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Establishing Stakeholder Readiness for Innovation Adoption

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Introduction

Pilot projects in water management are initiated to learn about an innovation and to ready the innovation for implementation or adoption (Vreugdenhil, 2010). Many pilots do not extend beyond the pilot stage. One of the main reasons is that the social context around the pilot project is not receptive to the innovation. In this paper we present a means of assessing the social receptiveness for a pilot project. This equips pilot project participants to actively identify barriers and opportunities and the consequent required actions should they wish to pursue further expansion and implementation of the innovation.

In this presentation, we focus on the societal aspects of the pilot study 'Flexible Groynes'. We discuss the deployment of a stakeholder readiness assessment at the outset of the pilot study and address the implications of this assessment for learning both on the technological and societal aspects of the innovation.

Flexible Groynes - The Pilot Project

In the Netherlands, groynes have been used to train river flows for over two hundred years and form a characteristic feature of our river landscapes. While groynes are undoubtedly effective in their hydraulic function, they also alter erosion and deposition patterns of sediment and are particularly expensive to repair if damaged through ship collisions. With the advent of three-dimensional Xblocs, as applied in coastal protection, came the idea that in a smaller size, the blocks could also be used to form river groynes, potentially ameliorating some of the more negative effects of traditional groynes. The Xstream blocks lock into each other, so that a groyne can be built as one body of similar material, with steeper sides than the traditional groyne that is usually composed of layers of geotextile, sand and rubble. Because the Xstream blocks are porous, potentially they interfere less with sediment flows, and so fewer problems with scour holes could arise. Similarly, their holes could provide niche habitats for small animals such as juvenile fish. Additionally, they should be easier to repair should a collision occur as they are modular and can be removed and replaced in the same position, and an added potential advantage is that it is possible to adjust the length of the groyne by adding more modular Xblocs.

In short, owing to its modular nature, a groyne made of Xstream blocks is potentially a more flexible infrastructural solution than the traditional groyne. To test the functioning of such groynes, a pilot project was initiated in which three groynes located in the IJssel River near Kampen are constructed and monitored from November 2019 to December 2020. Besides accruing knowledge on the technological functioning of this innovation, it is necessary to understand the societal functioning. This is formulated as a key component of the pilot study, so that the pilot no longer just focuses on the technology and its readiness for adoption, but also on the social system around it.

The pilot project was conducted in an innovation team consisting of Rijkswaterstaat, BAM, Van den Herik and Deltares, functioning within the broader context of the Self Supporting River System innovation platform (SSRS, www.ssrs.info).

The Stakeholder Readiness Level

The original stakeholder readiness level assessment instrument has five elements, namely: (i) Added value for developer or end-user, (ii) Level of widespread support, (iii) Costs of development and implementation, (iv) Fit with existing internal and external processes, and (v) Risks involved. The instrument was developed by Rijkswaterstaat (see www.rwsinnoveert.nl). We adjusted it for application in a multi-actor context within the Flexible Groynes pilot project case study, as there was more than one organisation involved. This involved

specifying the questions more precisely for each organisation, and subsequently interviewing a representative from each of the involved organisations. The interview results were then analysed as indicated in Figure 1 for presentation to a broader discussion group, comprising the interviewees as well as members of the SSRS innovation platform.

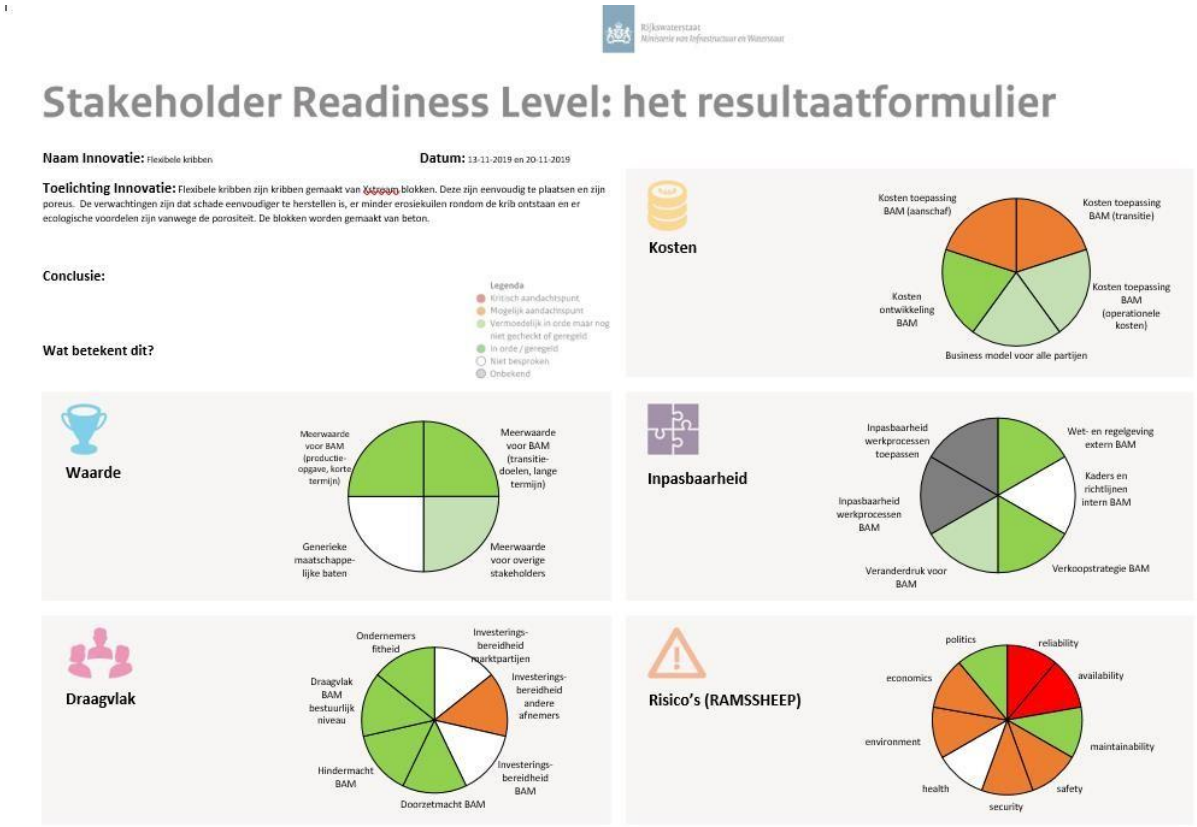

Figure 1. Example of representation of outcomes of the SRL analysis

Results of the discussions included the acknowledgement by participants that the results represent a snapshot in time and depend intrinsically on who is interviewed. The participants were aware that the application of the instrument in a multi-actor environment could be used by some actors to their advantage rather than for the common good, for instance by withholding information disadvantageous to them. However, all participants found the wider scope across the different organisations interesting and valuable. This helped in understanding their own and the other organisation, and in providing a focus of actions. For example, they identified the following action areas: (i) establishing and improving the sustainability of the groynes by reducing the CO2 footprint, and assessing whether juvenile fish use them as habitat niches, (ii) mapping potential application areas and interested parties, (iii) establishing the degree of fit of the flexible groynes with existing law and regulations and contract forms, and (iv) improving the investment commitment.

Concluding Remarks

The Stakeholder Readiness Level assessment instrument will be administered again in autumn 2020 in the Pilot Project Flexible Groynes to track the development over time of stakeholder receptiveness. Based on the positive response in this pilot project, it will also be administered in other pilot projects in water management. The ambition is to track how pilot projects influence the receptiveness of their social environment over time, and so distill design criteria for improved adoption of the innovations tested in the pilot projects.

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