



# A New Vision of Governance for the European Less Development Regions? Sustainability and Transition Management for a Modern Approach to Policy

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**Abstract.** The challenge for the future of Europe and the entire planet is to direct development towards sustainability trajectories. The current period is a time of change in the direction of Ecological Transition. Managing these changes requires innovative governance models, a challenge identified by the 14 European Megatrends. Europe recognizes the need for multilevel governance that always involves a more significant number of actors. The article identifies the governance approach of Transition Management (TM) as a model that responds to the challenge of new governance models inclusive of the sustainable vision. Especially for the lagging areas, the TM could be a methodology that supports the institutional capacity, often strictly correlated to the development conditions.

**Keywords:** Ecological Transition · Transition Management · Sustainability · Governance · Lagging Regions

## 1 Introduction

A profound change characterized contemporary society. The Covid-19 pandemic crisis has accelerated this transformative development and highlighted modern economic systems' fragilities. It confirmed the urgency of interventions aimed at protecting and reconstructing nature, the indissoluble link between the well-being of humanity and that of ecosystems. The European Sustainable Development Report [1] underlines that investing in protecting the European environment will also be essential for the economic recovery after the Covid-19 crisis. It is, therefore, necessary to redefine the areas of competence between the economy and the environment with a vision in which there are no fundamental dichotomies. We are experiencing the historical period as a new transition phase. The Transition defines the passage from an initial state of equilibrium to a new dynamic condition, which arises from the interaction and speed of structural change processes [2]. The Ecological Transition, in particular, is a process of structural change indispensable for the European Union, a fertile ground for new economic possibilities [3]. The challenge for the future of European territories is to direct development towards

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sustainability that concerns various elements and implies a future free from destructive conflicts [4]. Citizens support the EU's ecological ambitions, but the traditional governance systems are not more suitable for this scope. Above all, it is highlighted that for the less developed European Regions, and poor institutional capacity compromises virtuous development paths. A reflection, therefore, appears appropriate on the type of governance ideal for a path towards sustainability.

The Sustainable Development Agenda indicates the opportunity to use new governance models and identifies the Transition Management (TM) model as an approach that can benefit Europe's future [5]. Indeed, the Transition Management approach put together frontrunners from economics, policy, business, and society to develop a shared comprehension of the common complex transition challenge having a common strategy. This paper is structured as follows. The next paragraph highlights a general picture of the non-linear interpretation of Transition and Sustainability issues. The third paragraph underlines that one of the significant challenges identified as European Megatrends is the influence of new governance models. The following paragraph discusses what today appear to be the policies with the most significant impact on growth. Paragraph 5 emphasizes the need to resort to new governance models, especially for the less developed European regions. Paragraph 6 illustrates the characteristics of the Transition management model and the "Arena" operating model. Finally, the last paragraph expresses conclusions and references for new insights and future developments related to a new development approach to the European lagging regions.

## **2 Transition and Sustainability as a Complexity Framework**

The last decades have seen different studies, in an inter and transdisciplinary field, on sustainability transitions [6] with fundamental concepts that describe contemporary transformation processes. It is necessary to break down the concepts of Transition and sustainability to have a more analytical picture, given the complex structure of the Ecological Transition that incorporates into the concept of sustainability. The Transition is the consequence of the interplay of signs of progress supporting and reinforcing each other. The conditions for change are the transformations that result from developments in various ambitions or dimensions such as technology, economy, institutions, behaviour, culture, ecology, and image/paradigms [7]. The transition process is not linear but gradual and inter-temporal in its evolution [2]. Shock events such as war, pandemics, and economic crises accelerate it. The Transition results from endogenous and exogenous developments with cross effects and autonomous consequences that interact and influence social and cultural change. The various modifications of change that occur during the Transition can be divided into phases [2]. Furthermore, the nature and speed of change differ in the steps identified in the pre-development stages, take-off, turn, and stabilisation. Specifically, the Transition's phases are summarised as follows:

- The pre-development phase does not detect visible changes in society but is characterized by experimentation processes;
- The take-off phase initiates the change process and the initial reception of the change;

- The turning point reflects visible structural changes resulting from an accumulation of socio-cultural, economic, and ecological resources combined with institutional changes. During this phase, collective learning, diffusion, and innovation processes continue to be triggered;
- Finally, in the stabilisation phase, the speed of social change reaches a new dynamic equilibrium but is stable in a short time.

One cannot notice that the illustrated transition phases are comparable to the classical neo-Schumpeterian logic of innovation and the development cycle of a new product in its various steps, from its introduction to the stabilisation phase. In addition, some similarities with Kondratieff's long wave theory [8] with Schumpeter's economic development theory indicate a revised concept of dynamic change where the Transition is very close to the turning point phase above.

Transition results from the interaction of different processes, many of which escape a unitary and hierarchical control, such as cultural change, characterized by its spatial and temporal autonomy. However, it is possible to influence the direction and speed of a transition, changing the probability of its occurrence. Several mechanisms are available whereby the macro-result depends on the fulfillment of different micro-decisions.

The Transition offers significant environmental benefits by developing more environmentally friendly systems. The hydrogen economy, industrial ecology, and personalised mobility are examples of system innovation and its sectoral links.

The definition of sustainability is not unique but open to different positions with multi-dimension aspects. Several studies underline the complexity of the conceptualisation of sustainability in the literature, highlighting the link with the concept of sustainable development. The multidimensionality of sustainability has become established, considering the complexity of real systems (Fig. 1). It needs to consider all dimensions of social, political-institutional, economic, and ecological interrelatedness. In addition, the spatial and temporal horizons are highlighted in the search for inter- and intra-generational equity [9, 10]. The fundamental challenges for sustainability appear in several different domains, such as the depleting natural resources constituting a limit on energy supply, air pollution, greenhouse gas emissions are an alarm for climate change, nuclear risks represent a threat to human survival, and even the security of food supply is a source of uncertainties in short and in the long term [11]. So, sustainability transitions are long-term, multidimensional, and fundamental transformation processes through which socio-technical systems are established and shift towards more sustainable modes of production and consumption [12]. A transition to sustainability is intentional. In a guided transition, political actors and regulatory and institutional support play an essential role.

The concept of sustainability derived from the "Brundtland Report" [13] has triggered a reflection on the development paradigm shift. The first approach to sustainable development, defined as "weak," combined the principles of neoclassical economics with environmental sustainability. A later "strong" approach to sustainable development sets the environment at the core of development. It emphasises the role of regulation and public policies in inducing compatibility with sustainable development [14–16]. "*Transforming our World: The 2030 Agenda for Sustainable Development*", with the identification of 17 Sustainable Development Goals (SDGs) [17], is the post-2015 United Nations vision of the path that global development should follow and

has found strong support from the EU, even with the adoption of the European Green Deal. In this way, regional governance plays a significant role in achieving the SDGs, ensuring directionality towards sustainable development, and directly involving local stakeholders.

Furthermore, the closeness between planning and implementing policies allows observing measurable results in a more transparent, flexible, and inclusive process. A good governance model must support the Ecological Transition required by sustainable development. The below “triangle” clarifies some critical factors such as the economic, social, and ecological dimensions for the multifaceted aspects of sustainable development.

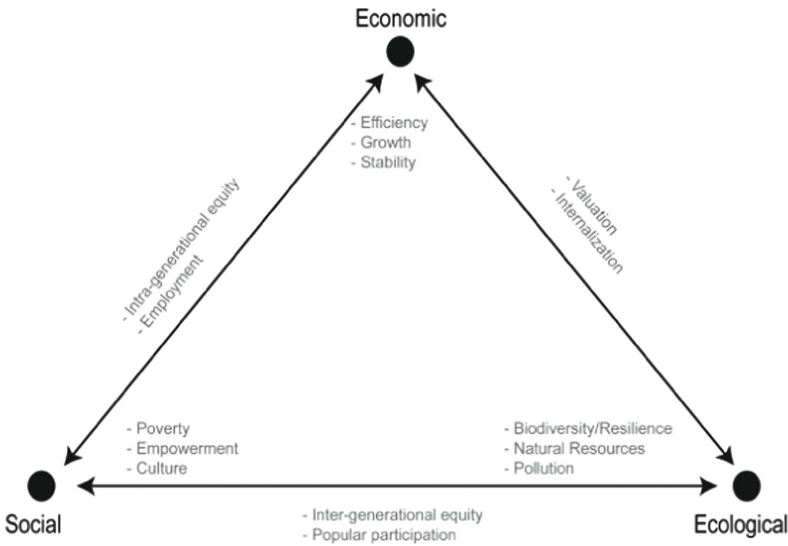
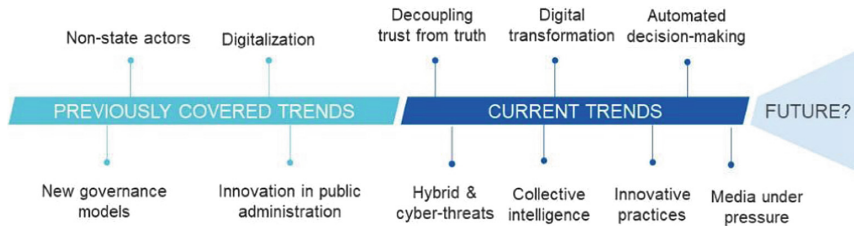


Fig. 1. Graphical representation of sustainable development [10, 18]

### 3 Megatrends: Greater Influence of New Governance Systems

The Ecological Transition is a change in the making, which policy strategies can guide with a medium and long-term vision. It needs structural changes in society. Current changes are defined as Megatrends [19]. Megatrends are long-term global driving forces that are observable in the present and are likely to exert significant influence for a few decades. In short, a Megatrend is a long-term driving force that is observable now and will continue to have a global impact on future generations. In Fig. 2, we can see several trends from non-state actors to automated decision-making.

Megatrends appeal for strategies for adaptation rather than plans for effecting change to the trends themselves. Europe has decided to monitor the 14 Global Megatrends relevant to the upcoming of the world. One of the European trends of particular interest is the “Greater influence of new governance systems.” Non-state actors, global consciousness, social media, and the internationalisation of decision-making are forming new multilevel governance systems. Different elements influence the Megatrend “Greater influence of new governance systems,” indicated in the timeline (Fig. 1), suggesting values determined in the vision of new stakeholders.



**Fig. 2.** Timeline. The driving forces of the Megatrend change over time. This timeline indicates that more established and newer trends are influencing the Megatrend’s future direction. Source: [https://knowledge4policy.ec.europa.eu/increasing-influence-new-governing-systems\\_en](https://knowledge4policy.ec.europa.eu/increasing-influence-new-governing-systems_en).

Identifying trends affects the long-term scenario. Observing local, regional, and global societal trends might be the primary tool for forecasting studies. Comprehension of these trends is particularly relevant to human development in economics, agriculture, energy, urban planning, and resource planning.

Managing the Ecological Transition requires new governance and management models. It requires insight into how governance systems can perform roles in new ways of working the challenges of this time. The Ecological Transition needs a holistic approach and the presence of new organisational actors, such as innovation brokers and meta-organizations that comprise networks of firms or individuals not bound by authority based on employment relationships but characterised by a system-level goal [20]. Participatory Governance is significant in the multi-stakeholder approach because it integrates different actors with various interests, knowledge, and capacities. A mindset change is required, and new decisions must be made cooperatively and involve all concerned actors.

Furthermore, the governance model must include self-regulation mechanisms achievement from accordance and control of collectively decided. Therefore, a non-linear approach to Governance appears necessary to evolve, adapt, and thus present a dynamic vision. One theoretical side that addresses Governance’s complex and non-linear nature is the Evolutionary Governance Theory (EGT) [21]. Evolutionary Governance Theory links up with the literature on social-ecological and complex-adaptive systems, emphasising the processes and mechanisms that drive social evolution.

The EGT recognises the co-evolution of systems and investigates territorial stakeholders’ interactions. The coordination of policies and practices regarding the organisation of the territory evolves as a process of spatial Governance. It identifies planning

systems as configurations of actors and institutions involved in space organisation. The EGT perspective highlights a planning system conceptualized as an evolving configuration of actors, institutions, and attitudes. Today, a broad consensus indicates the need for an evolution of territorial Governance that leads to spatial coordination capable of addressing socio-environmental challenges such as urban and development ones. EGT offers a perspective on how institutions, markets, and societies evolve and how TM is closely related to managing the actual structural change.

In other words, Transition Management is part of the theoretical framework of Evolutionary Governance; it allows incorporating normative objectives in evolutionary processes in “*a reflexive way*” [2]. Modern social complexity requires new, democratic, and participatory visions of Governance. The goals to be achieved are many and include new ways of development, where the concept of sustainability is central. The Transition Management model leaves room for the inclusion of sustainability. Indeed, the Transition Management approach put together frontrunners from economics, policy, business, and society to develop a shared comprehension of the common complex transition challenge having a common strategy.

## 4 The Policy Approach to Economic Growth

Ecological transition-oriented public investments involve strategic decisions on the type of change to pursue. Regions are specific ecosystems where economic development emerges from increased interactive, dynamically adaptive, and integrated activities. There is not a unique theoretical model for regional economies being complex systems. The ambition to achieve a particular type of economic growth, such as smart, inclusive, and sustainable change, implies giving it a precise direction [22]. The policies of growth mainly align with two strands of regional growth theories. Policies that follow a spatially blind approach that focus on successful agglomeration and efficiency models aim to stimulate overall growth but neglect problems of declining and lagging areas and try to solve them only in a compensatory way [23].

Policies with a universal approach have been adopted based on the traditional assumption that natural forces of workers’ geographic mobility and knowledge spillover would act as a counterbalance mechanism for agglomeration, leading to income equalization and the diffusion of innovation territorial convergence [24]. The theory of economic geography and the empirical evidence has shown that labor mobility and the diffusion of innovation polarize the economy and limit the equity-enhancing effects by adopting spatially blind policies [24]. On the other hand, place-based policies [25] have been promoted under the assumption that less developed areas can always catch up if equipped with the right tools. However, the lack of connectivity with poor physical infrastructure hinders place-based policies. Iammarino et al. [24] addressed the problem of policy approaches under the dual aspect of efficiency and equity. The authors highlight how the achievement of efficiency (using spatially blind policies) can increase territorial disparity (which, in turn, undermines efficiency) while excessive attention to equity (place-sensitive policies) undermines efficiency. Pursuing efficiency and fairness simultaneously with a territorial dimension is necessary. Both dimensions should be considered simultaneously, addressing both the causes of territorial discomfort and,

at the same time, maximizing the potential of each territory. The authors mentioned propose the fusion of these two principles with a definition that they identify as “place-sensitive distributed development policies” (PSDDP) [24]. The PSDDP model provides a “mission-oriented” top-down approach and a “diffusion-oriented” bottom-up approach for strengthening territorial-specific capabilities. The PSDDP model to avoid a trade-off between efficiency and equity indicates three fronts: a) pushing more and more regions towards more non-routine (innovative) functions in their economic mix; b) expanding the sources of creativity and satisfaction that are good in and of themselves on human grounds, and c) stimulating more significant investment in basic capabilities that are essential to a dignified and creative life”. [24]. This work does not aim to analyze the PSDDP model but only to consider the TM capable of supporting an approach that, by enhancing the mission, also considers territorial peculiarities. Above all, those regions that demonstrate inadequate governance capacity could use a governance model based on TM to compensate or reduce a certain degree of low quality.

## 5 The Less-Developed European Regions and the Low Institutional Capacity

The Eighth Report on Economic, Social, and Territorial Cohesion of the European Commission [26] highlights improved EU governance in recent years. Despite these results, gaps between and within the Member States remain (Fig. 3).

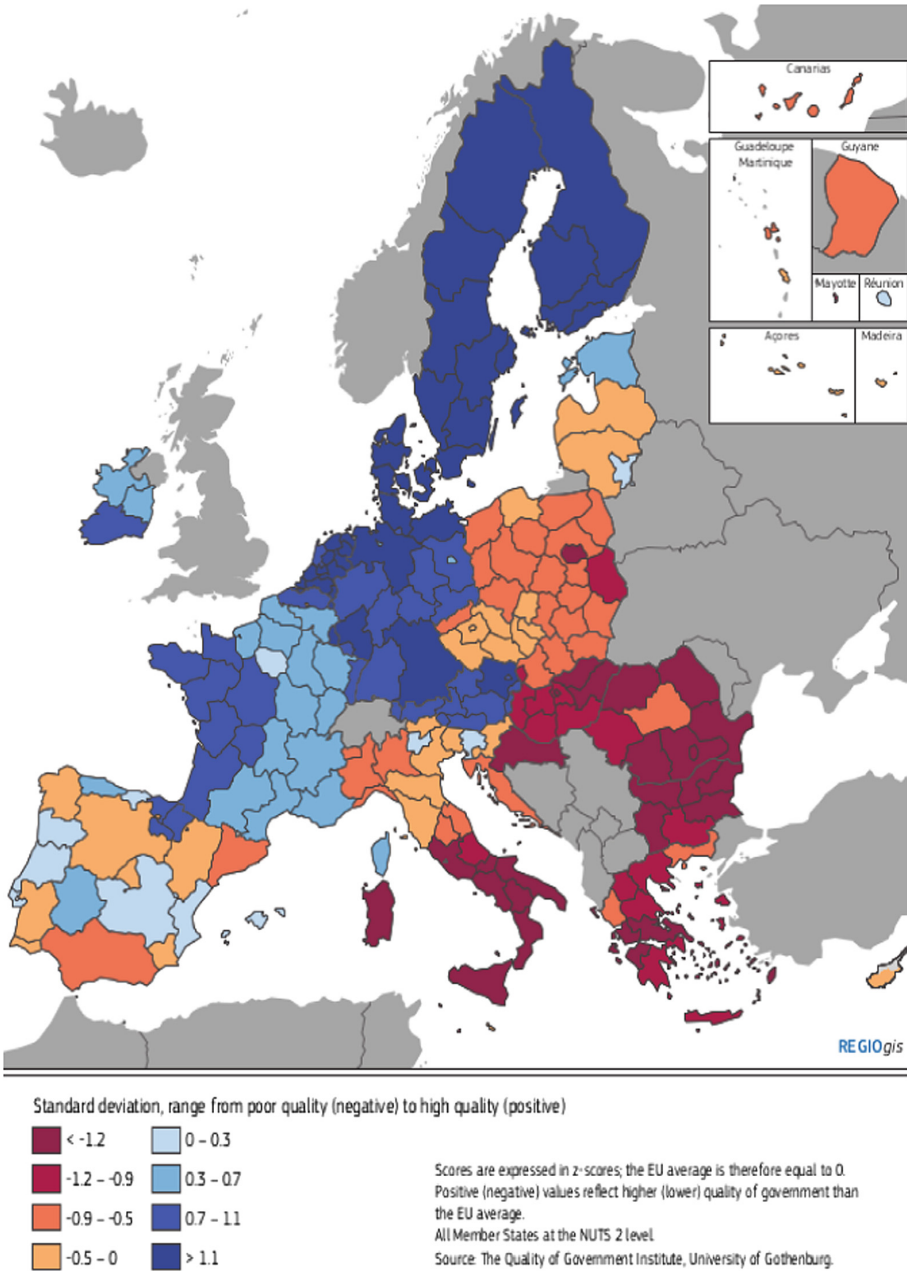
The regional policy of the European Union is a program based on a place-based vision [25] for the redistribution of wealth between European regions. A policy place-based is a long-term strategy to address the persistent underutilization of potential and reduce social and economic gaps in specific places through external interventions and multilevel governance actions.

The Cohesion Policy, implemented through the Structural Funds, has had both strong consent and various criticisms. Supporters believe it is necessary to bridge the disparities between the most developed and the most backward regions, and so be it adequate to make the weaker areas grow. Detractors highlighted critical points concerning the waste of resources, with high costs in terms of efficiency.

Despite the over thirty years of Cohesion Policy, there are still profound economic disparities between countries and between the regions of the countries that make up the European Union. The Report [26] highlights how cohesion policy is helping to reduce territorial and social disparities between EU regions. Still, in the Member States of Europe, southern (Italy and Greece) and southwestern (Spain and Portugal), improvement is lacking in competitiveness and growth, the suffering stagnation and economic decline. Southern Italy, for example, is confined in a “*development trap*,” the risk of being locked in a low growth rate of GDP per capita, productivity, and employment. The quality of local governments, in particular, seems to influence economic development and shapes the efficiency and return on public investment. Lagging regions lack institutional capacity, and the local institutional environment follows a passive implementation of a predominant growth model. Institutional capacity has a long-term impact on economic growth, contributing to investment effectiveness and higher levels of innovation and entrepreneurship.



Good administrative ability is essential for the management of policies and, consequently, for the effectiveness of public investments. Regions with good institutions,



**Fig. 3.** European Quality of Government Index, 2021



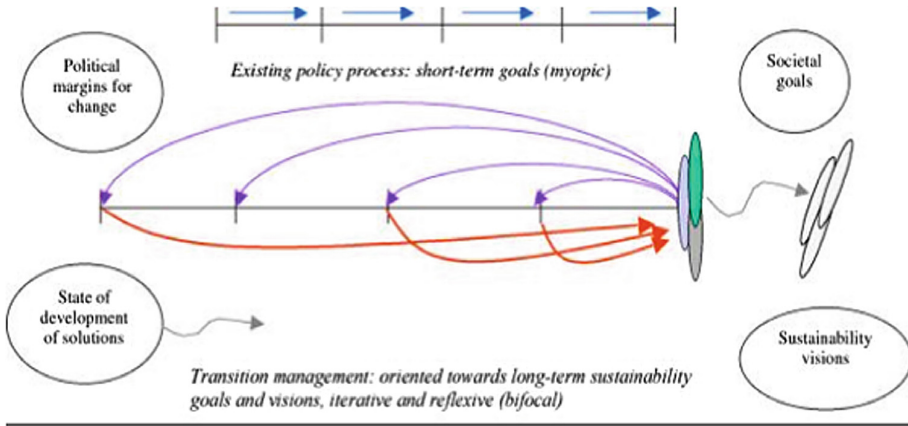
significant accountability, and low corruption tend to perform better in the production and services of public goods, thus helping to create a favourable environment for economic growth and social development. Good governance requires well-functioning institutions and transparent procedures [23, 27, 28]. The weaker the institutional set-up, the more significant the difficulties involved in transforming investments into growth and development. The importance of governance quality has been underlined in the literature [28–33]. Institutions drive economic interactions by creating essential determinants for the economic results in the territories that, in the long term, are often the result of institutional conditions rather than alternative economic factors [33]. The regional and local governance is crucial to determine the rules and capacity building of different public and private stakeholders locally. Transparency and accountability are two prerequisites for high-quality governance. Governance open to stakeholders increases public satisfaction and promotes accountability and understanding of processes leading to greater trust in government. At the same time, trust is instrumental for active public involvement in policy-making. The role every more relevant of sub-national governments in the management of public investment assumes even a broader significance in relationship to Ecological Transition. Thus, for an improvement in the quality of government, new models such as that of the TM appear especially suitable for regions suffering from economic stagnation. Encouraging new approaches to policy management with models that simultaneously give direction and co-participation becomes essential for a break from ineffective past models.

## **6 Transition Management: Governance for a Sustainable Development**

The field of sustainability transitions is relatively new and emerged out of a fusion between various disciplines, including innovation studies, science and technology studies, complexity theory, and governance theory [6]. Underlying these different backgrounds and perspectives lies a shared focus on transitions: processes of long-term change that society intends to transform structurally. At the same time, the original focus of the field was on socio-technical systems (i.e., transport, energy, agriculture), but recently seen increasing attention to urban transitions [34, 35] and the more social and political aspects of transformative change. This factor includes explicit attention to topics of power and politics [36] and grassroots innovation, as well as links with other emerging fields such as social innovation research [37–40].

A territorial governance model of Transition Management guides development dynamics toward sustainability objectives. Rotmans et al. [21] indicate a theoretical governance framework based on Transition Management. Studies on transitions towards sustainability followed [5, 12], which focused on technology and innovation with a transdisciplinary vision [6] and identifying the suitable model in the governance framework of the TM [41]. For example, the Dutch Government has already used the Transition Management model to manage four transitions: transitions to sustainable energy, sustainable mobility, sustainable agriculture, and transition biodiversity and natural resources, having already been on the path of a broader Ecological Transition for several decades.

In addition, The Dutch government uses the TM model one in the 4th Integrated Environmental Policy Plan and the Dutch Energy Transition Project [42]. Based on a double strategy, the TM improves the system (changing an existing trajectory) and innovation (new development or transformation course). The TM, therefore, departs from the old planning and implementation model aimed at achieving particular results. A process-oriented approach reformulates objectives and intermediate targets (see Fig. 2) (Fig. 4).



**Fig. 4.** Transition Management towards the classic intervention scheme [2].

Transition Management as a procedure management concerns objectives defined at a particular time. In particular, the Sustainable Development Goals [17] are well suited to apply the TM approach. An uncertain environment, such as a new model of sustainable development, urges companies and governments to predict evolutionary directions to plan development strategies. The TM offers elements to mutation and assists in enabling condition change. It is a reflective and evolutionary governance model that identifies systems or sectors of the economy as complex adaptive systems [36]. The governance instruments of TM, such as visioning, experimentation, and social learning, help to better prepare for change through transformative actions. TM's participatory process and interventionist approach support mobilizing actors and building networks for sustainability transformations. Transition Management is a meta-governance and policy-design framework for allowing and leading sustainability transitions. The ability to undertake a path of sustainability occurs through practical actions in the short term aligned with a medium and long-term focus [5, 34, 35, 41]. The European Ecological Transition indicates a profound mutation in the global system and includes all sectors; the energy system, moving from fossil fuels to renewable, or transport with the ever more increasing growth of shared mobility. Transitions occur over a long time that involves different generations leading to a change in the physical structure and the associated legislation, regulation, and societal expectations.

Transition Management presents a systemic approach to governance, which on a large scale offers the possibility of guiding and coordinating system innovations that

move towards greater sustainability. Sustainability trajectories identify by building creative processes for future scenarios [43]. The most prominent function of the transition scenarios is to obtain an irreversible reformulation of the current paradigms [44]. The participatory and democratic involvement of local actors with different backgrounds in the strategic governance process makes it possible to identify the nature of the problems and the underlying causal mechanisms, finding new directions for solutions to persistent problems. The TM leads to improvements in performance through specific interventions [45]. Scenarios can provide guidance and focus on evolving into structural societal changes, developing long-term representations of sustainable worlds. The scenarios that apply the TM model should integrate different aspects of the problems, recognize uncertainty, and involve a broad public audience on sustainability and development issues [46]. The change is a prerequisite for a transition, and the different innovations must be reinforced in a joint project [43]. The solicitation of several specific innovations aims to cultivate sustainable alternatives to existing practices, triggering structural transformations in a long-term perspective. Thus, transition scenarios assume the configuration of participatory explorations of possible development trajectories that incorporate a mechanism of change towards a desired future state of the system. Niche innovations arise in different domains of society, each of which has its own internal pace of change. Economic developments, for example, are characterized by relatively rapid times, but the different domains need their synchronization, and the TM has the right incentives for their modulation [2, 22]. The modalities, therefore, become “*learning by doing and doing by learning*” when the interrelationships between the different trends are explored. In this sense, the future is not an empirical reality but a set of partially visible alternatives with large spaces of possibility. The table below resumes the characterizing elements of Transition Management.

## 6.1 The process of Transition Management

The Transition Management approach allows an innovation network of actors of various backgrounds who compare and integrate the different perceptions of structural problems at a strategic level. This vision of reality manifests itself in a shared and integrated perception of the issue [23]. The development of the scenario lies in the perception of the intermittent signals that herald political, economic, or social changes in society. These processes indicate the gap between the present and the future and the desired development direction. In particular, the TM assumes relevance in the Ecological Transition process because of the long-term sustainable co-evolutionary strategies. Policymakers, therefore, are not detached observers of change but active participants in the direction of innovation.

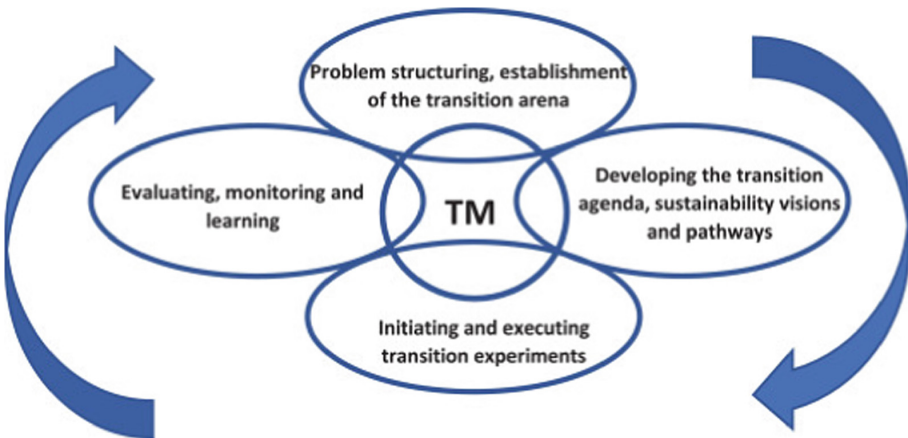
Kemp and Loorbach [2] describe the processes iterative of TM as follows:

- Problem structuring and identifying the transition arena;
- Developing a transition agenda, sustainability visions and pathways;
- Initiating and executing transition experiments;
- Undergoing processes of evaluation, monitoring and learning.

The model (Fig. 5) allows reflection upon the integration of sustainability in the policy of different European Regions where institutional characteristics and capabilities differ widely.

**Table 1.** The Transition Management characteristics. Authors’ elaboration on Malekpour et al. [41]

Transition	Management
<b>General Characteristic</b>	Long-term focus Acknowledge significant, irreducible uncertainties Acknowledge the multi-objective, multi-actor nature of policy issues The impact is difficult to measure, especially in the short-term
<b>Context</b>	The starting point is a societal problem
<b>Application Boundary</b>	Considers the broader societal problem, although application could be at different scales Systemic societal change is the ultimate goal Proposes an alternative governance process
<b>Process</b>	A vision is co-created as part of the process The process is open-ended and essential on its own for social and policy learning It has its explicit theory of change Is methodologically pragmatic Irreducible uncertainty is addressed through experimentation and learning Future scenarios are used in a normative way and as a mobilizing tool (ideation) The process proceeds in a participatory process through organizing and mobilizing actors and developing partnerships
<b>Output</b>	The aim is to mobilize actors to realize transformative pathways



**Fig. 5.** Activity clusters in Transition Management [2]

The actors of a change scenario participate in a cyclical process. The Transition Management Cycle [50, 51] defines the problems, strategies, and transition paths developed, the networks mobilized, the experiments carried out, and the results monitored by reflecting the different learning points. Theoretical elements, reflections, and practical experiments are at the base of the TM-Cycle. The structure of the model is cyclical,

and the phases can follow without a sequential order. The following four phases of the TM-Cycle operational systems are strategic, tactical, operational, and reflexive.

The strategic phase includes developing the vision, defining goals, and defining norms through collective discussion and a long-term perspective. Strategic activities will lead to changes in the social system. The tactical phase concerns the interaction between the actors' driving development. Tactical activities focus on interpreting the visions created by strategic actions at the system level and in the various networks, organizations, and institutions involved. Tactical activities seek to identify the barriers encountered (such as economic regulation conditions) when interpreting these views at the system level. The operational phase constitutes the learning process through experimentation and implementation at a specific level, focused on radical innovation. Finally, the reflective step allows us to evaluate social change. Reflective activities are incorporated both within politics and regulation and as a function of society's expectations and the "consensus" created through the media and modern information technologies.

The stimulating idea is that the stakeholders are involved in the entire process and all phases, including problem definition, coalition formation, experimentation, and evaluation.

The four phases of interventions are described below [49, 52] (Fig. 6):

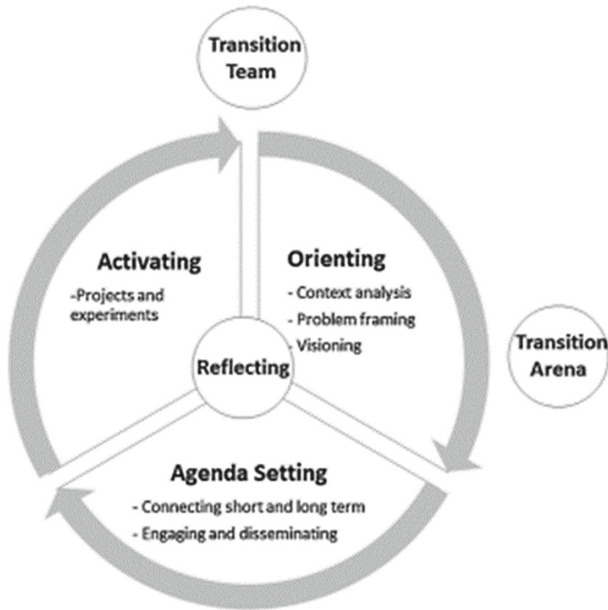
1. Orienting: understanding, analysing, exploring the challenges, and reframing the problems.
2. Agenda setting: envisioning alternative futures that are more just and sustainable, developing a transition agenda, and identifying transition pathways.
3. Activating: conducting transition experiments and mobilizing networks.
4. Reflecting: monitoring, evaluating, learning from the transition experiments, and adjusting vision, agenda, and coalitions.

The most appropriate sequence of these phases depends on the operational places involved. Stakeholders start with analysing the new challenges, but also they evaluate accomplished projects and move to new orientations and possibilities.

Orienting indicates a prospective of change affecting the entire system. It has a long-term vision and operates in a strategic framework. The activating represents the operational level. It evolves in the short term (up to five years) and builds accurate results with projects or experiments and the vision of the quality of solutions. The Agenda-setting is at the base of the tactical level, with an interval lasting between 5–15 years of institutional and infrastructural changes. The Agenda must build on creating a shared sense of ownership of a sustainable future across society. Finally, the monitoring and evaluating of the transition process and learning from experiments concern the reflecting intervention.

The tools of the TM are different and come from various fields but appear valuable and adequate for governance that includes the concept of sustainability within its strategies.

A central operative instrument of TM is the "Arena" [49]. The Transition Arena facilitates interaction, knowledge exchange, and exchange learning among actors. An Arena is a group (networks) of actors engaged in the transformative goal of implementing future practices. The 'Transition team' usually comprises the problem holder (e.g., the government department commission and a research team) who determine the framework and encourage the process [6].



**Fig. 6.** The Transition Management Dynamics [6]

A critical element in TM is the set-up of a transition arena: a time constraint space and network in which participants co-create knowledge, critically analyse and develop new ideas, visions, and practical actions. Arena participants are involved in a collective process. The initial group should not be too large, with the selection of relevant actors based on competencies, interests, and backgrounds. A critical element is a representative participation from stakeholders such as governmental bodies, businesses, NGOs, and knowledge institutes. The arena participants need to be innovative in their thinking and open-minded toward new ideas. In addition, the arena is an open network, so new actors may enter the arena subsequent, such as others could leave the transition arena [53].

The Transition Arena has a first problematic step. The beginning of the process is the most delicate moment because it requires a mutual understanding and agreement about the vision proposed and planned for the other paths. The different opinions may generate conflicting perspectives of the actors involved and their various interests. However, an integrated assessment of the problem can achieve a certain level of agreement [53]. Different actors are confronted with the '*boundaries of the system*' prospecting innovation and change in the pre-development phase. Establishing the transition arena could facilitate precisely those regions struggling to trigger a process of change and a virtuous growth path. Therefore, the Ecological Transition management appears less abstract through new governance mechanisms and follows a mutual agreement.

## 7 Conclusion

The TM model radically changes planning techniques by implementing a model oriented to the dynamic change process. It is a model that combines growth, innovation, and the environment; themes currently at the center of the political debate in Europe in a post-Covid-19 era, reflecting economic, social, and cultural changes. Furthermore, it provides transversal tools for solving specific issues with a dynamic vision of social phenomena and a multilevel approach. Environmental, social and economic issues are closely connected. The Ecological Transition recognizes the environment as a constitutive element of the economy and the society. The policies are not linear, following continuous backward induction processes with high flexibility. Therefore, the governance model of the TM reflects the indication of territorial management, capturing dynamism and local complexity of all environmental elements. The multi-layered structure of the TM involves different social actors. It generates the democratic and participatory process, a necessary condition for its successful application. Therefore, the goal is to bring together drivers of change and sources of knowledge to create strategic visions that lead to an expansive definition of sustainability. Democratic citizen participation does not replace the role of government guidance; it persists and is necessary. Politics should recognize territorial needs and transform them into new opportunities for development. Collective participation should generate public support and increase the legitimacy of policies, helping reduce the risk of conflict and offering ideas, information, and knowledge. The TM model can trigger new processes for those regions blocked inside in a development trap with an evident correlation with a low institutional capacity. It makes it possible to broaden the responsibility for political choices, build long-term scenarios, and directly involve those who live in the area. Therefore, the Transition Management model appears in line with the broader framework of the Greater influence of the new governance system, i.e., a Megatrend.

The cohesion and economic gap have not diminished in Europe's economically less developed regions. The TM analysis opens up new possibilities for intervention in the context of the sustainable development strategy and the current Ecological Transition, which in Europe assumes particular strategic importance for the area's new and future geopolitical aspects.

The move towards a sustainable ecological transition indicates that TM's economic and social innovation is still in an evolutionary phase. In particular, if the institutions are potential innovators or backward actors, the results TM scheme will reveal what categories deal with them.

However, there is a risk of excess abstraction and difficulty applying Transition Management. The basis is the reconsideration of democratic participation processes for developing policies of complete economic, social, and environmental sustainability. Several contributions have already analysed the capacity of multilevel management of the European regions' economic, social, and territorial cohesion processes. The quality of the institutions is a watershed between advanced regions and regions included within a development trap. The quality of the institutions, however, is not the only condition that causes the economic gap in an area. Given its dynamic and induction logic, which continuously revises intermediate and final objectives, the TM presupposes a significant and widespread human capital endowment. The multi-layered structure of the TM involves



different social actors, creating the democratic and participatory process, a necessary condition for its application.

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## References

1. Sachs, J., Kroll, C., Lafortune, G., Fuller, G., Woelm, F.: Sustainable Development Report 2021. Cambridge University Press (2021)
2. Kemp, R., Loorbach D.: Governance for sustainability through transition management. In Open Meeting of Human Dimensions of Global Environmental Change Research Community. Montreal, Canada, vol.20 (2003)
3. European Commission, 2020b, The European Green Deal Investment Plan and Just Transition Mechanism Explained, Brussels, 14 Jan 2020, See [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_24](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24)
4. Provenzano, V.: Ripensare lo sviluppo economico-il valore della marginalità in un mondo di incertezza. 1° edizione, vol. 1362. Carocci Editore (2020)
5. Loorbach, D.: Transition Management for Sustainable Development: A Prescriptive. Complexity-Based Governance Framework. In: *Governance* **23**(1), 161–183 (2010)
6. Loorbach, D., Shiroyama, H.: The challenge of sustainable urban development and transforming cities. In: Loorbach, D., Wittmayer, J., Shiroyama, H., Fujino, J., Mizuguchi, S., (eds) *Governance of urban sustainability transitions*, pp 3–15. Springer, Tokyo (2016) [https://doi.org/10.1007/978-4-431-55426-4\\_1](https://doi.org/10.1007/978-4-431-55426-4_1)
7. Rotmans, J., Kemp, R., Van Asselt, M.: More evolution than revolution: transition management in public policy. In: *Foresight*, **3**(1), 15 – 31 (2001)
8. Kondratiev, N. The long waves in economic life, *Rev. Econo. Stat.*, 17 1065–115. (1935)
9. Spangenberg, J.H.: Environmental space and the prism of sustainability: frameworks for indicators measuring sustainable development. *Ecol. Ind.* **2**(3), 295–309 (2002)
10. Ruggiero, C.A.: Sustainability and sustainable development: A review of principles and definitions. *Sci. Total Environ.* **786**, 147481 (2021)
11. IEA, I.: World energy outlook 2011. Int. Energy Agency, **666** (2011)
12. Markard, J., Raven, R., Truffer, B.: Sustainability transitions: An emerging field of research and its prospects. *Res. Policy* **41**(6), 955–967 (2012)
13. World Commission on Environment and Development: *Our Common Future*. Oxford University Press, Oxford (1987)
14. Castro, C.J.: Sustainable Development: Mainstream and Critical Perspectives. *Organ. Environ.* **17**(2), 195–225 (2004)
15. Baker, S., Kousis, M., Richardson, D., Young, S.: *The politics of sustainable development*, Taylor & Francis e-Library. Routledge, London. (2005)

16. Manasakis, C., Taliouris, E.: Integrating the Sustainable Development Goals into a Region's Smart Specialisation Strategy through Corporate Responsibility. *Eur. J. Sustain. Dev.* **11**(2), 174 (2022)
17. UN, Sustainable Development Goals Report 2016, United Nations, New York (2016)
18. Munasinghe, 1993, Environmental Economics and Sustainable Development. The World Bank (1993) <https://doi.org/10.1596/0-8213-2352-0>
19. Naisbitt, J.: Megatrends. New York **17**, 1982 (1982)
20. Gulati, R., Wohlgezogen, F., Zhelyazkov, P.: The two facets of collaboration: Cooperation and coordination in strategic alliances. *Acad. Manag. Ann.* **6**(1), 531–583 (2012)
21. Van Assche, K., Beunen, R., Duineveld, M.: Evolutionary Governance Theory: An Introduction. Springer, Heidelberg (2014)
22. Mazzucato, M.: Mission-oriented innovation policies: challenges and opportunities. *Ind. Corp. Chang.* **27**(5), 803–815 (2018)
23. Pike, A., Rodríguez-Pose, A., Tomaney, J.: Shifting horizons in local and regional development. *Reg. Stud.* **51**(1), 46–57 (2017)
24. Iammarino, S., Rodríguez-Pose, A., Storper, M.: Why regional development matters for Europe's economic future. European Commission Directorate-General for Regional and Urban Policy Working Paper, 7 (2017)
25. Barca, F., McCann, P., Rodríguez-Pose, A.: The case for regional development intervention: place-based versus place-neutral approaches. *J. Reg. Sci.* **52**, 134–152 (2012). <https://doi.org/10.1111/j.1467-9787.2011.00756.x>
26. European Commission, 8th Report on Economic, Social and Territorial Cohesion, (2022) [https://ec.europa.eu/regional\\_policy/en/information/cohesion-report/](https://ec.europa.eu/regional_policy/en/information/cohesion-report/)
27. Kaufmann, D., Kraay, A., Zoido-Lobaton, P.: Governance Matters, Policy Research Working Paper No 2196, World Bank, Washington, DC (1999)
28. Rodríguez-Pose, A., Garcilazo, E.: Quality of government and the returns of investment: examining the impact of cohesion expenditure in European regions'. *Reg. Stud.* **49**(8), 1274–1290 (2015)
29. Granovetter, M.: The strength of weak ties. *Am. J. Sociol.* **78**, 1360–1380 (1973)
30. Coleman, J.S.: Social capital in the creation of human capital, *Am. J. Sociol.* **94**(Suppl.), S95–S120, (1988)
31. Amin, A.: An institutionalist perspective on regional economic development. *Int. J. Urban Reg. Res.* **23**, 365–378 (1999)
32. Putnam, R.D.: Making Democracy Work: Civic Traditions in Modern Italy. Princeton University Press, Princeton, NJ (1993)
33. Rodrik, D., Subramanian, F., Trebbi, F.: Institutions rule: the primacy of institutions over geography and integration in economic development. *J. Econ. Growth* **9**, 131–165 (2004)
34. Frantzeskaki, N., Hölscher, K., Bach, M., Avelino, F.: 2018a. Co-Creating Sustainable Urban Futures: a Primer on Applying Transition Management in Cities (2018)
35. Frantzeskaki, N., Hölscher, K., Wittmayer, J.M., Avelino, F., Bach, M.: 2018b. Transition management in and for cities: introducing a new governance approach to address urban challenges. In: Frantzeskaki, N., Hölscher, K., Bach, M., Avelino, F. (Eds.), *Co-Creating Sustainable Urban Futures: A Primer on Applying Transition Management in Cities*. Springer, pp. 1–40 (2018) [https://doi.org/10.1007/978-3-319-69273-9\\_1](https://doi.org/10.1007/978-3-319-69273-9_1)
36. Voß, J.-P., Smith, A., Grin, J.: Designing long-term policy: rethinking transition management. *Policy Sci.* **42**(4), 275–302 (2009)
37. Smith, A., Stirling, A.: Innovation, sustainability, and democracy: An analysis of grassroots contributions. *J. Self-Governance Manage. Econo.* **6**(1), 64–97 (2018)
38. Avelino, F., Grin, J., Jhagroe, S., Pel, B.: The Politics of Sustainability Transitions. *Environ. Policy Plann.* **18**(5), 557–567 (2016)

39. Avelino, F., Wittmayer, J.M., Kemp, R., Haxeltine, A.: Game-changers and transformative social innovation. *Ecol. Soc.* **22**(4), 41 (2017). <https://doi.org/10.5751/ES-09897-220441>
40. Avelino, F., Dumitru, A., Cipolla, C., Kunze, I., Wittmayer, J.: Translocal empowerment in transformative social innovation networks. *Eur. Plann. Stud.*, 1–23, 1–23, (2019)
41. Malekpour, S., Walker, W.E., de Haan, F.J., Frantzeskaki, N., Marchau, V.A.: Bridging Decision Making under Deep Uncertainty (DMDU) and Transition Management (TM) to improve strategic planning for sustainable development. *Environ. Sci. Policy* **107**, 158–167 (2020)
42. Smith, A., Kern, F.: The transitions storyline in Dutch environmental policy. *Environ. Polit.* **18**(1), 78–98 (2009)
43. Sondejker, S., Geurts, J., Rotmans, J., Tukker, A.: Imagining sustainability: the added value of transition scenarios in transition management. *Foresight* **8**, 15–30 (2006)
44. Rotmans, J.: Societal innovation: between dream and reality lies complexity. Erasmus University of Rotterdam. Rotterdam, Inaugural Address (2005)
45. Meadowcroft, J.: Environmental, political economy. In: technological transitions and the state. *New Political Econ.* **10** (4), 479 – 498 (2005)
46. Raskin, P., et al.: *Great Transition: the promise and lure of the times ahead* Boston: Stockholm Environmental Institute **1**(2002)
47. Meadowcroft, J.: What about the politics? Sustainable development, transition management, and long-term energy transitions. *Policy Sci.* **42**(4), 323–340 (2009)
48. Loorbach, D.: A multilevel framework for transition management. paper presented at the International Conference on Innovation, Sustainability, and Policy. Seeon, Germany, (2004)
49. Roorda, C., Frantzeskaki, N., Loorbach, D., Van Steenberghe, F., Wittmayer, J.: *Transition Management in Urban Context. Guidance Manual-Collaborative* Kaufmann, D., Kraay, A., Zoido-Lobaton, P., Governance Matters, Policy Research Working, 2196 (1999)
50. World Bank, Washington, DC. Evaluation Version (2012)
51. Loorbach, D.: *Transition management: new mode of governance for sustainable development.* International Books, Utrecht (2007)
52. Loorbach, D., Rotmans, J.: *Managing transitions for sustainable development.* In: Wiczorek A.J., Olsthoorn X. (Eds): *Industrial Transformation – Disciplinary Approaches Towards Transformation Research.* Kluwer, Deventer (2006)
53. Loorbach, D.: *Transition management: governance for sustainability.* Wetenschap met beleid, beleid met wetenschap, (2006)

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