



Vienna Soil Dialogue 2026

**Soil First - Securing Europe's Future
from the Ground Up**



FAS Research



Soil Security – The Strategic Question

At the Vienna Soil Dialog, we set out to move beyond fragmented discussions and develop a structured understanding of soil security as a systemic challenge. By synthesizing inputs from panels, expert discussions, and audience contributions – supported by AI – we translated diverse perspectives into a coherent framework. To move from insight to action, we applied a structured three-step process within a dedicated Situation Room: identifying key leverage points, analyzing how they interact as a system, and assessing where Europe currently stands. This process forms the backbone of the following analysis.

Goal Statement

Identifying the key leverage points of soil security, understanding how they interact, and assessing where Europe stands today.

How We Approached the Problem

Listening at Scale

→ Capturing insights across all panels and discussions throughout the conference

AI-Supported Synthesis

→ Structuring and aggregating inputs into a consistent system view

From Insights to Structure

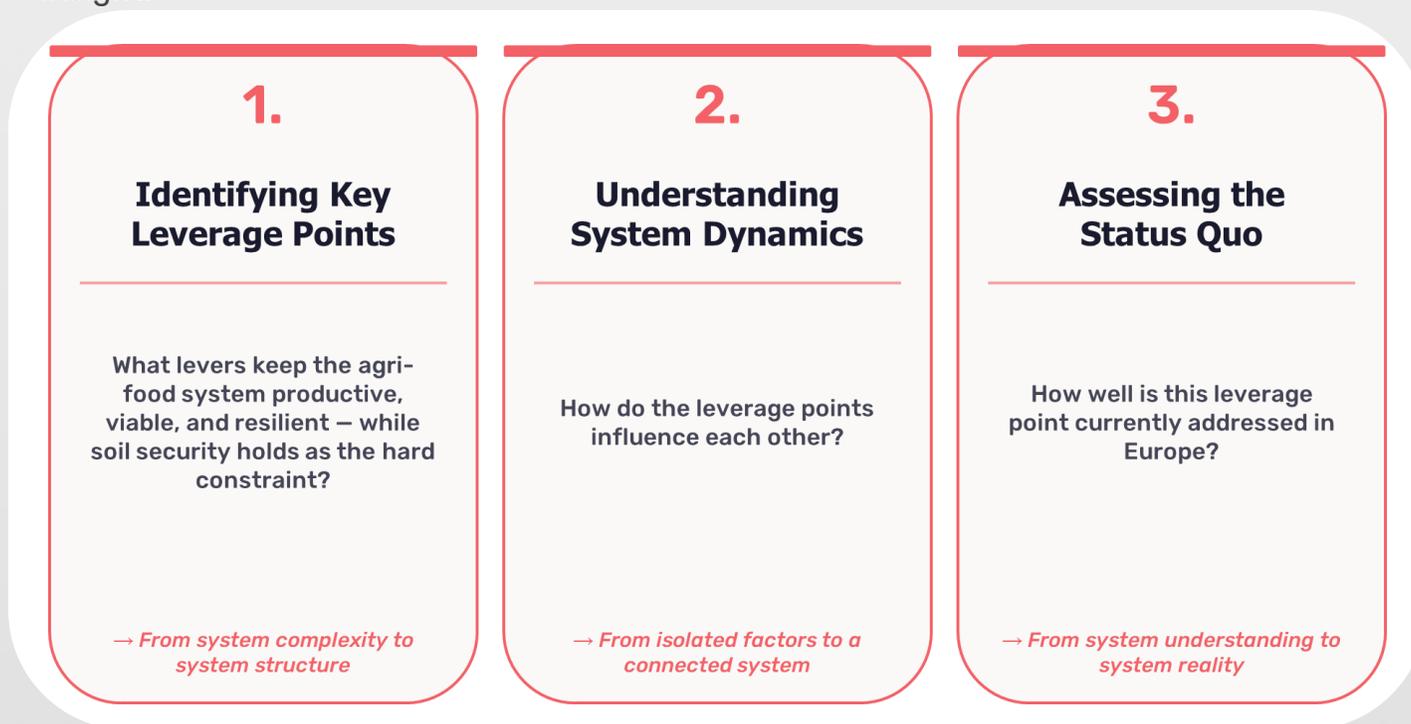
→ Deriving leverage points, mapping interactions, and evaluating system performance

This process transforms fragmented expertise into actionable system intelligence

Shift from isolated discussions to a system-level understanding – because only interconnected leverage points can resolve the soil security challenge.

From Insight to System Understanding

To translate insights into actionable system understanding, we structured the Situation Room around a three-step analytical process. This approach allowed us to move from identifying relevant factors, to understanding their systemic interactions, and finally to evaluating the current state of implementation in Europe. Each step builds on the previous one – transforming complexity into structured decision-relevant insight.



How the Process Creates Value

Structuring Complexity

→ Reduces a fragmented debate into a clear set of leverage points

Revealing Interdependencies

→ Makes visible how actions in one area affect the entire system

Enabling Strategic Prioritization

→ Identifies where Europe is strong, lagging, or exposed

Focus interventions on high-impact leverage points that shape system dynamics – not just on individually optimized solutions.

Identifying the Key Leverage Points of Soil Security

The first step of the Situation Room focused on identifying the key leverage points that determine whether the agri-food system can remain productive, economically viable, and resilient – while operating within the limits of soil security. Based on synthesized insights from panels, expert inputs, and discussions, we derived a set of core levers that shape the system’s long-term stability and performance.

<p>1 Continuous Soil Cover & Soil Rest</p> <p>Maintaining permanent soil cover through cover crops, rotations, and reduced tillage to reduce erosion, increase soil carbon, and stabilize yields under climate stress.</p>	<p>2 Soil as Protected Infrastructure</p> <p>Classifying fertile soil as critical infrastructure and protecting it from sealing and competing land uses through regulation to ensure long-term agricultural productivity.</p>	<p>3 Circular Nutrient Systems</p> <p>Recovering and recycling nutrients from agricultural and urban waste streams to reduce fertilizer imports, improve soil fertility, and build regional nutrient independence.</p>	<p>4 Incentivised based Loans</p> <p>Integrating soil health indicators into financial risk models to lower capital costs for resilient farms and align lending decisions with long-term soil stability.</p>
<p>5 Tech + RegenAg as Partner</p> <p>Deploying AI, robotics, precision farming, and precision fertilisation to optimize inputs, increase resilience, and adapt crops and systems to climate and resource constraints.</p>	<p>6 Soil Health Monitoring</p> <p>Defining and standardizing soil health indicators to align science, policy, and finance, enabling consistent measurement, transparency, and better system-wide decisions.</p>	<p>7 Farmer Relations</p> <p>Building trust with farmers, expanding advisory services, training, and peer learning to build farmer capabilities for adopting complex practices and managing transition risks.</p>	<p>8 Trustworthy Certification</p> <p>Developing a credible, low-cost verification that soil practices deliver what they claim – the prerequisite for market demand, finance, and policy to align.</p>
<p>9 Proof-of-Concept</p> <p>Designing and executing a small set of concrete farmer agreements to demonstrate that soil-secure systems are economically viable and build the trust needed for adoption at scale.</p>	<p>10 Pioneering Co-creative Culture</p> <p>Building a self-reinforcing ecosystem of bold practitioners whose visible experimentation earns peer legitimacy and pulls cautious adopters forward.</p>	<p>11 Soil Value & One Health</p> <p>Shifting societal understanding of soil toward a holistic, living process to influence meta-narrative, markets, and behavior and enable long-term stewardship across all</p>	<p>12 Soil Security for Sovereignty</p> <p>Advocate for soil as the silent foundation of food sovereignty, climate resilience, and strategic autonomy – invisible until it fails, irreplaceable once lost</p>

How the Leverage Points Are Structured

The leverage points are not isolated – they are embedded within a systemic structure derived from the conference itself.

Layer-Based Structuring

→ Each leverage point is assigned to one of five system layers: Material, Economic, Political, Execution, and Meaning

Panels as System Representation

→ The five layers reflect the structure of the conference panels, ensuring that the leverage points are grounded in real expert perspectives

From Discussion to System Logic

→ This approach translates thematic discussions into a coherent system architecture

The layers are not an abstract model – they are a direct synthesis of how the system is discussed and governed in reality

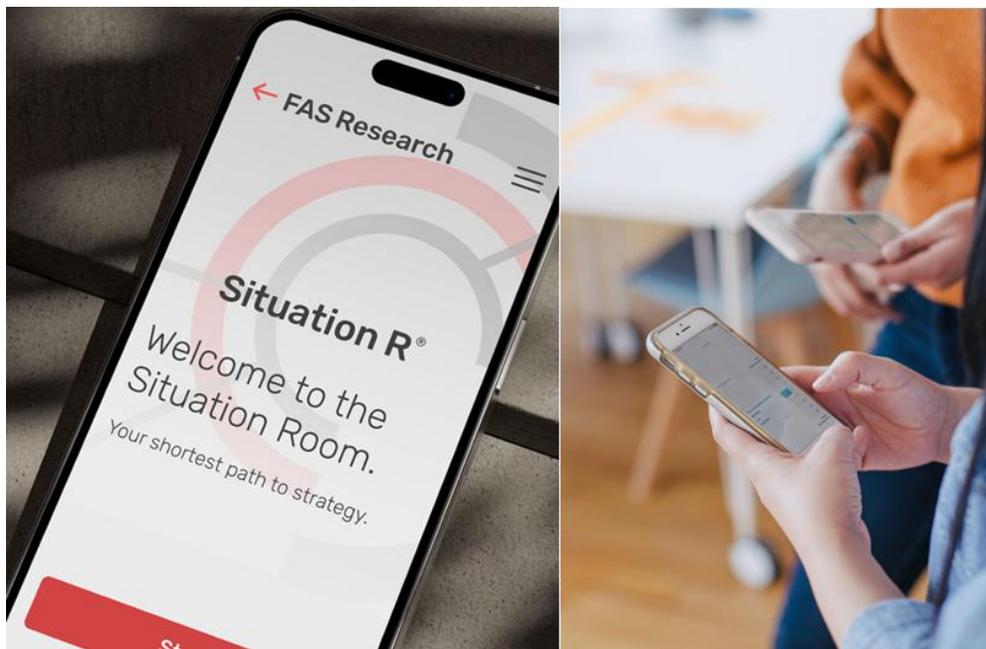
Treat the 12 leverage points as the critical entry points for intervention – but always act with awareness of the layer they belong to, as this determines their systemic impact.

12 Leverage Points - Details

- **CONTINUOUS SOIL COVER & SOIL REST:** Maintaining permanent soil cover through cover crops, rotations, and reduced tillage to reduce erosion, increase soil carbon, and stabilize yields under climate stress.
- **SOIL AS PROTECTED INFRASTRUCTURE:** Classifying fertile soil as critical infrastructure and protecting it from sealing and competing land uses through regulation to ensure long-term agricultural productivity.
- **CIRCULAR NUTRIENT SYSTEMS:** Recovering and recycling nutrients from agricultural and urban waste streams to reduce fertilizer imports, improve soil fertility, and build regional nutrient independence.
- **INCENTIVISED BASED LOANS:** Integrating soil health indicators into financial risk models to lower capital costs for resilient farms and align lending decisions with long-term soil stability.
- **TECH + REGENAG AS PARTNER:** Deploying AI, robotics, precision farming, and precision fertilisation to optimize inputs, increase resilience, and adapt crops and systems to climate and resource constraints.
- **SOIL HEALTH MONITORING:** Defining and standardizing soil health indicators to align science, policy, and finance, enabling consistent measurement, transparency, and better system-wide decisions.
- **FARMER RELATIONS:** Building trust with farmers, expanding advisory services, training, and peer learning to build farmer capabilities for adopting complex practices and managing transition risks.
- **TRUSTWORTHY CERTIFICATION:** Developing a credible, low-cost verification that soil practices deliver what they claim – the prerequisite for market demand, finance, and policy to align.
- **PROOF-OF-CONCEPT:** Designing and executing a small set of concrete farmer agreements to demonstrate that soil-secure systems are economically viable and build the trust needed for adoption at scale.
- **PIONEERING CO-CREATIVE CULTURE:** Building a self-reinforcing ecosystem of bold practitioners whose visible experimentation earns peer legitimacy and pulls cautious adopters forward.
- **SOIL VALUE & ONE HEALTH:** Shifting societal understanding of soil toward a holistic, living process to influence meta-narrative, markets, and behavior and enable long-term stewardship across all sectors.
- **SOIL SECURITY FOR SOVEREIGNTY:** Advocate for soil as the silent foundation of food sovereignty, climate resilience, and strategic autonomy – invisible until it fails, irreplaceable once lost.

SituationR® - From Dialogue to Shared System Understanding

At the Vienna Soil Dialog, the challenge was not a lack of expertise, but the fragmentation of perspectives across disciplines and stakeholders. The Situation Room was used as a software supported structuring method, by FAS Research, to synthesize discussions from panels and the audience into a coherent system view. The goal was not to make decisions, but to create a shared understanding of soil security – a common reference point that captures the system's key dynamics and current state.



What the Situation Room Enabled

Collective Sensemaking

→ Turns individual expert statements into a shared system perspective

From Talking to Structuring

→ Prevents discussions from remaining fragmented or anecdotal

Creating a Shared Reference Point

→ Establishes a common "map" of the system that all participants can relate to

Making Complexity Visible

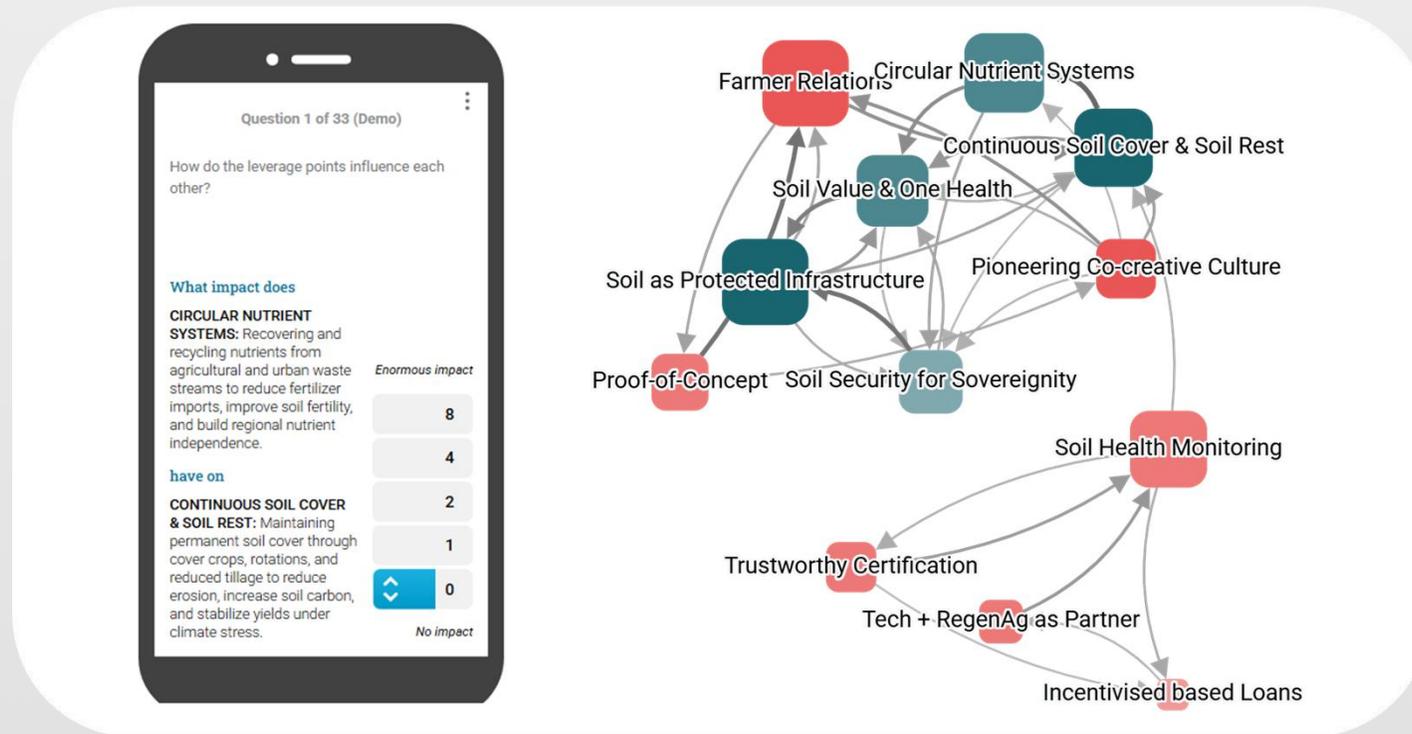
→ Highlights interdependencies that are otherwise hard to grasp in linear discussions

The Situation Room creates situation awareness – not decisions

Use structured synthesis to turn complex, multi-stakeholder discussions into a shared system understanding – as the foundation for any future action.

Understanding System Dynamics – How the Leverage Points Interact

In the second step, we moved from identifying leverage points to understanding how they influence each other as a system. Participants evaluated the interdependencies between all factors, making the underlying system dynamics visible.



Key Observations

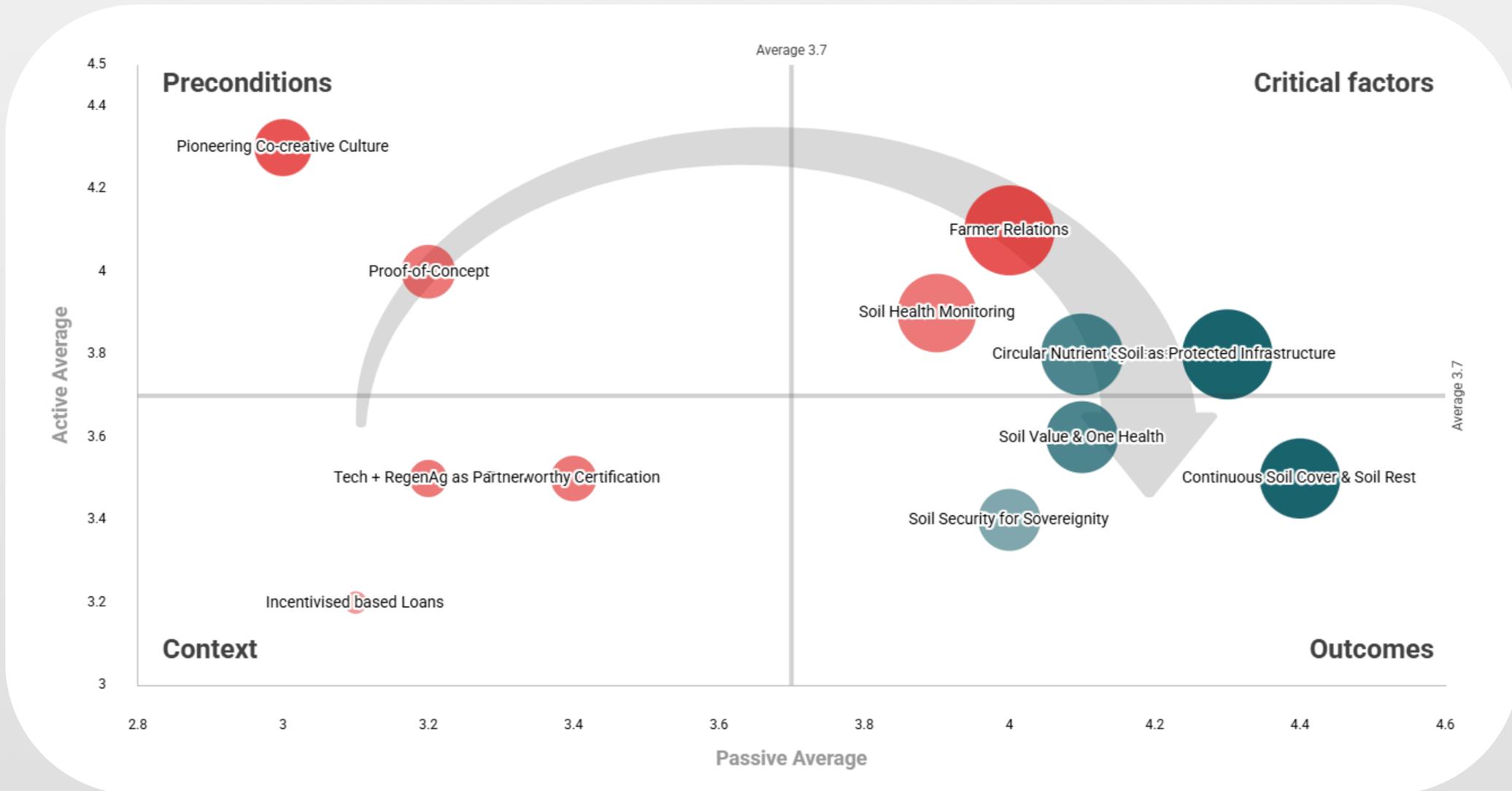
High Alignment Across Participants
 → Responses showed a strong level of consistency – no dominant dissenting views emerged

Robust Collective Signal
 → Despite diverse backgrounds, participants converged on a similar understanding of system dynamics

The network reflects a shared mental model – not fragmented opinions

Focus on the structure of interactions – because system behavior is defined by how leverage points connect, not by individual factors alone.

Leverage Point Map – How the System Interacts



Leverage Point Map – How to Read the Model (1/2)

What the Map Shows

This map plots each leverage point by how strongly it influences others (Active, vertical axis) versus how strongly it is influenced by others (Passive, horizontal axis). Color indicates whether a factor is predominantly active (red) or passive (teal); bubble size reflects overall criticality.

Preconditions

The map reveals three distinct roles within the system. The preconditions sit in the upper left – highly active, not strongly dependent on others. Pioneering Co-creative Culture is the single most active factor, followed by Proof-of-Concept, Tech & Regenerative Agriculture, Trustworthy Certification, and Incentivised-based Loans. These are the entry points where directed effort ripples outward.

Critical Factors

The critical factors occupy the upper right – Farmer Relations, Soil Health Monitoring, Circular Nutrient Systems, and Soil as Protected Infrastructure. These sit at the centre of the network, both shaping and shaped by many other forces. Change becomes visible here first, but these factors are difficult to address in isolation.

Outcomes

The outcomes cluster in the lower right – Soil Value & One Health, Continuous Soil Cover & Soil Rest, and Soil Security for Sovereignty. These are the deep shifts in paradigm and practice that emerge as consequences of sustained work on preconditions and critical factors, not as starting points.

Leverage Point Map – How to Read the Model (2/2)

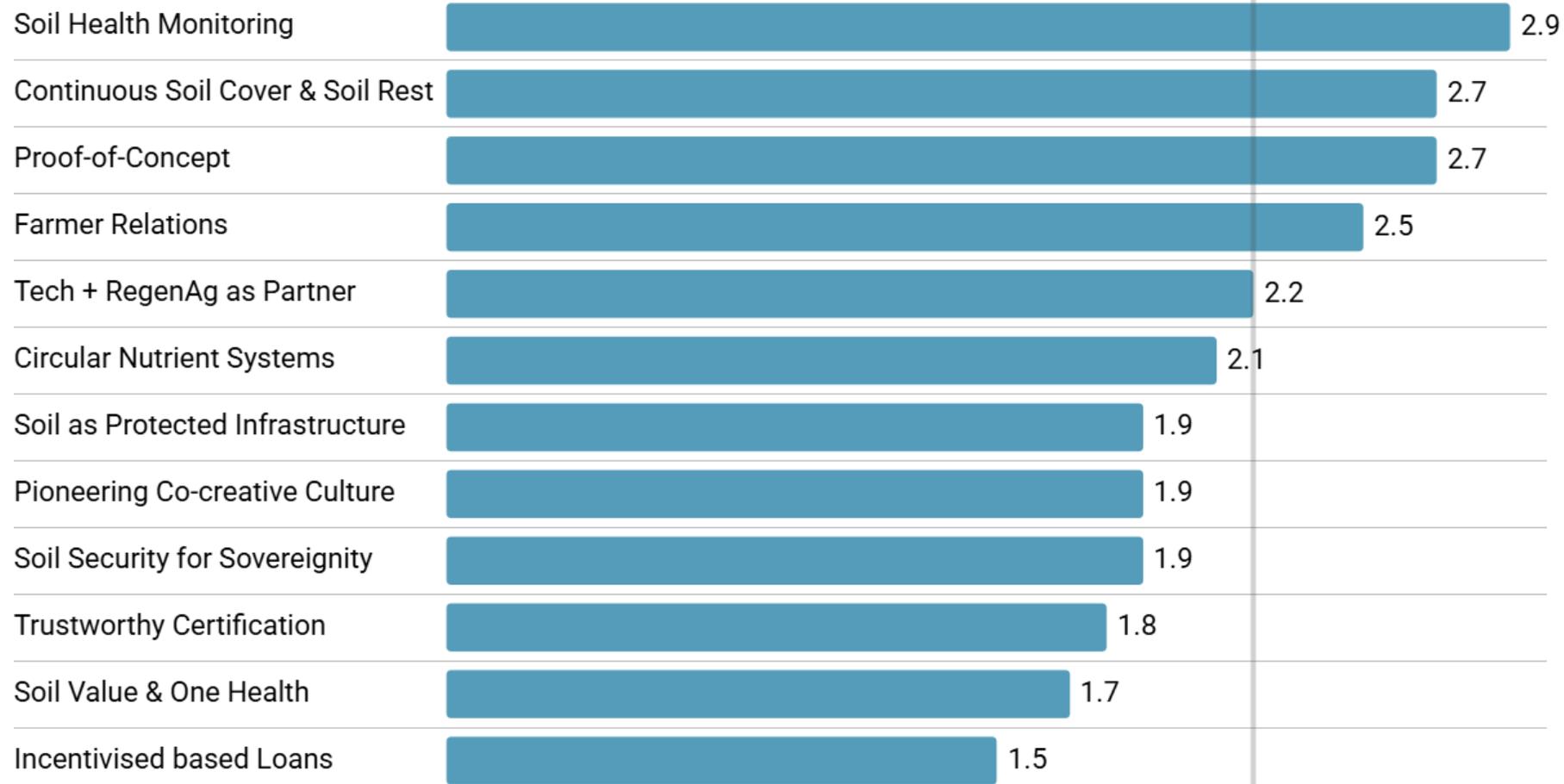
The Forward Logic

The arc across the map traces this logic: begin with experimentation, proof of concept, and aligned frameworks; watch change manifest through transformed relationships and monitoring; and arrive, over time, at the cultural and ecological shifts we aim for.

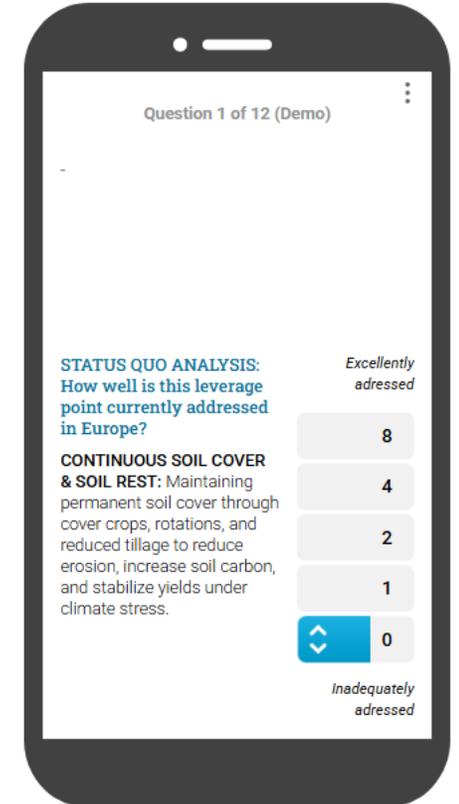
The Reverse Logic

Read backwards, the map tells an equally powerful story: if we imagine a future where soil security is established as a cornerstone of European sovereignty and where soil cover and one-health thinking are the norm, then what must have preceded that future is a fundamental transformation in how farmers relate to the system, how we monitor soil, and how nutrients cycle – and before that, a wave of pioneering experimentation, working proof of concepts, and aligned financial and technological frameworks.

Status Quo Ranking – How Well Europe Performs Today



Average 2.2



Status Quo Map – How to Read the Assessment

Europe's Current Performance

This map keeps the Active Average on the vertical axis but replaces the passive dimension with the group's assessment of how well each factor is currently addressed in Europe (scale 0–8). The average sits at just 2.1 – Europe is performing poorly across the board, with even the best-scoring factor (Soil Health Monitoring) reaching only about 3.

The Must-Do Zone

The upper-left quadrant marks the must-do zone: high systemic importance, low current performance. Pioneering Co-creative Culture stands out as the clearest signal – the most active factor in the entire system and among the least addressed. Farmer Relations and Proof-of-Concept also fall into this priority space.

The Overall Message

Taken together, both maps deliver one message: the system has a legible structure, the entry points are identifiable, and the gap between what matters most and what is currently being done is wide. Despite the group's considerable diversity, there was virtually no dissent in the assessment – a shared situational awareness pointing clearly toward where to begin.



THANK YOU!

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