A Process and a Catalogue of Solutions for Sustainable Cross-Border and Regional Public Transport

S Borén*
Department of Strategic Sustainable Development,
Blekinge Institute of Technology, Karlskrona, Sweden
sven.boren@bth.se

H Ny
Department of Strategic Sustainable Development,
Blekinge Institute of Technology, Karlskrona, Sweden
henrik.ny@bth.se

J Tenart
Bax & Company, C/Casp 118-120, 08013, Barcelona, Spain
j.tenart@baxcompany.com

M Mazouzi
ENEKA Energie & Karten GmbH, c/o Basislager Rostock,
Richard-Wagner-Straße 1a, 18055 Rostock
marco.mazouzi@gmail.com

ABSTRACT

The current public transport offers in the South Baltic region seldom meet customer expectations for easiness and attractivity of cross-border/regional journeys and rarely include integrated tickets for multimodal rides. To address that, stakeholders from six regions around the southern Baltic Sea developed the INTERCONNECT project that was guided by a holistic perspective on sustainability. Informed by that, this paper's objective was to propose a tool/method containing a planning process with a comprehensive and on-line open-access catalogue of solutions for sustainable cross-border/regional public transport services to inspire and guide planning and decision-making. The tool/method that was developed in this paper include a 7-step process and a catalogue of 42 solutions that were developed through several workshops and discussions among the authors and other experts in the field. The findings were compared and integrated with literature findings, practical experiences, then assessed against a principled definition of sustainability, and finally scrutinized and reviewed by project partners and external experts. The authors expect the results to sufficiently cover possible solutions for strategic sustainable development of cross-border/regional public transport and to inspire further development in other regions with similar infrastructure and financial means.

CCS CONCEPTS

• **Information systems**; • **Information systems applications**; • **Decision support systems**; • **Online analytical processing**;

KEYWORDS

Sustainability, Public Transport, Solutions, Cross-border, Regional transport, Catalogue

---
*Corresponding author.

1 INTRODUCTION

The transport of goods and people between countries and regions with a border to the Baltic Sea has since medieval times been key to trade and development of societies. Travellers can today cross the Baltic Sea by flight or ferries, and go to the next region by car, bus, or train. A common way is to bring cars onboard when crossing the sea by ferry as, since decades, the European Union (EU) has put efforts in making it easy to travel by car in Europe. However, using cars accounts for 12% of the EU's greenhouse gas emissions [1]. Cars are also a source of local pollution (e.g. acidification, eutrophication, smog, and noise). Because of the Green Deal [2] and earlier transport-related commitments (e.g. [3, 4]), EU members have aimed to reduce these emissions. That could partly be done by shifting car travelling to the use of public transport (PT), which uses 3.4 times less energy per passenger-kilometre [5]. Unfortunately, current PT offers across borders and between regions in the South Baltic Sea Region seldom meet customer expectations for ease and attractivity of cross-border/regional journeys. These offers are characterized by a scarce range of integrated tickets for multimodal rides, limited access to passenger information, and a lack of clarity on whether travellers should choose PT over car transport.

Driven by these challenges, regional stakeholders in Blekinge (Sweden), Rostock (Germany), Guldborgsund (Denmark), Pomorskie (Poland), Klaipeda (Lithuania), and Viimsi (Estonia) developed the INTERCONNECT project [6], that was mainly funded by the INTERREG South Baltic program and awarded with a flagship status in 2017. The intention was to reduce car-reliant mobility in the South Baltic Sea Region through more sustainable and user-friendly PT services. A systematic approach on sustainability including environmental, economic, and social aspects was chosen for carrying out the project activities. Such an approach requires guidelines on how any organization or sector can create economically feasible step-by-step transition plans to comply with conditions for sustainability. It should also be capable of informing
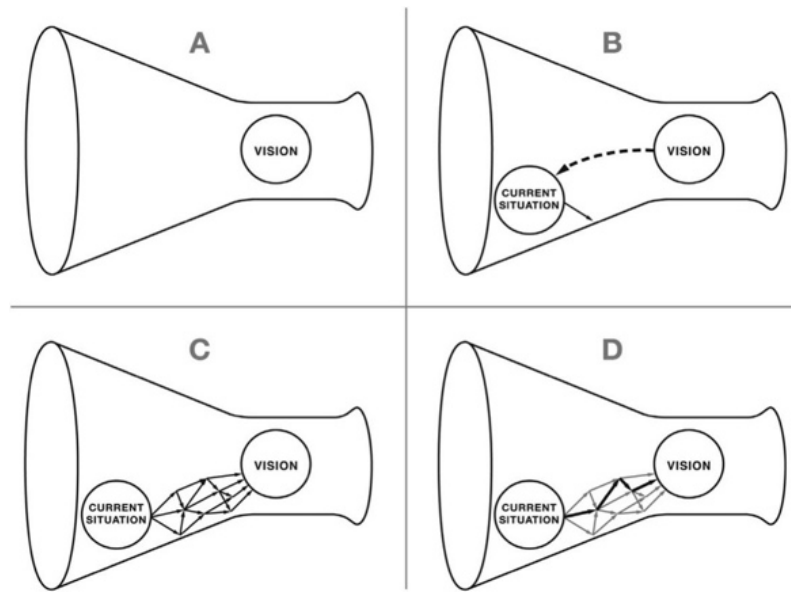
Figure 1: The funnel metaphor and the ABCD-procedure of the FSSD. Reprinted from Broman and Robèrt [7], page 21, with permission from Elsevier

concepts, methods, and tools to make them cohesively functional and support the systematic approach to sustainability. The scientifically founded and practically tested Framework for Strategic Sustainable Development (FSSD) [7] is designed to form a generic, yet operational definition of sustainability, particularly relevant for systematic planning and guiding systems and/or organisations towards sustainability. Given these benefits, this paper will use the FSSD as guidance for both the design of the study and, in particular, for the identification of sustainability impacts.

1.1 Aim and scope

One of the objectives of the INTERCONNECT project is to propose sustainable solutions for cross-border/regional PT services in order to create a list of solutions that could inspire and guide planning and decision-making towards sustainability for personal cross-border mobility in the South Baltic Sea Region. This paper aims to widen that scope and propose a tool/method that contains a planning process together with a comprehensive and on-line open-access catalogue of solutions for sustainable cross-border/regional PT services.

2 METHODS

2.1 Framing the development of the catalogue of solutions

The FSSD is operationalised through an ABCD planning procedure [7], according to Figure 1, which guided planning of research activities in this paper.

As illustrated in Figure 1, a sustainable vision, framed by a principled definition of sustainability, is designed in 'A', the current challenges and assets in relation to the vision are analysed in 'B', possible steps towards the vision are designed in 'C', and these are prioritized into a strategic plan in 'D' that bridge the gap to the

vision. Prioritization includes questions about whether actions and goals in the plan (1) are in the right direction towards the vision and will eventually comply with the Sustainability principles, (2) if they provide sufficient return on investment (ROI), and (3) if they are stable enough to withstand future foreseeable changes and will support rather than counteract other actions/goals in the plan. The catalogue of solutions that is presented in this paper primarily corresponds to the C-step of the ABCD-procedure and other studies in the INTERCONNECT project provided results that primarily correspond to the A and the B-steps (further explained in section 2.2).

As mentioned earlier, the sustainability principles of the FSSD are used to define a sustainable future in the A-step of the ABCD procedure. These principles are described by Broman and Robèrt [7]:

"In a sustainable society, nature is not subject to systematically increasing: (1) ...

(1) concentrations of substances extracted from the Earth's crust; (2)
(2) concentrations of substances produced by society; and (3)
(3) degradation by physical means;

and people are not subject to structural obstacles to: (4) health; (5) influence; (6) competence; (7) impartiality; and (8) meaning-making."

In the context of the INTERCONNECT project, several workshops, seminars and discussion forums with project partners and external experts were organized in order to develop and scrutinize ideas. That work was led by the researchers of this paper and guided by the ABCD-procedure. Added to that, the results were further refined with previous experiences and results from several literature reviews, as well as evaluated regarding expected ROI, future changes, and compatibility with other solutions. The solutions'
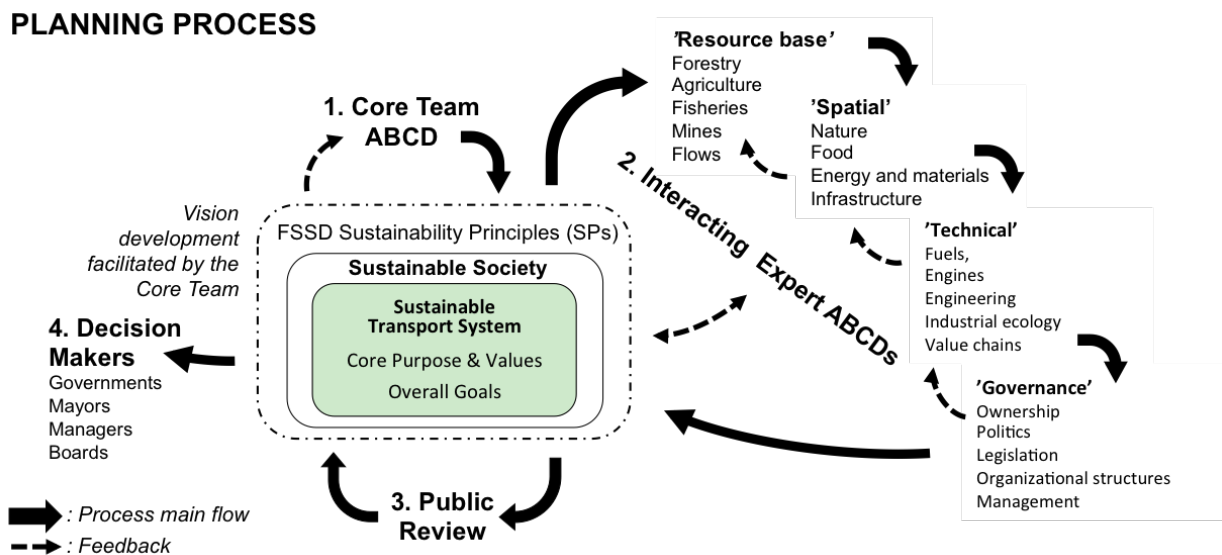
PLANNING PROCESS

Figure 2: An image of the stakeholder collaboration planning process model, which was used to frame the vision seminars that gave valuable input to this paper. Reprinted from Robèrt et al., page 56 [11]

possible violation(s) of sustainability principles where evaluated by the authors of this paper, as well as what measures that could improve or prevent these violations. The process for this is further described in the results section.

2.2   About information retrieval

The INTERCONNECT project started in 2017 with studies on evidence, knowledge, and experience led by the Hanseatic Institute for Entrepreneurship and Regional Development at the University of Rostock (HIE-RO). That included screening of policies and user response to PT services [8]; Investigation of market needs for cross-border/regional PT services [9]; and Analysis of suburban and rural connectivity patterns for PT [9]. These studies generated input to the results in this paper on primarily the B-step in the ABCD-procedure. Added to that, vision seminars on sustainable paths for PT [10] were held in Karlskrona (Sweden), in Gdynia (Poland), and in Klaipeda (Lithuania), which corresponds to the A, B, and C-step in the ABCD-procedure as they resulted in lists of what should be included in visions and solutions for each region towards sustainable cross-border/regional PT. Additional information regarding visioning was later provided from partners in Rostock and Guldborgsund. The three seminars were guided by a stakeholder collaboration planning process model [11], which also builds on the ABCD-procedure. This has previously been developed by researchers at Blekinge Institute of Technology, and also further refined and tested in the INTERCONNECT project. According to that model (Figure 2), the first step is to form a core team, which in this paper is represented by researchers at BTH who participated in the INTERCONNECT project. The second step is about engaging stakeholders from different planning areas in order to focus on 'resource base', 'spatial', 'technical', and 'governance' while going through the steps of the ABCD-procedure. The third and fourth steps in the model where not used in this paper as recommended

when creating a comprehensive plan towards the vision. It could be argued, though, that these latter steps have been used to some extent as the authors have used feedback from stakeholders to finalize the content of the catalogue. In the near future there will be another paper published by the authors of this paper about the application and development of the stakeholder collaboration planning process model in the INTERCONNECT project.

Other sources of information were websites and reports from organisations dealing with cross-border/regional transport (e.g. EU Commission, UITP, projects funded by EU, national and regional transport authorities), and also databases containing research papers (e.g. Scopus, Web of Science, Directory of Open Access Journals, Google Scholar, JSTOR, and Science Direct).

2.3   How to design the catalogue of solutions

Together with INTERCONNECT project partners and experts on cross-border and regional PT, the authors of this paper found, developed, and refined solutions for bringing cross-border and regional PT towards sustainability. The information was gathered in a list and structured/divided into different thematic areas. Because of the focus on sustainability, the authors provided information about violations of sustainability principles and measures that could improve or prevent these violations. Added to that, information about conditions and limitations where found to be useful for the framing of the solutions and thereby complement descriptions. That also reflects the questions about ROI, future changes, and compatibility with other solutions. Solutions for sustainable cross-border/regional PT were developed and scrutinized in several workshops and discussions among the authors of this paper and experts at HIE-RO and affiliates, together with the results from the vision seminars, previous experiences, and literature reviews. The authors of this paper assessed solutions in the catalogue against the sustainability principles, and suggested measures that could improve the identified

violation(s) of these principles. The proposed content of the catalogue of solutions for cross-border/regional PT was then scrutinized in a workshop [12] with project partners and invited experts. This was followed by a review of the proposed catalogue of solutions among the project partners. The authors then finalised the catalogue of solutions, which will be published on the Interconnect project website after the publication of this paper.

3 RESULTS

3.1 Process for planning towards sustainable cross-border/regional public transport

For organisations that would like to create plans towards sustainable cross-border/regional PT, the authors of this paper suggest to broaden the scope by using the above mentioned way of developing the catalogue of solutions together with the ABCD-procedure [7] and the stakeholder collaboration model [11]. This process was partly tested through the creation of the catalogue of solutions in the INTERCONNECT project, and the other suggested parts is based on experiences and findings from other studies that the researchers of this study has been involved with. The following 7-step planning process is proposed by the authors of this paper:

1. The planning initiators form a core team with about three significant stakeholders to lead the following steps in the process and also have competence in leading multi-stakeholder processes about sustainability and cross-border/regional PT.
2. Go through the steps of the ABCD-procedure to (i) be aware of possible results, (ii) to identify possible needs for education, and (iii) to specify which stakeholders that should be included in the co-creation of the content in the remaining steps, and who could represent the different expert groups for 'resource bases', 'spatial', 'technical', and 'governance' in the stakeholder collaboration planning process model.
3. Host seminars with stakeholders on (A) the content for a vision for sustainable cross-border/regional PT, (B) assessment of strengths, weaknesses and opportunities in relation to the vision, and (C) solutions towards the vision.
4. Update the catalogue of solutions provided by this paper through literature reviews and interviews with external experts about additional ideas, good practices, and scrutinize these together with the results from the seminars. This update should be able to cover solutions that are unique for the specific area that the plan is intended to cover.
5. Filter the catalogue of solutions in line with the D-step of the ABCD-procedure by excluding solutions that: (1) violate the Sustainability principles and could not be changed to not do so; (2) do not provide sufficient ROI; and (3) are not flexible platforms for possible future changes and counteracts rather than supports other solutions.
6. Based on the updated catalogue of solutions, draft a plan of actions and goals towards the vison.
7. Get feedback from stakeholders and make final adjustments before publishing the plan.

3.2 Information retrieval

This paper results were based on findings from literature reviews and INTERCONNECT project partner workshops, discussions, and earlier studies - mainly from the vision seminars. The results from these seminars can be summarized as (1) there are differences in sustainability ambitions between regions; (2) vision components from each region reflects the aim of the INTERCONNECT project; and (3) that PT in cities is in general good in all regions. There were some common ideas for sustainable development of PT that can be summarized as follows:

- Common E-tickets for PT travellers
- Improved infrastructure for public and human powered transport (i.e. walking and biking)
- Electricity and renewable energy to be used as energy carriers
- A lifecycle perspective of vehicles, energy carriers, and infrastructure is needed
- Competitive PT is needed, not only through low ticket price

The literature review resulted in finding several inspirations for improvements of PT towards sustainability. The ongoing TRAM project, funded by Interreg Europe, has summarized good practices for sustainable urban mobility in Europe and made them available on the TRAM website [13]. Some of these (e.g. real-time passenger information system, metropolitan travel cards and cycling plans in Andalusia) were relevant for cross-border/regional PT and contributed to the results of this paper. A master's thesis by Fellner, Tenart, and Vierling [14] about barriers and best practices for PT in the South Baltic Sea Region was also inspiring for the results of this paper, especially the potential best practices and ideas to overcome perceived common barriers (i.e. politicians and legal structure, infrastructure and spatial planning, service, and behaviors). That thesis was especially relevant since it also used FSSD, and its results are therefore aligned with the definition of sustainability that has been used in this paper.

3.3 Catalogue of solutions

The catalogue included 42 solutions, divided into eight areas/categories for cross-border/regional PT. Despite being steps in the right direction towards sustainability, some solutions still violate the sustainability principles. These violations can however be dealt with by making conscious choices during implementation of the respective solutions. The authors of this paper could identify the following most common improvements for sustainable development for the solutions in the catalogue:

- energy should stem from renewable sources (e.g. wind, solar, hydro)
- material recycling loops should be closed
- materials (e.g. cobalt) from conflict areas should not be used
- child labour should be avoided throughout the whole supply chain.

Table 1–8 describes the suggested solutions within the respective areas, as well as violations of the sustainability principles 1-8, recommendations on how to improve sustainability performance, and conditions and limitations for the respective solution. The catalogue will in the online version be complemented with factsheets that further describe the solutions and show examples of applications.

Table 1: List of solutions in the area of comfort for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made).

Solutions related to comfort	Sustainability Violation	Improvement	Conditions and limitations
Take measures to have cleaner facilities, e.g. toilets, seats, waiting rooms.	-	Use environmentally friendly cleaning products.	Should be coupled up with information campaign.
Improve access for reduced mobility users (disabled, trolley, elderly).	-		
Build charging stations at train/bus/ferry terminals for e-car, e-bike, e-scooter.	1, (2, 4)	Close recycling loops. Electricity from renewable sources. Climate neutral concrete. No child labour.	
Enable fast and reliable internet connection and charging sockets onboard.	1, 2, 4	Close recycling loops. Electricity for internet servers stems from renewable sources.	Should be coupled up with information campaigns.
Create service(s) for moving onboard luggage from a bus/ferry/train to another.	-	Powered by renewable energy carriers if vehicles are involved.	
Create safe spaces onboard vehicles and at terminals/PT nodes.	-		Should be coupled up with information campaign.
Create service(s) available for kids travelling alone, elderly, disabled, etc.	-		
Using tools to test how PT works for special groups, e.g. elder, blind, or kids.	-		
More space onboard due to more departures => more vehicles in operation.	(1-8)	Vehicles to be powered by electricity (1st hand) or biofuels.	

Table 2: List of solutions in the area of information and communication for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made).

Solutions related to information and communication	Sustainability Violation	Improvement	Conditions and limitations
Implement dynamic PT information screens at stations.	1, 2, 4, (5-8)	No use of materials from conflict areas. No child labour.	
Educate to change mindset about travelling by unsustainable means.	-		
Create a survey among citizens (not only PT users) to better understand travel behaviours.	-	-	

Table 3: List of solutions in the area of intermodality for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made).

Solutions related to intermodality	Sustainability Violation	Improvement	Conditions and limitations
Allow bikes on buses, trains, and ferries.	-		
Develop walking/biking infrastructure to/from terminals and PT nodes.	1	Use recycled asphalt and/or climate neutral concrete.	
Develop PT infrastructure to/from regional and x-border terminals.	(1, 2, 4)	Recycled asphalt and/or climate neutral concrete. Energy from renewable sources. Close recycling loops.	Subsidies from local governments.
Create interconnection with electric vehicles (e.g. BEV, (e)bike/e-scooter) sharing at terminals and PT nodes.	1, 2, 4, (5-8)	Close recycling loops. No child labour. No use of materials from conflict areas.	Link with rural area. Peak load supply and use/parking regulations.
Use multi-purpose vehicles that can be used for many functions (PT, etc).	1, 2, 4, (5-8)	Close recycling loops. No materials from conflict areas. No child labours. Energy from renewable sources.	

Table 4: List of solutions in the area of organization/business models for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made).

Solutions related to organization/ business models	Sustainability Violation	Improvement	Conditions and limitations
Develop travel policies to use PT instead of cars and flights.		Make sure trips use renewable energy.	
Install fleet management system for PT planning.	1, 2, 4, (5-8)	Close recycling loops. No materials from conflict areas. No child labours. Energy from renewable sources.	
Create joint procurement with neighbouring cities.	-		
Pick up passengers based on their needs.	-	Make sure this is combined with a car-free zone policy.	Vehicles can go empty and might replace walking/biking.
Create one organization/ association for several PT areas.	-		

Table 5: List of solutions in the area of planning for sustainable cross-border/regional PT.

Solutions related to planning	Sustainability Violation	Improvement	Conditions and limitations
Synchronize departures and arrivals at PT hubs for increased ridership.	-		Re-planning of affected PT lines.
Use science-based models for planning towards sustainable cross-border and regional public transport.	-	Make sure to rely on models/ perspectives that include full sustainability.	
Use self-assessment to identify compliance and readiness for SUMP and MaaS.		Complete with a strategic sustainability perspective, i.e. FSSD.	

Table 6: List of solutions in the area of productivity/reliability for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made)

Solutions related to productivity/reliability	Sustainability Violation	Improvement	Conditions and limitations
Create measures for PT to become faster or equally fast compared to car travelling.			High investment - requires national/EU funding.
Create a mobile app to inform passengers about position and estimated arrival time.	1, 2, 4, (5-8)	Make sure electricity for server comes from renewable sources.	
Create measures to increase reliability of PT by train, e.g. more tracks or meeting points, planned maintenance, rail security.	-		Collaboration with PTAs, operators and co-funding from national authorities.

Table 7: List of solutions in the area of rolling stock and propulsion/powertrain for sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made)

Solutions related to rolling stock and propulsion/powertrain	Sustainability		Conditions and limitations
	Violation	Improvement	
Power ICE busses and trolleys with biodiesel.	1, 2, (3)	Make sure resources competing with food are not used and are locally produced.	Higher tax on fossil fuels or emissions. Engines need adjustments.
Switch from ICE to battery electric vehicles.	1, 2, (4-8)	Energy from renewable sources. No cobalt from conflict areas. No child labours.	Charging infrastructure every 200 km.
Enable electric supply to ferries in ports.	1	Electricity from renewable sources. Close recycling loops. Climate neutral concrete.	Requires inquiry about power supply in/to harbours.
Convert ferries to hybrid or plug-in hybrid propulsion.	1, 2, (4-8)	Electricity from renewable sources. No child labours. Close recycling loops.	
Switch to electricity generated by renewable resources.	-		Possibility to buy renewable electricity.
Switch from ICE to direct electric propulsion of vehicles.	1, (2, 4)	Electricity from renewable sources. Close recycling loops. Climate neutral concrete.	High investment - requires national/EU funding.
Switch from ICE to hydrogen fuel cell electric vehicles.	1, 2, (4-8)	Hydrogen from electrolysis with renewable electricity, and/or biogas, and/or seawater.	

Table 8: List of solutions in the area of ticketing/fares or sustainable cross-border/regional PT (violations within parentheses can be avoided if improvements are made)

Solutions related to ticketing/fares	Sustainability		Conditions and limitations
	Violation	Improvement	
Enhance booking of an entire trip with regional/national PT.	-		IT-based booking system. Agree with operators.
Enable easy travel between countries.	-		IT-based booking system. Agree with operators.
Reduce price for groups of PT users, at different periods of the year.	-		
Create contactless cards, bank/credit account instead of cash.	(3)	Close material recycling loops.	
Create electronic ticket on a mobile app.	1, 2, 4, (5-8)	Electricity for server from renewable sources.	
Use PT tickets in combination with other offers, e.g. theatre, sport, cinema.	-		

4 DISCUSSION

4.1 Main findings

Firstly, through development and testing in the INTERCONNECT project, the authors of this paper have found a 7-step process (summarized in Figure 3), which is tailored for planning towards sustainable cross-border/regional PT.

Secondly, the authors of this paper have developed a comprehensive catalogue of 42 solutions for sustainable cross-border/regional PT services in the areas of Comfort; Communication; Intermodality; Organisation/Business models; Planning; Productivity/Reliability; Rolling stock and propulsion/powertrain; and Ticketing/fares. Based on findings from literature reviews, previous experiences, and activities in the INTERCONNECT project, the solutions were developed and scrutinized by the authors of this paper together

with project partners and external experts. The authors also identified from a systems perspective how to improve sustainability performance for solutions that could violate sustainability principles. The catalogue of solutions is intended to be published online on the INTERCONNECT website during 2020.

4.2 Validity considerations and comparisons with other studies

Based on a holistic approach on sustainability with guidance by FSSD, this paper has developed results that includes a process and a catalogue of solutions that the authors of this paper think are useful for organisations that would like to develop sustainable cross-border/regional PT. This has been made possible through earlier publications (e.g. [13–15]) in multi-stakeholder processes for sustainable development of the transport sector, and through

Figure 3: Summary of the 7-step process for planning towards sustainable cross-border/regional PT

experiences on the same topic together with INTERCONNECT project partners from six regions around the South Baltic Sea Region and external experts. Despite the inclusion of a limited number of stakeholders from the South Baltic Sea Region, the authors expect the results to sufficiently cover possible solutions for strategic sustainable development of cross-border/regional PT.

The vision seminars in the INTERCONNECT project were held in English (partly with translations to local languages), while the round table discussions in these seminars were performed either in local languages (or any other that suited the participants around the table) to have richer results. It was assumed that this setup would also attract more local cross-border/regional PT stakeholders than if the seminars would have been held only in English. This dual-language approach has later been supported by Nikulina et al. [16].

Although public and private organisations as well as travellers are finding out how to meet climate change challenges, there could soon be new possibilities that the authors of this paper might not have thought about or disregarded because they seemed not realistic from a cost perspective.

4.3 Contributions to research and society

The authors of this paper believe the findings in terms of the 7-step process and the catalogue of solutions for cross-border/regional PT will contribute to the research community by the approach provided by the FSSD and sustainability principles, which the authors have not seen in other similar studies. The results can also contribute to initiatives and/or planning of cross-border/regional PT regarding new or possibly upgraded connections between regions and countries. The results seem also valid for inspiration and ideas in other regions with ambitions to have more sustainable cross-border and regional PT, especially in regions with similar infrastructure and financial means as in the South Baltic Sea Region.

4.4 Recommended further work

Further feasibility studies for certain areas with an in-depth cost perspective could probably provide a further developed assessment. The authors also intend to go deeper into suggesting an updated

planning framework for cross-border/regional PT, which would partly be based on the findings in this paper.

ACKNOWLEDGMENTS

REFERENCES

[1] The European Commission 2019 CO2 emission performance standards for cars and vans (2020 onwards)
[2] The European Commission 2019 A European Green Deal
[3] The European Commission 2011 Energy Roadmap 2050
[4] The European Commission 2011 *Roadmap to a Single European Transport Area* (Brussels)
[5] D'Angelo S 2011 DECARBONISATION: the public transport contribution
[6] Ludwiczak A 2017 INTERCONNECT - One ticket to the future
[7] Broman G I and Robèrt K H 2017 A framework for strategic sustainable development *J. Clean. Prod.* **140** 17–31
[8] Mazouzi M, Cihon M and Warszycki P 2018 *Report on Policies, Projects & Good Practices* (Rostock)
[9] Mazouzi M, Cihon M and Warszycki P 2019 *Market needs for regional and cross-border public transport services* (Rostock)
[10] Borén S and Ny H 2018 Summary from activity 3.2: Workshops on sustainable paths for public transport
[11] Robèrt K H, Borén S, Ny H and Broman G 2017 A strategic approach to sustainable transport system development - Part 1: attempting a generic community planning process model *J. Clean. Prod.* **140** 53–61
[12] Sukhova S 2019 Partnership meeting in Rostock, Germany
[13] TRAM 2019 Project good practices
[14] Fellner M, Ténart J and Vierling J 2018 Barriers and Best Practices to the Use of Public Transportation: A Case Study of the South Baltic Sea Region Barriers and Best Practices to the Use of Public Transportation: A Case Study of the South Baltic Sea Region (Blekinge Institute of Technology)
[15] Friman M, Larhult L and Gärling T 2013 An analysis of soft transport policy measures implemented in Sweden to reduce private car use *Transportation (Amst).* **40** 109–29
[16] Nikulina V, Larson Lindal J, Baumann H, Simon D and Ny H 2019 Lost in translation: A framework for analysing complexity of co-production settings in relation to epistemic communities, linguistic diversities and culture *Futures* **113** 102442