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Project: "Empowering Participatory Budgeting in the Baltic
Sea Region – EmPaci"

Feature Matrix Manual

Group of activities 4.1: Output 1

Responsible Partner: University of Rostock

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Status: Final (English)

List of abbreviations

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

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1   Introduction

Participatory Budgeting (PB) is a process of participation in which citizens are directly involved in decision-making about their local government or district's budget allocations. In this regard, it offers an opportunity to integrate citizens into the democratic process actively.[1]

PB is concerned with access to information, public deliberation, negotiation, and decision-making on a large scale, activities that can all be supported by information technology (IT).[2] At the same time, the implemented components, features and process steps of the various PB-initiatives differ widely. In the following, we refer to them as *process items*. There exists no shared gold standard for a PB-process; instead, the process items are heavily customized to the local context.[3] These varying efforts motivated the Group of Activity (GoA) 4.1, step 1 of the EmPaci project: Creating a feature matrix that comprises the different possible functions of an IT-system and an assessment of the fulfilment level for 50 selected PB-initiatives. This feature matrix serves as a catalogue for interested cities to inform themselves about possible process-items they might want to implement.

At first, the purpose of the feature matrix was merely to cover IT-related functionalities. However, doing the research, we discovered that the isolated view on information technology falls short of capturing the diverse landscape of PB-initiatives. While some IT-capabilities are just simple IT-functions, most IT-capabilities connect closely with an underlying organisational process and decisions how the PB-process is designed. An example is the facilitation of a registration process. Some municipalities choose to allow an easy registration on the platform using an e-mail. Others issue a personal code for every citizen. While this is a functionality that an IT-supported PB should cover, the decision is highly political and partly legally prescribed, and not primarily driven by IT. We, therefore, covered not only isolated IT-capabilities but pictured a holistic process of a PB-implementation with the different process items that one might choose, as well as the underlying capabilities a system has to fulfil. The underlying output of this GoA, the feature matrix, is available here: http://cities.empaci.eu. As a matter of fact, this document focusses on online participation schemes, whereas there are also of course offline variants of PB.

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[1] Sintomer, Y./Herzberg, C./Röcke, A. (2008).
[2] Rose, J./Rios, J./Lippa, B. (2010).
[3] Hutchison, D. et al. (2005).

The report is structured as follows: The next section gives an overview of the feature matrix and the process-items it contains. Section 3 contains a manual for using the online tool of the feature matrix.

2   Overview on Process Items of the Feature Matrix

The process items on the feature matrix are aligned using eight consecutive PB-categories representing the different phases of a PB-process (cf. Figure 1). The process starts with *Informing*. Here, the citizens get the first information about the PB-process – who can participate, how much money can be spent, how it will work, and the rules to contribute and participate. The next step is the *Request for Proposals*. In this stage, the eligible citizens make recommendations for the allocation of the budget. *Validating Proposals* give the local council the possibility to filter proposals that do not meet the PB-process eligibility criteria, followed by *Presentation*, where the list of eligible proposals is now accessible on the web page and other platforms. The *Financial 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.
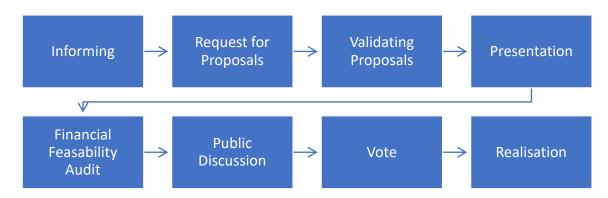

Figure 1: Top-level categories of the Feature Matrix

Not every stage is mandatory in a PB-process – it might be very well possible to skip some of the steps, for example, the 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. For example, the *Financial Feasibility Audit* can be completed at different times in the PB-process. This categorisation merely serves as a structuring element for the feature matrix and the corresponding analysis. The output document 3 of this GoA gives a detailed overview of corresponding feature-items.

Further, the feature matrix comprises categories used to assess functional and non-functional usability criteria (cf. Figure 2). Regarding the website's design, the structure and clearness of the website's navigation, the content design, and the availability and functionality of an internal search were covered. Mobile enablement assesses the behavior on small screen sizes and touch interfaces.

Special regards were given to accessibility, which analyzes e-inclusion aspects. Here, we covered the support for visually impaired or motor-impaired citizens. A detailed description of the usability aspects and an extensive analysis of the state of the art of the assessed websites are available on output document 2 of this GoA.
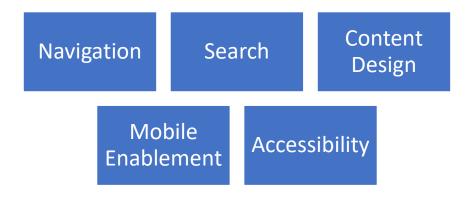

Figure 2: Usability Criteria of the Feature Matrix

3 Manual for the Feature Matrix

The feature matrix is available online, either through the direct link "cities.empaci.eu" or via the item "feature matrix" on the main website "empaci.eu". The link opens the feature matrix, as shown in

Figure 3. On the top right, the current version number and the associated release date is shown. Further, it is possible to download the underlying Excel spreadsheet for conducting an individual analysis.

Figure 3: Entry Point of Feature Matrix

3.1 Browsing Through the Data

The table below the headline "Compare Cities" contains the interactive, browsable data (cf. Figure 3). The first row contains the analyzed cities – in total, 50 different PB-initiatives were assessed. A click on the name of the city marks it to be filtered. The filter is applied by clicking on the green button "Remove cities without a tick", the "Reset" button resets the filters. Hovering with the mouse over the pen icon next to the city name shows the PB-initiatives' website. A click on the pen icon opens the website in a new tab.

On the left, the main categories described in Figures 1 and 2 are presented. A click on the categories opens a detailed view of the items. Hovering above the pen icon displays a description of the assessed items. The "IT"-icon indicates whether the item is mainly driven by the IT-department or by political, process-related decisions (see output document 3 for more extensive information). The drop-down menu "Choose one of the following" triggers a filter for the requested attribute, showing only the cities with the given value.
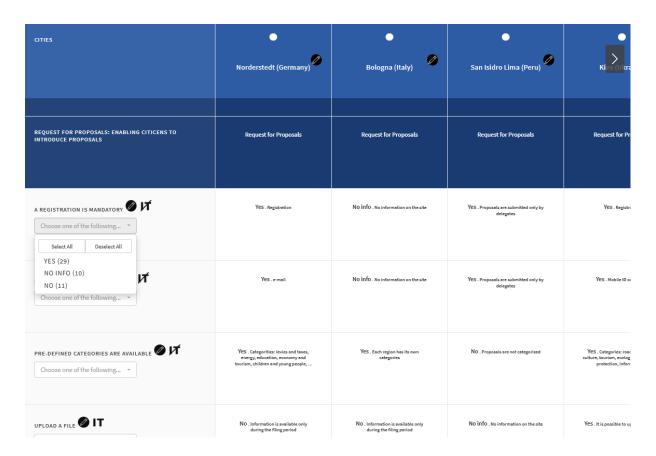
Figure 4: Open Category "Request for Proposals"

3.2   Accessibility Mode

To enhance readability for visually impaired users, an accessibility function is included. On the active feature matrix, the button "accessibility mode" in the header enables a black and white view and offers further control on the appearance.

The first item of the accessibility menu allows controlling the font size. The "site colors" changes the contrast between font and background using different shades of colors. Images allow the enabling or disabling of pictures, as well as turning them black and white. The speaker symbol triggers a text to speech engine. Settings open an additional menu for adjusting the space between lines, letters, and the font type (with or without serifs). The crossed eye symbol to the right of the "settings"-button disables the accessibility mode, the "–"-symbol hides the accessibility menu, keeping the selected options active.

Figure 5: Accessibility Mode and the Corresponding Menu

4　Closing Remarks

This output document provides a manual for using the feature matrix, which is available online at http://cities.empaci.eu. It stands in conjunction with output document 2, which presents an analysis of the state of the art in terms of usability and accessibility in PB-websites, and output document 3, which contains a repository of implementable features for PB-initiatives.

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