

Developing and running demand-responsive transportation services

Demand-Responsive
Transport to ensure
accessibility, availability
and reliability of rural
public transport



RECOMMENDATIONS

The recommendations provide a guideline on how to run an innovation process to develop and design user-oriented transportation services to specified target groups within the sector of on-demand public transport.

The recommendations are helpful for regional and local public authorities responsible for creating and organising new demand-responsive transportation services.

The recommendations are based on the insights drawn from the RESPONSE project.

When developing and designing the DRT service models, five stages of the innovation process* are recommended to be carried out:

1) Alignment and problem framing. Define the challenge or a customer's need and ensure that the organisation and other actors have a common understanding of the problem and the goal of the innovation.

2) Insight. Collect the results from different types of research to highlight the weaknesses of an existing service or insights into what type of service potential customers would prefer.

3) Service development. Start developing the service using brainstorming and workshops to generate ideas and potential business models.

4) Piloting. Test the concept with some early adaptors or potential customers. Carry out as many tests as possible and move between phases three and four until it is ready for phase five;

5) Implement. Phase out the project and start planning for long-term operating service. It is necessary to evaluate and summarise results from the pilot and the insights gathered previously, and to assess whether the project has achieved its original goal, what has gone well, and what are essential improvement points



(*More information about the innovation process: RESPONSE report "Iterative innovation process for on-demand transport" by Ruter AS)

General recommendations on how to design and run the new demand-responsive transportation service:

- **Know potential external factors that may influence the transportation service model.** The municipality and political ambitions can set the substructure for engaging in innovation and influence largely where the pilots will run, the target groups, and the pilot's length. It may also impact the financial aspect and pricing models and the sustainability of the business model.

While developing the service model, use PESTEL analysis to understand the national framework and local factors. PESTEL is a structured method that can be used to identify, analyse, and understand the political, economic, social, technological, environmental, and legal factors that may influence the innovation process in your organisation. In addition to working through the steps in the innovation model, companies must consider the external factors that may affect the organisation and the innovation process in each iteration and each step.

- **Know your customers and their needs, and tailor solutions based on the target groups.** It is necessary to know the customers to customise solutions to different segments. Diverse target groups have unique needs, and the services should be tailored to deliver value to the respective groups. If the service is not designed well enough, the customers will be more unlikely to use the service.

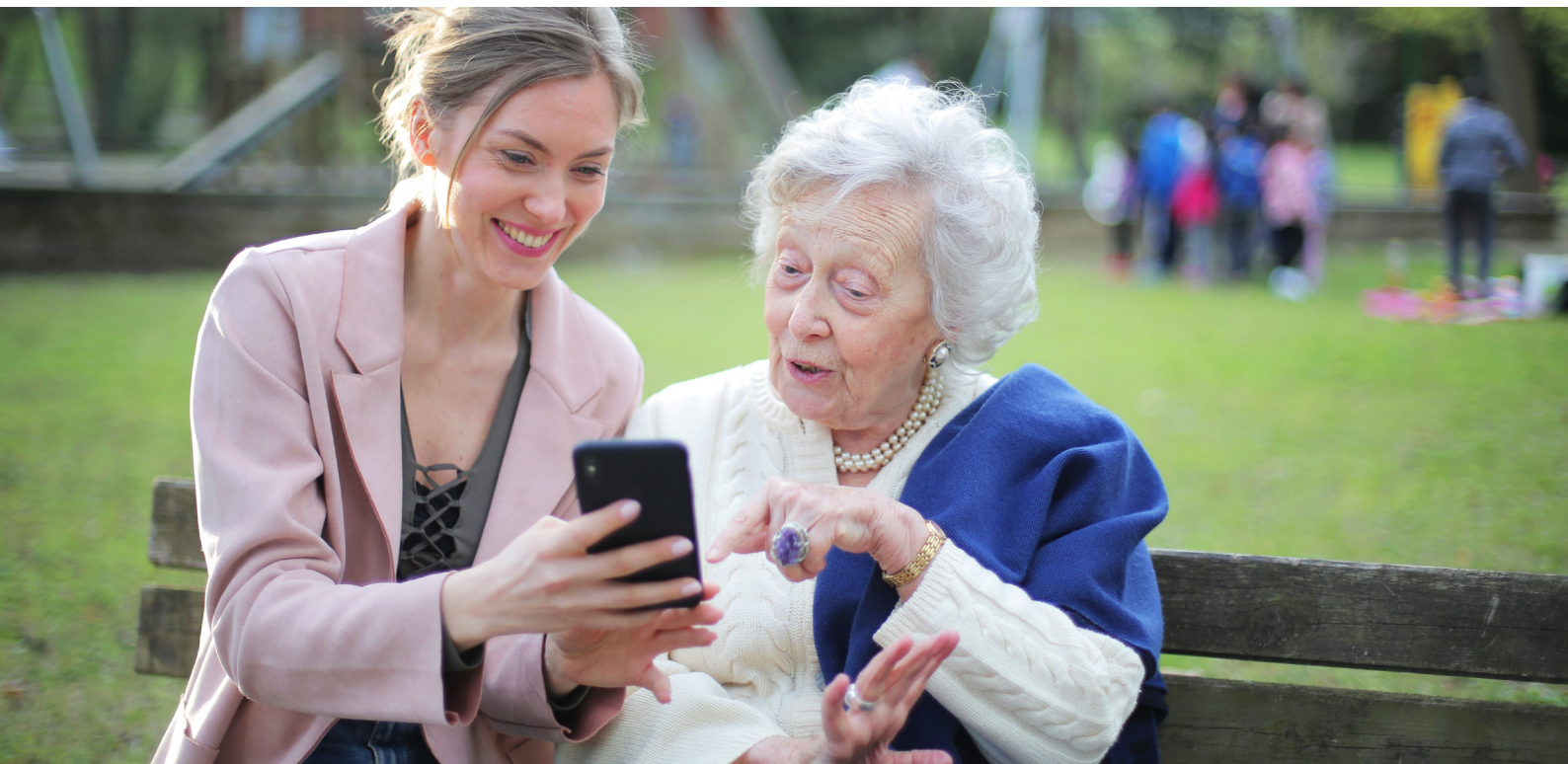
Transport providers should be aware of the principal forms of vulnerability, i.e. physical discomfort, commodification, and disorientation, which travellers may experience during traveller-driver interactions. Use interactive methods to better understand vulnerable travellers and conduct group sessions where participants can analyse and develop co-designed future transport solutions. The handbook** developed in the framework of the RESPONSE project provides several instructions on how to make DRT more user-friendly. Some recommendations are to conduct simple, cost-effective shadowing studies by own staff or to conduct innovation-oriented service co-design sessions, also called experience-based co-design (EBCD), with vulnerable travellers and other citizens not yet using existing systems.



GENERAL RECOMMENDATIONS ON HOW TO DESIGN AND RUN THE NEW DEMAND-RESPONSIVE TRANSPORTATION SERVICE:

- **Know the geographical area and evaluate DRT innovation combined with existing transportation models.** Geographical knowledge is seen as a necessary condition to start the pilots on DRT solutions. Population and population density will impact the potential demand for your service. Also, the travel purpose and the existing transportation offer will influence how people travel. Having such facts and figures of different areas will help determine where starting an on-demand transportation service is most suitable. When looking at a greater area, DRT solutions may cover areas not part of the existing route map and therefore fulfil the market potential of public transport.
- **Do changes in the pilot if you discover new learning objectives during the piloting period.** Working iteratively with innovation provides better solutions and is better-suited for the customers as errors are discovered and corrected before the service is launched. The users' feedback is valuable, and such piloting will contribute new insights into the problems that the users might face but are not discovered during the insight phase. Bad results are also good learning initiatives, and it may show that the pilot should not be implemented at all. Hence, continuously and iteratively analysing user feedback and the pilot's KPI's will help to identify the changes needed to improve the learning objectives of the DRT solution.

** More information about the vulnerable travellers: RESPONSE handbook "Experiences of demand responsive transport among vulnerable travellers - a handbook on need, demeanour, and interaction" by Karlstad University



Response



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