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## Feature Repository & Recommendations

Group of activities 4.1: Output 3

Responsible Partner: University of Rostock



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## List of abbreviations

GoA .....	Group of Activity
IT .....	Information Technology
PB .....	Participatory Budgeting

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# 1 Introduction

Participatory Budgeting (PB) can improve the efficient allocation of public spending and strengthen democracy. They also invite citizens to take a more active part in democracy by joining political decision-making.<sup>1</sup> However, these systems are highly diverse regarding their functionality and are conditioned by local, social, political, and economic environmental factors.<sup>2</sup> While some choose a separate proposing and voting phase, others merge the two activities. These different conditions and processes motivate the individual functional requirements that a municipalities has towards its IT-based PB-initiative. Therefore, this research activity's and output's goal is not the derivation of a commonly accepted, generic process with the corresponding features, but the creation of a repository of mandatory and optional capabilities for cities that are interested in PB. It shall enable these cities to inform themselves on the various scopes for designs and pick the fitting features to the individual circumstances.

The following document provides a catalogue of functional IT-requirements. It is understood to be in conjunction with the report documents 1 and 2 of this group of activity (GoA) 4.1. While report document 1 provides a manual for the feature matrix itself, report document 2 focuses on usability-related functional and non-functional components of an IT-based PB-website. This output document serves as a repository for functionalities that a local government might choose for its PB-implementation. It comprises items that are *mandatory* to implement (e.g., voting mechanisms), *recommended* (e.g., search function within the list of proposals), or *optional* (e.g., export functionality for proposals). The listed features are the foundation for the data gathering of the feature matrix.

The remainder of this report is structured as follows: The next section gives an overview of the elements' different categories, followed by a detailed view of the corresponding items. The report is concluded by an outlook on future research activities planned for the next phase of the project.

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<sup>1</sup> Serramia, M. et al. (2019).

<sup>2</sup> Shah, A. (2007), p. 22.

## 2 Feature Repository

The process items on the feature matrix are aligned using eight consecutive PB-categories representing the different phases of a PB-process. The process starts with *Informing*. Here, the citizens get the first information on the PB-process – Who can participate, how much money can be spent, how will it work, and the rules. The next step is *Request for Proposals*. In this stage, the invited citizens make recommendations for the allocation of the budget. *Validating Proposals* gives the local council the possibility to filter proposals that do not meet the PB-process eligibility criteria, followed by *Presentation*, where the list of suitable suggestions is now accessible on the web page and other platforms. The *Feasibility Audit* checks whether the given proposals are realistic in the budget-limit. *Public Discussion* offers a means for facilitating a forum for the exchange of ideas. As the name suggests, *Vote* captures the actual voting on the proposals, and the *Realisation* stage accompanies the implementation of the accepted ideas.

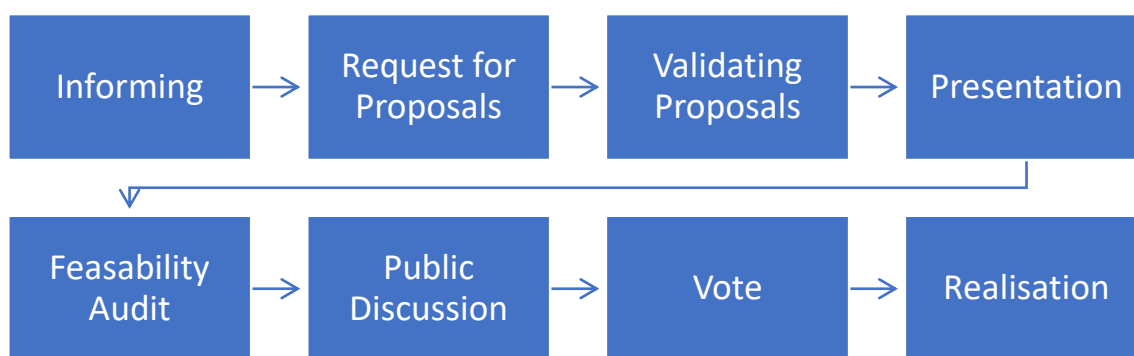


Figure 1: Top-Level Categories of the Feature-Matrix

As already stated in the introduction, every PB is different and adapted to the local circumstances. Therefore, not every stage is mandatory in a PB-process – it might be very well possible to skip some of the steps like a preliminary validation between the request for proposals and their presentation on the website. It is also possible to interchange or merge some of the stages – this categorization merely serves as a structuring element for the feature matrix and the corresponding analysis.

Further, this variety is valid not only for the top-level view shown above but also for the single features that the categories are built on. The diversity of features is integrated into this document using an importance rating. This rating is performed using the PB definition of Sintomer et al., which states that a PB shall discuss a financial dimension (1), at least citywide

with a body with power over the administration (2), carried out as a repeated process (3) with a public deliberation (4) and accountability on the outputs (5).<sup>3</sup> Along this requirements, the features are rated as:

- *Mandatory*: Every PB-initiative needs to implement such a measure. A fully functional PB-process is not possible without these items.
- *Recommended*: While a functional PB-initiative is possible without these items, they are considered desirable for facilitating high-quality PB.
- *Optional*: These items depend on the detailed process considerations of the individual PB-instantiations. A fully functional PB is possible without these items. However, they often offer additional functionality easing the use of the PB, following compliance regulations, or are conditioned by political decisions.

Further, we implemented an additional category *IT/Non-IT*. All features of the feature-matrix have some relation to IT, e.g., through implementing the underlying functionality. Some of the features, though, are almost solely driven through the IT-department and do not imply a political decision. On the contrary, other features impact the participatory budget's overall orientation and require a strong mandate from the political decision-makers.

## 2.1 Informing

Features in this category are concerned with getting the citizens informed on the newly planned PB-initiative. It captures feature-items that support the spread of different types of information on the planned PB-process.

IT/Non-IT	Importance	Item	Description
Non-IT	Recommended	Informing on PB-participation	Provide information on how to participate in the PB-process.
Non-IT	Recommended	Informing on PB-rules	Provide information for citizens regarding the rules for participating in the PB.
Non-IT	Recommended	Goals for PB are available	Display the desired outcomes for a PB-implementation on the web-page.
Non-IT	Optional	Examples of (successful) developments of PB	The web-pages give examples for success-stories of other municipalities.

Table 1: Implementable Features for Category "Informing"

<sup>3</sup> Sintomer, Y./Herzberg, C./Röcke, A. (2008).

## 2.2 Request for Proposals

Features in this category capture the elements that are linked to the handing of the proposals of citizens. This includes the registration process, as well as the uploading of new ideas.

IT/Non-IT	Importance	Item	Description
Non-IT	Optional	Mandatory registration	To participate, citizens need to register themselves before there are able to hand in and vote for ideas.
Non-IT	Optional	Registration requirements	Support for formal requirements regarding the registration.
Non-IT	Optional	Predefined categories are available	To further structure the submitted proposals, they can be categorized (e.g., in “playground” or “landscaping”).
IT	Optional	Upload a file	The PB-website implements an object storage. It is possible to upload a picture smaller than 5 MB.
Non-IT	Optional	Cost Estimation	Citizen include a cost estimation with their proposals
IT	Recommended	Locational data	The submitted proposal can be accompanied by information on the exact location, e.g., by showing a map. (Locational data has to be provided. The place can be chosen on a map.)

Table 2: Implementable Features for Category “Request for Proposals”

## 2.3 Validating Proposals

Features in this category are important right after a proposal was transmitted. They ensure that the citizens are informed on the current progress of the publication of their ideas.

IT/Non-IT	Importance	Item	Description
IT	Recommended	Status management	Every submitted proposal is associated with a status representing the current state of the processing (e.g., “waiting for validation”, “ready for voting”).
Non-IT	Optional	Pre-moderation	The administration has to validate the given cost-estimate. If the estimated costs are above the spending limit, the proposal has to be canceled. If the proposal’s costs and the one calculated by the administration differ, but they are still within the spending limit, the administration can adjust the costs.
Non-IT	Recommended	Administration’s commenting/reasoning	The administration can write a short statement to the proposal. This is especially necessary if a proposal is getting declined by the administration.
IT	Recommended	Notification	Submitters are updated regarding comments and status updates of their proposals by e-mail.

Table 3: Implementable Features for Category “Validating Proposals”



## 2.4 Presentation

Features in this category are related to the display of the proposals. Arguably, it is one of the most critical steps as it facilitates informing the citizens on newly created ideas in their district and city-wide.

IT/Non-IT	Importance	Item	Description
IT	Mandatory	List of proposal on web-page	The list of published proposals is shown on the web-page.
IT	Recommended	Search capability	The web-page has a function to search the published list of proposals.
IT	Recommended	List filtering	The list can be filtered using predefined categories (e.g., implementation status, rating).
IT	Optional	Export functionality	The list of published proposals can be downloaded (e.g., in an Excel or PowerPoint file).
IT	Optional	Rating	Users can publicly rate a proposal (e.g. through “likes”). These ratings are independent from the binding voting process.
IT	Recommended	Comments in the reviewing process	Users of the platform can comment on each other’s submitted and published proposals.

Table 4: Implementable Features for Category “Presentation”

## 2.5 Feasibility Audit & Public Discussion

Features in this category are relevant before the voting initiative starts. The feasibility audit filters such elements above the budget limit or those that are not in the local administration’s responsibility. Public discussion provides a forum that facilitates the exchange of the citizens’ opinions.

Category	IT/Non-IT	Importance	Item	Description
<b>Feasibility Audit</b>	Non-IT	Mandatory	Estimate costs	Altering costs of proposals and declining is possible.
<b>Feasibility Audit</b>	Non-IT	Mandatory	Technical Feasibility	The proposal falls in the jurisdiction of the municipality and is technically possible.
<b>Feasibility Audit</b>	Non-IT	Mandatory	Legal Feasibility	The proposal does not violate local laws or PB-guidelines.
<b>Public Discussion</b>	Non-IT	Optional	Debate tool	Users of the platform can comment not only on each submitted and published proposal, but also in a general forum for discussion on a broader perspective (not only related to proposals).

Table 5: Implementable Features for Category “Feasibility Audit” and “Public Discussion”

## 2.6 Voting

Features in this category are related to casting votes. As the possibilities for a voting instantiation are manifold and dependent on the political and juridical environment, we do not recommend specific feature-items.

IT/Non-IT	Importance	Item	Description
Non-IT	Mandatory	Support for customized voting implementation	The PB-Software has to support the voting process of the municipalities.
Non-IT	Optional	Issue codes for voter identification	Identifies if the identification of voter eligibility is captured through the issue of a unique code.

Table 6: Implementable Features for Category "Voting"

## 2.7 Realisation

After the votes are cast, the realisation takes place. The PB-website should accompany the implementation efforts and keep the citizens informed on the progress that is made. This increases the accountability of the administration towards its citizens.

IT/Non-IT	Importance	Item	Description
IT	Recommended	Media involvement	The PB-website informs citizens on the progress of the implementation of accepted proposals.

Table 7: Implementable Feature for Category "Realisation"

## 3 Closing Remarks

Output 3 for GoA 4.1 collects implementable features for PB-software. It serves as a repository for interested administrations. Municipalities that plan a new PB-initiative can inform themselves on possible PB-designs and choose the features that best fit their needs. Considering the diverse landscape of local laws and requirements for PBs in the baltic sea region, the openness towards different manifestations of PB-processes shall support these administrations in creating a PB on their own.

Further, the decision-making focus (IT or Non-IT) and an indicator of importance are given. The work corresponds with the feature matrix, the main deliverable of GoA 4.1.

This research is aligned with the other outputs of GoA 4.1. Output 1 is concerned with a description and manual for the feature-matrix, which is also the data basis for this output document. Output 2 regards the design of the website and establishes desirable usability criteria. The next research steps for GoA 4.2 are the creation of a reference architecture and tool patterns.

## References

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