

Logistics Insights and Strategic Considerations for Food Supply Resilience

Värnamo Hospital – Pre-Study and Workshop Reflections

Purpose

This note provides additional logistics-focused reflections based on the two reports produced during the pre-study, the discussions held in the workshops, and the conceptual work developed in the student project on resilient meal distribution for Värnamo Hospital. The aim is not to repeat the findings already presented in the reports, but rather to highlight strategic insights that emerge when the system is analysed from a logistics and supply chain resilience perspective.

Strategic Logistics Insights

1. The regional food system operates mainly as a node within national logistics networks

One key observation is that the food supply system around Värnamo functions primarily as part of a national distribution structure rather than as a self-contained regional system. Even when food is produced locally, the logistics system is often organised so that products first enter national distribution channels before reaching public institutions. From a resilience perspective, this means that the region is structurally dependent on external logistics flows. During large-scale disruptions affecting national distribution networks, the ability to mobilise local production quickly may therefore be limited.

2. Limited local processing capacity creates a structural logistics bottleneck

A critical but often overlooked element of food logistics resilience is processing capacity. A region may have agricultural production, but without sufficient local processing (such as slaughterhouses, dairies, or packaging facilities), raw products cannot easily be converted into food suitable for institutional kitchens. In such situations, the logistics flow effectively becomes: farm → transport out of the region → processing → transport back to the region. This creates additional transport dependence, longer supply chains, and reduced flexibility in crisis situations. Processing facilities therefore represent critical nodes in the regional food logistics system and deserve attention in resilience planning.

3. High concentration of distributors increases systemic risk

The current system relies heavily on a limited number of large food distributors. While these actors provide efficiency and scale in normal operations, this concentration can create systemic risk. If a distribution hub, company, or transport operator experiences disruption, a large portion of the food supply chain may be affected simultaneously. From a resilience perspective, understanding this concentration of logistics functions is important when assessing contingency planning for critical institutions such as hospitals and care facilities.

4. Vulnerabilities may emerge in last-mile distribution

Even when food successfully reaches the region, the final distribution stage remains a potential vulnerability. Deliveries to hospitals, elderly care facilities, and municipal kitchens depend on local transport capacity, including vehicles, drivers, and prioritisation mechanisms. In crisis scenarios where transport capacity becomes constrained, the absence of predefined prioritisation protocols could delay deliveries to critical

institutions. Strengthening planning for last-mile logistics could therefore significantly improve operational resilience.

5. Infrastructure dependence on a limited number of transport corridors

Most food deliveries to the hospital and municipal kitchens rely on a small number of major transport corridors. This concentration increases exposure to disruptions such as accidents, severe weather, or infrastructure failures. If one of these corridors becomes temporarily unavailable, alternative routes may be limited or significantly slower. In addition, some analyses suggest that parts of the regional road infrastructure may face increasing maintenance pressure in the coming decade, which could gradually affect reliability. While this represents more of a medium-term risk, it highlights the importance of understanding route redundancy in food distribution planning.

Strengths and Opportunities

The analysis also reveals several strengths that could support the development of a more resilient food logistics system. The region benefits from professional logistics actors with established distribution networks, cold storage facilities, and operational experience. These capabilities represent valuable assets that could potentially be integrated into crisis logistics coordination structures. In addition, the diversity of farm structures in the region provides a form of structural resilience. A mix of production systems can reduce systemic risk compared to highly specialised agricultural regions.

Recommendations for Strengthening Food Logistics Resilience

Several practical steps could help strengthen regional preparedness. First, developing a regional food logistics map would help identify critical nodes such as storage facilities, distribution hubs, processing sites, and key transport routes. Such a map would improve situational awareness and support contingency planning. Second, establishing crisis logistics protocols that prioritise deliveries to critical institutions – including hospitals, elderly care facilities, and schools – would clarify decision-making during disruptions. Finally, strengthening coordination mechanisms between producers, processors, distributors, and public institutions could significantly improve the ability to mobilise local resources when national supply chains are disrupted.

Overall Reflection

Taken together, the analysis suggests that the main challenge is not the absence of food production or logistics actors in the region, but rather the lack of integrated regional structures capable of coordinating production, processing, and distribution during crisis scenarios. Strengthening these coordination mechanisms could significantly increase the resilience of the food supply system supporting Värnamo Hospital and other critical institutions.