defining "Novel Traits" in the context of NGTs.

M

Step: Conduct a review of at least 50 scientific papers and regulatory definitions from the EU, the U.S., and other leading regions within six months.
Objective: Use the findings to produce a white paper detailing potential approaches to defining "Novel Traits" and identify gaps in existing definitions.

A

Step: Host three expert workshops or roundtable discussions within four months to gather input and reach a consensus on the key factors that constitute "Novel Traits."
Objective: Ensure participation from at least 20 experts across diverse fields and gather their feedback on a proposed draft definition.

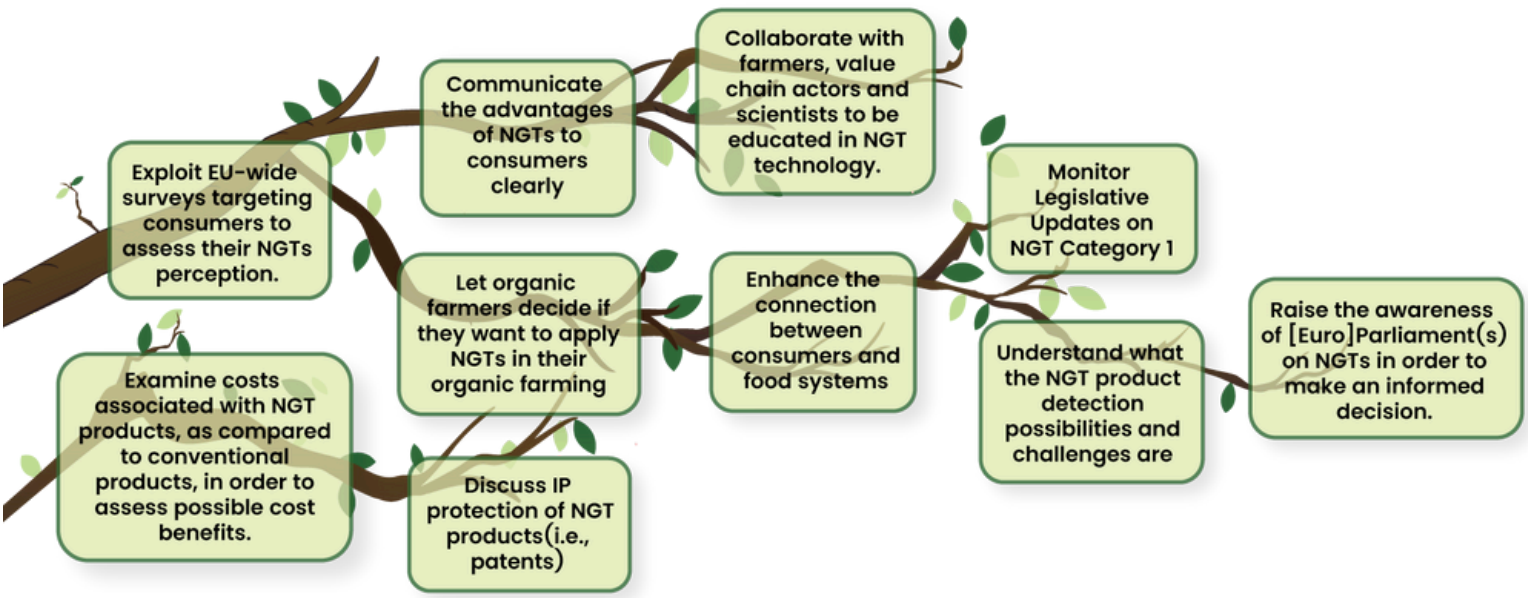
R

Step: Focus on defining "Novel Traits" in a way that is consistent with regulatory and scientific standards, ensuring that the definition supports the safe evaluation and classification of NGT products.
Objective: Provide clarity on traits that distinguish NGTs from conventional breeding and traditional GMOs, supporting both industry needs and public trust.

T

Step: Complete the research, consultations, and drafting process within nine months, followed by a public consultation period lasting three months.
Objective: Finalize and publish the definition of "Novel Traits" within 12 months, aiming for endorsement or utilization in at least one EU regulatory or policy document within 18 months.

Phase 2



Exploit EU-wide surveys targeting consumers to assess their NGTs perception.

S

Step: Analyze data from existing and new EU-wide surveys to assess consumer attitudes, knowledge levels, and concerns about NGTs.
Objective: Identify key trends, misconceptions, and factors influencing consumer perceptions across different demographics and regions.

M

Step: Conduct a meta-analysis of at least five major consumer surveys within the next six months, covering at least 10,000 respondents across EU member states.
Objective: Produce a comprehensive report summarizing consumer attitudes and highlighting regional differences with at least five key insights.

A

Step: Collaborate with established research institutions, universities, and industry bodies to gain access to reliable survey data and ensure statistical robustness.
Objective: Secure partnerships with at least three leading consumer research organizations within the first three months.

R

Step: Use the findings to refine communication strategies, educational initiatives, and policy recommendations aimed at increasing consumer awareness and trust in NGTs.
Objective: Ensure that at least 50% of stakeholders (e.g., policymakers, industry representatives) use the insights to inform their outreach strategies.

T

Step: Complete the survey analysis within six months and host a stakeholder briefing within the next three months to present findings and strategic recommendations.
Objective: Publish a final report within nine months and track its influence by measuring engagement from policymakers, media, and consumer groups.

Examine costs associated with NGT products, as compared to conventional products, in order to assess possible cost benefits.

S

Step: Consult comprehensive cost analyses reports comparing the production, distribution, and market prices of NGT products versus conventional products in key agricultural sectors (e.g., grains, vegetables, and fruits).
Objective: Identify cost benefits and potential savings for producers, consumers, and supply chain stakeholders.

M

Step: Analyze at least 10 case studies or datasets comparing the costs of NGT and conventional products in terms of inputs (e.g., seeds, water, fertilizers) and outputs (e.g., yield, quality).
Objective: Produce a detailed report highlighting at least five significant cost benefits within six months.

A

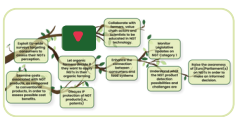
Step: Collaborate with agricultural economists, industry experts, and academic researchers to gather accurate cost data and perform in-depth analyses.
Objective: Ensure data collection and analysis are completed within the allocated budget and timeframe by leveraging partnerships with at least three institutions or organizations.

R

Step: Focus on cost factors most relevant to stakeholders, such as reduced pesticide use, higher yield efficiency, or lower transportation costs due to improved shelf life of NGT products.
Objective: Provide actionable insights to producers, policymakers, and consumers, demonstrating the economic advantages of adopting NGTs.

T

Step: Initiate the cost analysis project within one month and complete the study within six months.
Objective: Present the findings in a public forum or industry conference and distribute the final report to key stakeholders by the end of Q3.



Communicate the advantages of NGTs to consumers clearly

S

Step: Develop a consumer-friendly communication campaign that explains the benefits of NGTs in terms of sustainability, nutrition, food security, and reduced pesticide use.
Objective: Ensure messaging is clear, science-based, and relatable to everyday consumer concerns.

M

Step: Create and distribute at least 10 different communication materials (e.g., videos, infographics, FAQs, fact sheets) within six months, targeting at least 1 million consumers.
Objective: Achieve a 20% increase in consumer awareness about NGT benefits, as measured through pre- and post-campaign surveys.

A

Step: Partner with food industry stakeholders, agricultural scientists, and consumer organizations to co-develop and validate content.
Objective: Secure endorsements or collaborations with at least five credible institutions to enhance trust and reach.

R

Step: Focus on consumer-relevant benefits, such as affordability, environmental impact, and health improvements, rather than just technical explanations.
Objective: Ensure that at least 70% of surveyed consumers find the information useful and relevant to their food choices.

T

Step: Launch the communication campaign within three months, with monthly evaluations based on audience engagement metrics (e.g., website visits, social media shares, media coverage).
Objective: By the end of 12 months, achieve at least a 30% increase in positive consumer sentiment toward NGTs, measured through social listening and surveys.

Collaborate with farmers, value chain actors and scientists to be educated in NGT technology.

S

Step: Establish structured training programs where NGOs, farmers, value chain actors, and scientists engage in knowledge-sharing sessions on NGTs, their applications, and implications for agriculture and sustainability.
Objective: Ensure NGOs have access to science-based, practical knowledge to foster informed discussions and decision-making on NGTs.

M

Step: Organize at least 6 interactive workshops or field visits within 12 months, each engaging at least 50 participants from NGOs, farming communities, and industry stakeholders.
Objective: Achieve at least 80% participant satisfaction and improved knowledge retention, measured through pre- and post-training assessments.

A

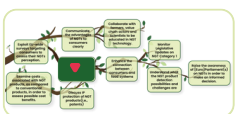
Step: Partner with agricultural universities, biotech companies, research institutions, and farmer cooperatives to develop accessible and neutral educational materials on NGTs.
Objective: Secure collaboration with at least three major research or agricultural institutions within six months to support the initiative.

R

Step: Address key concerns from NGOs and farmers, such as safety, sustainability, ethical considerations, regulatory frameworks, and market acceptance of NGTs.
Objective: Ensure that at least 70% of NGO representatives acknowledge the relevance of the training to their advocacy work and policy engagement.

T

Step: Develop a permanent multi-stakeholder dialogue platform within 18 months to facilitate ongoing engagement and education between NGOs, farmers, scientists, and industry players on NGTs.
Objective: Ensure at least 1,000 stakeholders engage with the platform within the first year and track impact through periodic feedback surveys.



Let organic farmers decide if they want to apply NGTs in their organic farming

S

Step: Facilitate informed decision-making by providing organic farmers with unbiased, science-based information about NGTs, their compatibility with organic farming principles, and potential benefits or challenges.
Objective: Ensure organic farmers have access to accurate, transparent, and practical knowledge before making a decision.

M

Step: Organize at least 5 educational workshops and webinars within the next 12 months, targeting at least 500 organic farmers across different EU regions.
Objective: Assess farmer engagement and knowledge improvement through pre- and post-event surveys, aiming for at least 70% of attendees to report increased understanding.

A

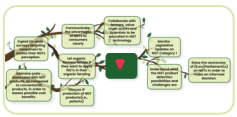
Step: Collaborate with organic farming associations, agricultural scientists, and policymakers to create neutral, science-based materials on NGTs tailored for organic farming contexts.
Objective: Secure endorsement or partnership with at least three major organic farming organizations to ensure credibility and reach.

R

Step: Address key concerns of organic farmers, such as regulatory implications, consumer perception, market access, and coexistence strategies with non-NGT organic practices.
Objective: Ensure at least 80% of surveyed farmers feel that the provided information is relevant to their farming decisions.

T

Step: Establish a decision-support platform (website, helpline, or advisory network) within 6 months, offering organic farmers a space to ask questions, share experiences, and discuss NGT integration.
Objective: Ensure at least 1,000 organic farmers access the platform within the first year and track how their stance on NGTs evolves over time.



Enhance the connection between consumers and food systems

S

Step: Develop interactive educational initiatives (e.g., farm visits, digital platforms, workshops) to help consumers understand how food is produced, processed, and distributed.
Objective: Increase consumer awareness of sustainable agriculture, NGTs, and food production processes.

M

Step: Organize at least 10 farm-to-table experiences, open farm days, or online webinars across different EU regions within 12 months, reaching at least 5,000 consumers.
Objective: Measure effectiveness through surveys, aiming for 70% of participants to report a better understanding of food systems.

A

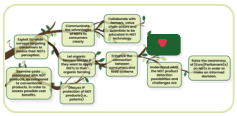
Step: Partner with farmers, food industry players, consumer organizations, and educational institutions to create engaging content and events.
Objective: Secure collaboration with at least five major industry stakeholders to ensure broad reach and credibility.

R

Step: Focus on consumer concerns such as food safety, sustainability, nutrition, and ethical sourcing, linking these issues to food system transparency.
Objective: Ensure at least 80% of surveyed consumers find the information relevant to their purchasing decisions.

T

Step: Launch an interactive online platform within 6 months featuring farmer testimonials, virtual farm tours, and explainer videos on modern food production techniques, including NGTs.
Objective: Reach at least 50,000 unique visitors in the first year and track engagement through social media interactions and website analytics.



Monitor Legislative Updates on NGT Category 1

S

Step: Establish a dedicated monitoring system to track legislative developments, regulatory discussions, and policy updates related to NGT Category 1 at the EU and national levels.
Objective: Ensure stakeholders receive timely and accurate information on policy changes affecting NGTs.

M

Step: Publish monthly legislative updates summarizing key developments, committee discussions, and policy shifts in the EU regulatory framework for NGTs.
Objective: Ensure at least 95% accuracy in reporting legislative updates and reach at least 500 industry professionals and policymakers with each update.

A

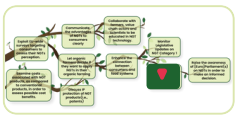
Step: Partner with legal experts, industry associations, and regulatory bodies to verify and interpret legislative updates for relevant stakeholders.
Objective: Establish collaborations with at least three key regulatory or policy organizations within the next six months.

R

Step: Focus on monitoring European Parliament debates, European Commission proposals, national-level policy adaptations, and stakeholder consultations regarding NGT Category 1.
Objective: Ensure that 100% of updates provide actionable insights for businesses, researchers, and policymakers.

T

Step: Launch a real-time NGT Policy Tracker (newsletter, dashboard, or website) within three months, offering access to legislative insights, stakeholder positions, and upcoming regulatory decisions.
Objective: Reach at least 5,000 stakeholders (scientists, farmers, policymakers, industry leaders) within the first year and adjust based on feedback.



Understand what the NGT product detection possibilities and challenges are

S

Step: Develop an educational program explaining the scientific, technical, and regulatory aspects of NGT product detection.
Objective: Ensure consumer organizations have a clear and fact-based understanding of the possibilities and challenges in detecting NGT-derived products.

M

Step: Organize at least four expert-led webinars or workshops within 12 months, engaging at least 200 representatives from consumer associations across the EU.
Objective: Measure participant understanding through pre- and post-event surveys, aiming for a 70% improvement in knowledge retention.

A

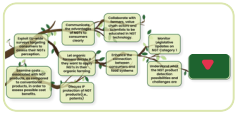
Step: Collaborate with scientific institutions, regulatory agencies, and biotech experts to provide accurate, neutral, and science-based insights on detection methods.
Objective: Secure at least three key partnerships within the next six months to co-develop training materials and expert-led discussions.

R

Step: Address real-world detection challenges, including costs, accuracy, regulatory requirements, and international trade implications, to ensure relevance to consumer advocacy.
Objective: Ensure that at least 80% of participating consumer associations find the information applicable to their work, as measured by post-event feedback.

T

Step: Publish a comprehensive consumer guide on NGT product detection within 18 months, summarizing detection methods, their limitations, and regulatory implications.
Objective: Distribute the guide to at least 1,000 consumer association representatives and track engagement via downloads, event participation, and follow-up inquiries.



Raise the awareness of [Euro]Parliament(s) on NGTs in order to make an informed decision.

S

Step: Organize targeted briefings, policy dialogues, and educational materials to inform Members of the European Parliament (MEPs) and national parliamentarians about NGTs, their benefits, risks, and regulatory implications.
Objective: Ensure policymakers have access to science-based, balanced information to make informed legislative decisions.

M

Step: Conduct at least 5 high-level briefings and workshops for MEPs and national parliamentarians within 12 months, reaching at least 100 policymakers.
Objective: Measure success by tracking engagement levels, feedback scores, and the number of follow-up inquiries from policymakers.

A

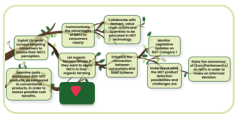
Step: Collaborate with scientists, industry representatives, farmers, and consumer groups to present a holistic view of NGTs.
Objective: Secure participation from at least three major stakeholder groups in each event to ensure diverse perspectives.

R

Step: Focus on key legislative concerns such as NGT safety, sustainability, food security, consumer perception, and economic impact, linking them to EU policy priorities.
Objective: Ensure at least 70% of participating policymakers find the information relevant and applicable to their decision-making process.

T

Step: Launch a dedicated NGT Policy Briefing Series within six months, including position papers, explainer videos, and infographics tailored for policymakers.
Objective: By the next parliamentary vote on NGT legislation, ensure that at least 50% of targeted policymakers have received and engaged with the information provided.



Discuss IP protection of NGT products (i.e., patents)

S

Step: Organize structured discussions among policymakers, industry leaders, scientists, and legal experts to evaluate the implications of patenting NGT-derived products, including innovation incentives, market access, and farmer rights.
Objective: Provide a balanced understanding of IP protection's role in NGT adoption and commercialization.

M

Step: Host at least three expert roundtables and two public consultations within 12 months, engaging at least 150 stakeholders (lawyers, biotech firms, policymakers, and farmer organizations).
Objective: Gather and document diverse perspectives, publishing at least one comprehensive report summarizing key discussions and recommendations.

A

Step: Collaborate with patent offices, biotech associations, legal experts, and agricultural organizations to clarify how existing patent laws apply to NGT products.
Objective: Secure participation from at least five key regulatory or industry bodies to ensure a well-informed debate.

R

Step: Address key concerns such as patent accessibility, licensing models, potential impacts on farmers, and the balance between innovation and public interest.
Objective: Ensure at least 70% of participants express increased clarity on the topic, as measured by post-discussion surveys.

T

Step: Publish a policy recommendation document within 18 months, outlining possible IP frameworks for NGTs, including best practices for fair licensing and access models.
Objective: Present findings to EU policymakers and industry groups before the next relevant legislative discussions on NGTs.

To access all Transition Action Plans,
please visit the link or scan the QR code

- **Consumer Associations**
- **Breeder Associations**
- **National Policymakers**
- **The Food Industry**
- **Farmer Associations**
- **NGO Associations**

https://genebecon.eu/transition-action-plans-taps/

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For any questions related to the **Transition Action Plans**, please contact:
Xenia Schneider - XPRO CONSULTING | *xenia-schneider@xpro-conuslting.com*

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GeneBEcon EU project

@GeneBEcon

Contact Us

Dennis Eriksson
Project Coordinator
dennis.eriksson@slu.se
www.slu.se

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