

Implicit Sufficiency in Regional Planning? Insights from a Town Center Revitalisation Programme in Styria, Austria

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1 ABSTRACT

Village and town centers are increasingly recognized as key locations for creating compact, high-quality living environments with short distances, social interaction, and local economic activity. Regional programs of urban development emphasize their importance as multifunctional hubs that can reduce daily transportation needs, support local services, and counteract urban sprawl. However, it remains largely unclear to what extent these centers can contribute to reducing space and material consumption.

This paper examines the role of sufficiency within the framework of the “Starke Zentren” (Strong Centers) initiative, a regional support program in Styria (Austria). This program aims to assist municipal decision-makers through advisory services and strategic guidance for strengthening village and town centers. Sufficiency refers to the reduction of absolute resource consumption through demand-oriented spatial development and complements strategies of consistency and efficiency. We use sufficiency as an analytical lens to identify resource-reducing aspects of that program.

We investigate which forms of sufficiency, understood as resource-saving strategies, are reflected in the measures of the “Starke Zentren” initiative through a qualitative content analysis. We systematically categorize existing measures by type (strategy, tactic, pilot) and assign them to spatial fields of action. This approach reveals the aspects of sufficiency implicitly addressed and where substantial gaps remain. The findings indicate that many measures exhibit only moderate transformation potential (as derived from program descriptions), while strongly sufficiency-oriented interventions remain rare. Tensions between economic revitalization and resource conservation constrain their impact. The analysis also highlights the adjustments and complementary measures that are necessary to strengthen the sufficiency orientation of existing center-development strategies.

Keywords: Sufficiency, Regional Planning, Town Center Revitalization, Resource reduction, Regional programmes

2 INTRODUCTION

Rural village and town centers in European context gained increasing attention as key spaces for everyday life. Recent academic and policy-oriented contributions highlight not only the need to maintain local services and social meeting places, but also the importance of territorial cohesion in the face of structural change and demographic shifts (Ciampa et al., 2025; OECD, 2021). Village and town centers play a crucial role in the quality of life of their residents. In contrast to functionally separate settlement structures, the focus is now on compact and multifunctional centers that can meet daily needs within short distances, promote shared use, and offer accessible public spaces. Therefore, strengthening village and town centers has become a central objective of spatial planning strategies at the European and national levels, particularly with regard to sustainability, accessibility, and the efficient use of existing settlement structures (OECD, 2021; ÖROK, 2019).

Despite the focus on village and town centers, it is unclear to what extent their revitalization is linked to low resource consumption or sustainable everyday practices. Many village and town center revitalization strategies follow a growth-oriented planning paradigm and are primarily aimed at economic activation and competitiveness, even though many of the regions are experiencing demographic decline (Leick/Lang, 2018; Sancho Reinoso/Dax, 2024). Often, village and town center revitalization efforts still involve expansion into peripheral areas and car-centric mobility, which can lead to urban sprawl and resource-intensive everyday practices (OECD, 2021; ÖROK, 2019).

The prevailing growth-oriented development logic is increasingly being questioned in academic discourse also within the discipline of urbanism. Recent publications emphasize the need to acknowledge material limits and develop a system that gradually transforms existing spatial structures into resource-efficient and regenerative systems (Degros et al., 2023). From this perspective, prosperity is no longer solely associated with growth, but rather with the ability to reconcile well-being and ecological limits (Jackson, 2009).

While programs for the revitalization of villages and town centers are typically formulated with consideration for sustainability, quality of life, and spatial efficiency, they lack a systematic analysis of whether and how these measures can contribute to an absolute reduction in resource consumption in residents' everyday lives. Questions of limiting, prioritizing, and determining the appropriate level of spatial development are of central importance and often remain unanswered in center-oriented planning strategies (OECD, 2021; Sancho Reinoso/Dax, 2024). In this paper, we use the concept of sufficiency as an analytical approach. Sufficiency focuses on reducing overall resource demand through the design of everyday practices, spatial structures, and usage patterns. In contrast to efficiency- and consistency-oriented approaches, which primarily address the nature of resource use, sufficiency raises the question of what level of spatial development, infrastructure, land take (including soil sealing and urban sprawl), and material consumption is appropriate (Böcker et al., 2020). The sufficiency perspective allows us to conduct a differentiated analysis of existing planning measures in relation to villages and town centers by highlighting the implicit resource potential as well as the structural limitations of an existing policy program. Instead of making normative assessments, the goal is to examine the extent to which existing programs already enable resource-efficient everyday practices.

We examine the concept of spatial sufficiency using the regional initiative “Starke Zentren” in the Austrian state of Styria as a case study. Launched in 2022 by Department 17 (Landes und Regionalentwicklung) of the Styrian government, this interdepartmental program aims to strengthen Styrian village and town centers as multifunctional focal points of everyday life by concentrating local services, social infrastructure, public spaces, and mobility within existing settlement structures. It is conceptualized as a support program for municipalities, providing strategic consulting, process support, and knowledge exchange. The program targets municipalities that are interested in strengthening their town center, reorganizing daily life, local services, and social interaction (Steirische Landesregierung, 2023). Although the initiative explicitly refers to sustainability, quality of life, and inner-city development, it does not define sufficiency as a guiding principle or sets targets for the absolute reduction of land use, material consumption, or mobility needs. This makes the program a particularly suitable case study for analyzing how sufficiency potentials are implicitly embedded in existing planning practices without being formulated as an explicit political objective.

Against this background, this paper addresses the following research question: To what extent and in what ways are principles of spatial sufficiency implicitly reflected in the measures and practices of the “Starke Zentren” initiative? To this end, we employ the method of a qualitative content analysis of a catalog of measures provided to us for internal use by the “Ortskernkoordination” (town center coordination team) of the “Starke Zentren” initiative. With considering sufficiency as an analytical tool, we contribute to the discussion of resource-efficient spatial development in rural municipalities. We demonstrate how sufficiency can be integrated into regional planning and how it can be enhanced by additional measures as an implicit byproduct. Furthermore, we propose differentiating between strategic, tactical, and pilot projects as a framework for the catalog of measures, as this, in our opinion, enables comprehensive and long-term planning. The paper demonstrates the opportunities for spatial sufficiency that the initiative offers, but also highlights its limitations.

3 THEORETICAL FRAMEWORK

3.1 Sufficiency as a Sustainability Strategy

Sufficiency is one of three sustainability strategies next to efficiency and consistency (Rudolf/Schmidt, 2025; Huber, 1995; Huber, 2000). All three strategies are commonly discussed as approaches aiming to reduce environmental pressures and resource consumption. They differ fundamentally in how this overarching sustainability goal is pursued. While efficiency is based on technological innovations and aims to achieve the same output with less input, consistency aims to organize product processes in such a way that closed

material cycles are created. Sufficiency, by contrast, addresses the question of limitation by reducing overall demand and defining an appropriate level of resource use.

When it comes to spatial development, efficiency and consistency play an important role especially when it is about energy-efficient buildings, renewable energy systems, and circular construction methods. However, these strategies primarily address how resources are used rather than questioning how much resource use is necessary. As a result, efficiency and consistency strategies are often discussed in combination with rebound effects, where relative improvements offset increased demand or expanded use (Sorrell et al., 2020).

Against this background it is important to understand that sufficiency is not an alternative to efficiency or consistency, but rather complements them. Sufficiency can be understood as a framework that defines demand-related limits, while efficiency and consistency address how the remaining resource use can be organized with less impact (Böcker et al., 2020). Aside from that, sufficiency should not be confused with self-sufficiency or autarky.

3.2 From Sufficiency to Space

In academic discourse, sufficiency is described as a normative and theoretically contested concept. It has recently been discussed at various analytical levels, including consumption patterns (Sandberg, 2021), business systems (Niessen/Bocken, 2021), processes of social change (Lage, 2022), and multi-level governance perspectives (Jungell-Michelsson/Heikkurinen, 2022).

Building on these debates, Iten et al. (2024) emphasize that sufficiency requires a political and institutional framework to be effective, particularly at the local level. Local authorities could thus act as catalysts for systemic change toward sufficiency. Although the local level is identified as a key sphere of action for sufficiency policies, it remains unclear how such policies manifest in concrete spatial and everyday usage patterns.

In parallel, the architectural and urban planning discourse also argues that prevailing planning routines are driven by accumulation logics and equate spatial growth with prosperity and progress. This has led to an immense consumption of land, materials, and energy, while simultaneously obscuring the ecological limits of spatial development (Degros et al., 2024).

From this perspective, sufficiency cannot be achieved solely through consumption-oriented approaches or political leadership, but must also incorporate urban design and spatial planning. Hertweck (2022) also advocates for a planning- and design-oriented understanding of sufficiency that considers existing spatial structures, the building stock, and infrastructure systems. Sufficiency thus becomes a question of repair, transformation, and reduction within the built environment, rather than the goal of individual restraint. Taken together, these perspectives highlight the need to analyze how sufficiency-oriented political ambitions are spatially implemented and anchored in planning practices.

In this paper, spatial sufficiency is therefore understood as an outcome of the interaction between political frameworks, planning instruments, and spatial practices, rather than as an explicitly formulated planning objective. This is especially important because space not only structures everyday life but also stabilizes practices and enables long-term effects. From an urbanism perspective, sufficiency addresses the intensity of resource consumption – i.e., the question of what constitutes an appropriate level of consumption.

In this study, we define the relevant resources as (1) land take and soil sealing, (2) material use embodied in the built environment, particularly the balance between new construction and reuse, and (3) mobility-related demand, especially car dependency shaped by settlement structure and the distribution of everyday functions. These dimensions are key interfaces through which spatial development can reduce (or increase) absolute resource demand. This is particularly relevant with regard to questions of how much land use is appropriate and involves addressing issues of appropriateness, prioritization and limitation.

To address sufficiency from a spatial perspective, this paper builds on the work of Böcker et al. (2020), who outline how sufficiency can be understood in relation to space and infrastructure. Their approach shifts attention away from individual behavior and towards the conditions under which everyday needs can be met with low resource consumption.

Instead of focusing on individual behavior or voluntary restraint, sufficiency is examined here through the ways in which spatial structures and planning decisions shape social practices. We use the term socio-spatial

to emphasize that resource-demanding practices are shaped by spatial arrangements as well as institutional and social conditions. In this sense, sufficiency is understood as a socio-spatial orientation: its effect consists out of an interaction of spatial arrangements, institutional settings, and patterns of use. This approach should neither consist of individual measures nor be conceived in isolation at the local level. Sufficiency can be applied in particular to land use, the organization of daily life, and the availability of shared infrastructure. Strategies such as compact settlement structures, functional diversity, and the accessibility of shared spaces could be closely linked to sufficiency measures. Although they do not automatically lead to sufficiency, they create important prerequisites for reducing resource consumption and therefore deserve closer analytical consideration.

3.3 Town Center Development between Economy and Everyday Life

The transformation of a village or town center is not a neutral process; it is influenced by the political and economic dependence on local supply, jobs, and central services. Many communities find themselves in a difficult position due to their reliance on specific economic sectors. The loss of supply utilities and restaurants represents a significant setback for the community. These dependencies shape the design, use, and evaluation of central spaces.

Since sufficiency manifests itself through spatial structures, everyday practices, and shared infrastructure, it can represent a suitable strategy for this challenge within existing village and town centers. However, it is important to examine the logics that dominate the planning and development of these spaces. Many regional policy programs adhere to a growth-oriented approach (Rauhut/Humer, 2020). This growth-oriented perspective is reflected in international policy frameworks, such as those of the OECD, which predominantly conceptualize cities and urban centers through lenses of economic performance, productivity, and competitiveness (OECD, 2020). Consequently, the success of town center revitalization is often assessed through economic indicators such as the diversity of commercial services or visitor numbers. The role of town centers as spaces of everyday life, social interaction, and non-commercial use is frequently treated as a secondary benefit rather than a core quality of village and town centers.

However, the process of revitalizing village and town centers should take a holistic approach, combining all vital aspects. Quality in town centers cannot be reduced to economic performance alone. A strong center should radiate openness and accessibility to all residents. Public spaces should accommodate both long-term and short-term uses and enable staying, not only movement. Neither completely empty centers nor purely transit-oriented spaces foster urban life. Public spaces should rather enable a range of everyday activities, informal encounters, and forms of appropriation that contribute to social life and a sense of belonging are indicative of a good urban life (Gehl, 2021).

Such qualities are difficult to capture through economic indicators, but are essential for long term vital, lively, inclusive village and town centers.

3.4 Resource Consumption and Spatial Structures

From a sufficiency perspective this economic tension is directly linked to patterns of resource consumption. Spatial decisions based on logics for economic activation often lead to monofunctional structures, low functional diversity, and the displacement of everyday uses to other locations. Typical examples include retail parks or service clusters developed at the urban fringe, which concentrate single uses and are primarily accessible by car.

Such monofunctional development patterns limit opportunities for shared and multifunctional infrastructure, especially in traffic-oriented spaces (Bendiks/Degros, 2021), and are associated with increased per capita consumption of land, energy, and energy-intensive infrastructures (EEA, 2016).

Given the scarcity of resources and the need to develop a system that simplifies resource conservation for residents, economic stabilization alone is insufficient. Furthermore, a transformation of everyday practices, which are closely linked to spatial structures, is necessary. For example, high dependence on private car use, as well as monofunctional residential areas with detached single-family homes, contribute significantly to land, material, and energy consumption (Anderson et al., 1996; EEA, 2016). These practices are not merely expressions of individual preferences, but are structurally embedded in spatial planning decisions, infrastructure provision, and housing supply (Ehrlich et al., 2017). Sufficiency-oriented strategies within

policy programs can gradually transform these patterns, promoting compact city centers, short distances, shared infrastructure, and alternatives to resource-intensive forms of housing and mobility.

4 RESEARCH DESIGN

Sufficiency is rarely explicitly formulated as a goal in spatial development programs, even though such programs have long-term effects on spatial structures and everyday practices. This study therefore analyzes an existing program to identify implicit effects related to sufficiency, prevailing implementation logics, and structural gaps. Rather than proposing new normative concepts, the analysis aims to identify concrete levers in current planning practice that can be used to gradually strengthen sufficiency-oriented principles. The standardized spatial delineation method for city and village centers, developed within the framework of the “Starke Zentren” initiative, forms the basis for defining a village or town center. This method is a GIS (Geographic Information System) technique based on a spatial multi-criteria analysis. Each cell of this grid is assessed and weighted based on its historical buildings, building density, land use diversity, population density, public transport connections, and the designation of building land according to the applicable zoning plan. A catchment area of 300 meters is defined around the town center, determined by pedestrian paths, and is considered the extended town center. This definition forms the spatial frame of reference for the analysis carried out in this study.

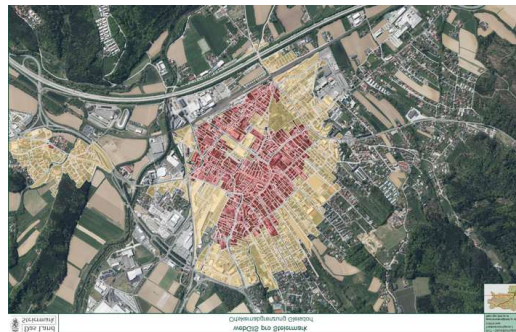


Fig. 1: Definition of the town centre. Example of a definition of a town centre using the GIS model, based on several spatial criteria.

Based on this spatial definition, the analysis examines a set of 51 measures implemented in thirteen municipal town and village centers. The analysis draws on measure descriptions provided by the “Ortskernkoordination” (local center coordination) unit of the Styrian State Administration, for internal use. All measures have already been implemented and are part of a real development process. Sufficiency is not an explicit goal of the initiative, but is applied here as an analytical lens.

Analysis step	Description	Output
Program documents	Catalog with 51 measures from the Strong Centers initiative, including brief descriptions, images, and location details	Standardized qualitative dataset
Qualitative coding	Deductive and inductive coding of each measure according to: measure type (strategy / tactics / pilots), field of action, potential resource-saving side effects	Structured coding matrix
Interpretative analysis	Identification of patterns, dominant implementation logics, tensions, and gaps	Analytical patterns and typologies
Results	Synthesis of findings across levels of action and fields of intervention	Identification of implicit sufficiency potentials and structural limitations

Table. 1: Analytical procedure. Applied in the qualitative content of the “Starke Zentren” initiative, from program documents to interpretive synthesis.

4.1 Methodology

Each measure in the Catalogue includes information on the municipality, a corresponding image, and a brief description. Additional clarifications were obtained through discussions with the “Ortskernkoordination” (local center coordination). The document offers a standardized overview of the measures, thereby providing a consistent and comparable basis for the analysis.

The analysis employs a qualitative content analysis, primarily based on deductive logic, but also incorporating inductive elements. The analytical categories were derived from the theoretical framework, while dominant implementation logics were identified inductively from the material, following a flexible approach to qualitative content analysis as commonly applied in urban planning research (Sheydayi/Dadashpoor, 2023). The analytical categories were selected to capture the implicit sufficiency-related effects of the measures implemented within the “Starke Zentren” initiative.

4.2 Coding and Analytical Categories

4.2.1 Measure Type

Since the document does not differentiate between various types of measures, a classification into strategy, tactic, and pilots was initially established. This classification serves as an analytical framework to illustrate the impact level of the measures and their potential interrelationships.

We define those measures as strategies that illustrate a long-term spatial orientation, that formulate and consolidate overarching goals. Tactics, on the other hand, refer to principles and procedures that can be applied situationally without yet being fully operationalized. In this work, pilots are defined as spatially and temporally specific, sometimes experimental implementations in which tactical approaches are specifically tested and further developed. As spatially defined individual projects, pilots enable the linking of different areas of impact, such as social, functional, and structural aspects.

This classification builds on Michel de Certeau’s distinction between strategies and tactics, originally developed in “The Practice of Everyday Life” (de Certeau, 1984). While strategies refer to institutionalized, long-term frameworks, tactics operate within existing structures through situational, improvisational actions. We extend de Certeau’s dichotomy by adding pilots as a third, implementation-oriented category.

This triadic framework aligns with our understanding of contemporary urban practice, where the combination of tactical engagement with strategic design can transform everyday environments through experimental pilots (Bendiks/Degros, 2021). This triad structures both the analysis and the interpretation.

4.2.2 Field of action:

In this step, the measures were assigned to their respective fields of action. This reveals which thematic areas of town center development the measures focus on and which areas are underrepresented. This categorization encompassed building, mobility, landscape, social meeting points and process. The classification into these categories emerged from the short descriptions of the measures. Measures concerning the transport system, improving routes, or parking space management were assigned to the mobility category. The building category included those measures relating to the conversion or structural development of (existing) buildings. Measures focusing on everyday uses, functional mix, or the activation of vacant properties for social, economic, or cultural purposes were grouped under social meeting points. Landscape encompassed those measures addressing public space and quality of stay, and spatial openness, including squares, open spaces, and landscape-related features. Finally, the process category included measures that serve as steering instruments, coordination processes, or institutional framework conditions.

4.2.3 Resource saving side effect

To obtain a clear answer to the question of which sufficiency relevant side effects arise from the initiative's measures, it was defined for each measure whether and in what form it can save resources. This is relevant to show in what way the measures of “Starke Zentren” initiative already make a contribution to the reduction of land, material and mobility use, even without an explicit sufficiency strategy. A resource-reducing side effect was identified if a resource reduction could be derived from the description of the measures. Only potential and indirect effects were considered, not actual or measurable savings.

4.2.4 Complementary measures for sufficiency impact

Since sufficiency is rarely achieved through isolated measures, but rather depends on the strategic combination of several instruments and framework conditions, additional measures were identified that would be necessary to stabilize the sufficiency-related potential of individual interventions.

Additional instruments, regulations, or potential combinations with other measures were identified to define further gaps in the overall strategy and to demonstrate pathways to a holistic spatial strategy. These additions were derived analytically and are not considered existing program objectives.

Measure	Municipality	Measure type	Field action	Sufficiency-relevant side effect
Senior Living	Fehring	Pilot	Building	Centralisation of care functions; reduced mobility demand; reuse of inner-city location
Ongoing Functional Overview	Weiz	Tactic	Process	Enables reuse and functional mix; supports inner development – no direct resource saving side effect
Town Center Development Strategy	Feldbach	Strategy	Process	Potential framing of land-use limitation and inner development priorities– no direct resource saving side effect
Local Supply store in town centre	Fehring	Pilot	Social meeting	Reduced car dependency; consolidation of everyday services
Parking relocation to second row	Ilz	Pilot	Mobility	Reclaiming public space; reduced traffic dominance
Public space redesign	Trofaiach	Pilot	Landscape	Increased shared use; social activation (material-intensive intervention)

Table 2: Examples. Provides illustrative examples of measures and their coding. The selection serves to demonstrate how the analytical categories were applied.

5 LIMITATIONS

The analysis is based on standardized and intentionally concise descriptions of measures, which provide a comparable program-level overview rather than detailed project documentation. The study focuses on the conceptual and structural characteristics of the measures, rather than on individual planning processes.

The analysis does not include site visits, analyses of spatial quality or observations of the actual use or appropriation of the implemented projects. Instead, it examines the measures at a programmatic level, addressing their potential implications for spatial structures and resource-related practices. Actual resource savings are not measured; the focus lies on identifying implicit sufficiency-related potentials and dominant implementation logics embedded in the measures. A differentiated assessment of these contextual conditions was beyond the scope of this study. Consequently, the results do not evaluate intentional sufficiency strategies, but reveal implicit sufficiency potentials and structural limitations within an existing planning program.

6 RESULTS

6.1 Character of Measures

The measures address revitalizing town centers, activating public spaces, promoting social meeting places, and location-based policy guidelines, such as attracting growing businesses to the town center to support further development. However, these approaches are not translated into concrete implementation strategies. At the same time, the measures remain tied to a specific municipality and are frequently illustrated with images from local settings, thus formally maintaining their local context. This characteristic is analytically relevant because the measures cannot be understood as classic reference projects or as fully developed and reproducible tools.

6.2 Distribution of Measures by Type

Building on these characteristics of the measures described in section 4.2.1, certain trends can nevertheless be identified and categorized into the triad of strategies, tactics, and pilots. This categorization serves to determine the level at which the measures operate and their interrelationships. A concrete example for a

strategy is the measure to develop a “town center development strategy” in the municipality of Feldbach. According to the description in the catalog of measures, a town center strategy provides an overview, organizes areas of action, and shows which tools can be effectively used to strengthen the town center. It creates a clear framework for targeted action, is clearly designed for long-term changes and defines overarching goals.

A typical example for tactics is the measure “Ongoing Functional Overview” from the municipality of Weiz, in which ground floor uses are mapped and regularly updated. This measure creates an important basis for decisions regarding future developments, but it does not yet formulate a concrete implementation; rather, it remains a permanent, principled instrument.

As a concrete example of a pilot project, we describe here the new construction of “Senior Living” project in Fehring, where assisted living and nursing care are deliberately located in the town center at Sonnenhof. The central location enables short daily commutes, strengthens local services, and promotes social participation. Care thus becomes a visible part of daily life in the center and contributes to the revitalization of the town center.

Overall, the categorization in measure types shows that the measures are predominantly situated at a tactical level, while strategic objectives are present only sporadically, and pilot projects are primarily formulated implicitly. The focus is therefore on principled approaches that mediate between long-term orientation and concrete spatial implementation.

Measure Type	Number	Percentage
Strategy	8	~16 %
Tactic	23	~45 %
Pilot	20	~39 %

Table 3: Division of Measure Type.

6.3 Fields of Action

In accordance with the coding framework described above, the measures were assigned to five fields of action in order to identify thematic gaps and prioritize them. The categorization was based on the five thematic areas of buildings, mobility, landscape, social meeting places, and process. While the measures cover all five key areas, they demonstrate a clear direction and thematic focus of the initiative.

Building-related measures largely consist of initiatives aimed at repurposing, densifying, and activating existing buildings, but also those that focus on inner-city development in the form of housing in the town center for all age groups. This is exemplified by the Sonnenhof in Fehring, mentioned in the previous chapter. A fundamental focus on existing buildings and multiple uses indicates a potential relevance depending on the specific form of implementation.

Mobility-related measures, on the other hand, play a more subordinate role and are limited to improving pedestrian connections in the town center and parking management. The example of the municipality of Ilz shows how a newly constructed parking lot in a second row can revitalize parts of the main square. Relocating parking spaces allows for the reduction of traffic-dominated areas in the town center.

Landscape measures for designing public spaces and increasing their quality of life are also somewhat less common in the collection of measures. A concrete example of this would be the redesign of public space in Trofaiach, where the demolition of a building deemed unsaleable according to the measure’s description created a new public space in the town center. Even though the demolition of buildings is highly resource intensive. From a sufficiency perspective, Landscape interventions could take an important role in strengthening village and town centers. They can not only promote encounters and increase the visibility of everyday uses, but also encourage communal use and reduce the need for private retreats. Furthermore, they can contribute to climate change adaptation, create infiltration areas, and promote biodiversity in the town center.

Measures to strengthen social meeting points are those that promote everyday functions, mixed-use development, and social interaction. Through proactive zoning policies and cooperation with the operator, the local grocery store in the town center of Fehring was secured. Instead of relocating existing businesses, a new local supplier was built on the main square with a parking lot at the second row, connected by a

passageway to increase foot traffic in the town center. This consolidates everyday services in the center and thus indirectly contributes to reducing mobility and land use.

Process-oriented measures would be those that promote management, coordination, and the long-term development of the town center. A concrete example would be the role of the “caretaker”, a responsible person on-site who oversees processes and ensures transparency, reliability, and smooth operations. Such a person was appointed, for example, in the municipality of St. Gallen. Without coordinating processes, effects relevant to sufficiency remain sporadic and difficult to scale. Overall, it can be said that the largest proportion of measures concerns the process-oriented approach to strengthening the town center.

A total of 27% of the measures were categorized as processes. The topics of social meeting places (25%) and buildings (24%) are also increasingly being addressed, while the categories of landscape (16%) and mobility (8%) receive less attention. Each measure was assigned to one dominant field of action. While this classification highlights a thematic focus of the initiative, it leaves open the question of whether and to what extent these measures will actually lead to resource savings in the various dimensions of security of supply.

6.4 Resource saving Side Effect

No measurements or quantifiable impact analyses were conducted; instead, implicit effects were inductively derived from the catalog of measures. For this purpose, all measures were assigned to a dominant resource-saving side effect. Of the 51 measures, potential resource savings could be identified for 32. Six types of resource savings emerged; the most frequent resource-saving side effects relate to spatial sufficiency and the avoidance of further land consumption through densification (10 measures). Material-related side effects occur primarily when existing buildings are repurposed or renovated instead of being newly constructed (5 measures).

Furthermore, resource-saving side effects result from shared use and multiple uses (10 measures), which simultaneously avoid infrastructure expansion. Four measures show a potential reduction in car journeys through spatial proximity, pedestrian and bicycle connections, or centralized services. Furthermore, some of the measures offer indirect resource savings through the use of existing spaces when businesses are relocated to the town center (two measures). One measure relates to resource savings due to short supply chains, namely the farmers' market in Fehring. This example illustrates how short value chains embedded in the local context can contribute to sufficiency-related effects beyond the immediate spatial intervention.

Nevertheless, it should be noted that many measures have multiple resource-saving side effects, depending on the context and implementation.

The example of the local supplier in the center of the municipality of Fehring demonstrates that while the primary benefit is a reduction in car use, it also saves space by avoiding peripheral retail locations. By promoting everyday encounters and ensuring a reliable supply of goods, this measure also addresses a social sufficiency dimension and can be interpreted as counteracting conventional market-driven retail development.

The resource-saving side effects are not evenly distributed but are primarily concentrated on measures for inner-city development, repurposing, and functional consolidation. This particularly applies to measures for the revitalization, conversion, and multiple use of vacant properties. Since none of the measures explicitly aim at resource conservation, the material and space savings can be attributed to the desired spatial proximity and the existing use of the existing buildings.

6.5 Complementary measures:

This section examines which complementary measures are necessary to fully exploit the potential for resource savings. As already mentioned, resource conservation rarely results from isolated individual measures, but rather from a combination of spatial, institutional, and regulatory frameworks. Various complementary measures can be identified in this regard.

One of the most frequently identified missing links is a regulatory framework to halt outward development. Most measures can only achieve their resource-saving effect if expansion on the outskirts of towns and villages is stopped. Restrictive zoning designations and limitations on new land zoning can therefore be considered key complementary measures.

Furthermore, complementary measures often relate to land use and ownership instruments, such as land acquisition, pre-emption rights, leasehold rights, and long-term usage agreements. These instruments indicate that sufficiency-related effects depend less on individual projects than on long-term control over key sites and their uses. Practice-based insights from informal expert discussions suggest that the initiative already considers such instruments, but their implementation is often constrained by limited municipal financial capacity.

While the analysis shows that car-oriented infrastructure is being relocated and potentially reduced, these interventions are rarely embedded in a comprehensive mobility strategy that prioritizes walking, cycling, or public transport. A complementary measure would therefore be an integrated, sufficiency-oriented mobility strategy that explicitly prioritizes active mobility and public transport and links these modes to spatial planning, zoning, and parking policies.

The implementation of renovation and modernization projects further depends on funding schemes and regulatory frameworks that favor reuse over new construction. Transparent financing structures and shared financial risk can support refurbishment and adaptive reuse, thereby reducing material and land consumption associated with replacement building.

Even measures classified as process-oriented – such as “caretakers”, town center partnerships, or monitoring tools – require linkage to formal decision-making mechanisms to unfold their potential. Without clear mandates, resources, and competences, such measures remain enabling frameworks without direct influence on implementation. For example, a “caretaker” requires authority to intervene, and a vision for the town center needs to be translated into concrete spatial and functional priorities.

Finally, sufficiency also concerns private space. The activation of town centers cannot fully compensate for the underuse of existing residential space in peripheral or low-density housing areas. Complementary measures could therefore include regulatory, advisory, and incentive-based instruments that enable shared living arrangements, subdivision, or adaptive reuse of existing housing stock.

7 DISCUSSION

The analysis of the “Starke Zentren” initiative’s package of measures revealed no explicit sufficiency goals. The initiative's objectives focus on revitalization, provision, and activation, rather than resource reduction, limitation, or finding the right balance. Nevertheless, sufficiency is implicitly visible as a byproduct, albeit indirectly and in a highly fragmented manner. This includes, for example, measures for inner-city development or those aimed at reusing existing buildings. However, the sufficiency-related aspects are not systematically framed as part of an explicit program logic and therefore remain contingent on local context and implementation.

7.1 Sufficiency across levels of action: strategy, tactic, and pilots

This becomes particularly clear by distinguishing between strategic, tactical, and pilot level of action. Here, the analytical framework, applied in this study helps to identify leverage points for strengthening sufficiency-oriented spatial development without introducing new policy instruments. The analysis shows that sufficiency is reflected unevenly across different levels. While it is not reflected at the strategic level, there are sufficiency-oriented measures implicitly anchored at the tactical level. At the same time, ambivalent logics emerge at the pilot level: although reuse is frequently articulated as a goal, demolition and new construction continue to occur. Overall, sufficiency appears implicitly and inconsistently across different levels of action.

7.2 Blind spots: landscape, non-development, and ecological functions

Nevertheless, some dimensions of sufficiency, that are crucial for long term resource conservation, are only addressed peripherally. Measures related to landscape primarily aim to upgrade public space into social gathering places, while aspects such as soil functions, unsealing, water retention, microclimate regulation, or biodiversity promotion are largely absent from the measure descriptions. Yet, the integration of ecological functions is central not only to climate change adaptation but also to sufficiency, as sufficiency concerns not only the use of space but also the deliberate absence of development. From this perspective, landscape could be strategically employed to reduce land consumption over the long term.

7.3 Spatial quality, design, and everyday usability

Furthermore, most measures in the catalog are hardly analyzed in terms of their spatial and design qualities, as the descriptions primarily focus on function, use, or activation, but hardly on spatial quality, intensity of use, or the everyday usability of spaces without consumption. Only attractive and well-designed spaces can lead to a reduction in private retreats and a shift towards shared use. Good design should be understood as a path to sufficiency in its own right. Many measures that enable sufficiency are primarily regulatory – zoning, land policy, parking regulations – but while regulations can be restrictive, design can be empowering. Sufficiency therefore requires both regulatory and design-based approaches.

7.4 Growth paradigms and structural limits to sufficiency

Another structural aspect that constrains the implementation of sufficiency is the persistence of growth-oriented planning paradigms. Despite demographic projections indicating that almost two-thirds of Styrian municipalities are expected to shrink in the coming years (Atlas zur Landesentwicklung Steiermark), the initiative continues to focus strongly on revitalization, attracting new businesses, and activating existing ones.

The aim is not to limit growth, but rather to redirect it. Explicit strategies addressing limitation, non-development, or stabilization are largely absent.

This is particularly relevant for sufficiency, which requires not only efficiency and optimization but also acceptance of stabilization and, in some cases, downsizing. Peripheral municipalities, in particular, could benefit from withdrawal strategies or prioritization measures aimed at securing existing communities rather than pursuing growth.

This reveals a structural tension between growth-oriented planning paradigms and sufficiency-oriented spatial development.

7.5 Sufficiency as a complementary strategy

Overall, applying sufficiency as an analytical framework enables a new interpretation of the “Starke Zentren” initiative. Even if sufficiency is not explicitly mentioned in the program, it becomes visible through the analysis. However, resource conservation will remain limited in the implementation measures as long as outward development, parking logic, and growth-oriented assumptions largely remain untouched. Beyond regulatory instruments, sufficiency-oriented spatial development also depends on whether everyday services, construction activities, and maintenance can be organized within a limited territorial context. Strengthening local value creation can therefore support sufficiency by reducing dependency on extensive supply chains, without implying self-sufficiency or autarky. A more deliberate engagement to zoning logics, land ownership, land policy, parking regulations, and governance structures could strengthen the contribution of municipalities to a more resource-conscious use of space.

Sufficiency should not be understood as stagnation or deprivation, but rather serve as a strategic decision-making framework, that complements efficiency and consistency approaches. When applied as part of a broader review process, alongside consistency and efficiency, it can support socially effective and resource-conserving spatial interventions that contribute to a high quality of life in village and town centers.

8 CONCLUSION

The research question formulated at the beginning of the study, to what extent and in what way principles of spatial sufficiency are implicitly reflected in the measures of the program for the revitalization of village and town centers, can be answered as follows: While sufficiency is present in the program, it appears predominantly as a fragmented byproduct of activation-oriented planning logics.

Applying sufficiency as an analytical lens reveals where the program’s measures already go beyond growth-oriented logics, but also where they systematically reach their limits due to structural constraints. Because sufficiency is not strategically framed within the program, resource conservation and questions of appropriate consumption levels remain highly context-dependent and unevenly anchored.

The analysis further demonstrates that the transformative potential of sufficiency-related measures depends on the interplay between institutional negotiation processes and their spatial translation. From this perspective, sufficiency requires a clear strategic orientation to become effective beyond isolated effects,

supported by action-guiding tactical principles and spatially anchored pilot projects. Understanding and strengthening the interrelations between these levels – strategy, tactic, and pilots – represents a key contribution of this study and a promising starting point for further research.

Beyond the scope of this analysis, sufficiency-oriented town center strategies could be complemented by measures addressing private space consumption, for instance through advisory services or incentive programs supporting shared use of living space.

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