



DIGITALSTADT
DARMSTADT

WHITE BOOK SMART CITY

Guidelines

Assessment and scorecards

INTRODUCTION

The (self-)evaluation of digitalisation and smart city projects* is a sensible, if not necessary, step in reflecting on (own) work to improve future projects and establish a learning culture within the organisation. It improves the creation and execution of future projects as well as the transfer of project experience into the routine processes of an organisation.

(Self-)evaluation also offers the opportunity for other municipalities to learn from existing experiences or to use tried-and-tested solutions themselves.

(Self-)evaluation can be carried out by a single organisation or by all partners involved in the project together. This supports the step from an individual perspective to a system perspective.

It is important for the process of (self-)evaluation to put together the best possible data and document basis. This may include, for example:

- Project documents (strategy documents, project application, resolutions, funding notices)
- Milestones, progress reports on implementation
- Evaluation and, if applicable, measurement results for the indicators

Once these documents are available, the projects can be evaluated in the steps described below.

In addition to being suitable for retrospective evaluation of a completed project, the guidelines can also be used to test the feasibility of new project ideas (ex-ante evaluation) or to develop new projects. In this way, the foundations for a successful project can be laid. The guideline focuses on the areas of strategic fit, process quality, impact orientation, and transfer quality in terms of stabilising project results, changing processes and structures, and managing knowledge within and outside the organisation. Last but not least, it supports a holistic view of smart city projects from the outset.

* The basic structure of the guidelines is based on the smart city analysis tool of Die Strategiemanufaktur and its work areas Smart Cities – Smart Regions and Smart Programming. It has been adapted/specifically developed in light of the DDG evaluation.

CLASSIFICATION

The following project evaluation maps guide you through the evaluation step by step. They focus on the key components of a digitalisation or smart city project.

The basic structure is divided into the following sections:

1) Environment monitoring

1.1 Good practice screening

2) Strategic and systemic analysis of projects

2.1 Project documentation

2.2 Strategic orientation

2.3 Strategic fit

3) Monitoring

3.1 Achievement of objectives

3.2 Indicators

3.3 Effectiveness orientation

4) Process, transfer and consolidation

4.1 Process quality

4.2 Transfer quality

5) Smart city dimensions

5.1 Technological-economic innovation dimension

5.2 Social-societal innovation dimension

5.3 Sustainable-ecological innovation dimension

5.4 Institutional-organisational dimension

5.5 Participatory and co-design dimension

5.6 Purpose orientation

Questions are asked that provide information about the start, operational implementation and effectiveness of projects or processes. After the reflection and review questions, you have the opportunity to briefly describe the status or perspective of each aspect with regard to your own project in a short statement. In order to implement this (self-) evaluation (ex post) quickly, a simple and summary evaluation is recommended, with a score leading to a clear result. Some questions can be answered with yes or no, others require a slightly more differentiated qualitative assessment based on the individual aspects of the complex of questions. If this 'quick check' is carried out at the beginning of a project (ex ante), it provides a preliminary overview of possible gaps in the procedure and creation.

The answers are backed by a point system, which is added up at the end. With a maximum score of 36, an assessment of the project's implementation is based on the following criteria:

Good (necessary score)	26–36
Moderate (necessary score)	16–25
Weak	6–15

The background features several light blue squares with dark blue shadows, arranged in a scattered pattern. One square is in the upper right, another in the middle left, and a larger one in the lower right with a small dark blue square on its top right corner.

1. ENVIRONMENTAL MONITORING

1.1 GOOD-PRACTICE SCREENING IN ADVANCE

Have results and experiences from similar projects been included, such as from other municipalities, municipal associations, states, scientific organisations, foundations and consulting firms?

Comments on the status of the (internal) project:

Ex-ante experience screening

Score (Max. 2)

Experience screening not carried out

0

Experience screening carried out

2

The page features a blue gradient background with several light blue squares of varying sizes and positions. Some squares have long, dark shadows cast to the right, creating a 3D effect. The squares are scattered across the page, with one in the upper right, one in the upper left, one in the middle right, and one in the lower left.

2. STRATEGIC AND SYSTEMIC ANALYSIS OF PROJECTS

The page features several decorative squares of varying sizes and shades of blue, some with shadows, scattered across the background. One large square is in the upper right, a medium one in the lower left, and a dark one with a white square inside is in the lower right.

3. MONITORING

3.1 ACHIEVEMENT OF OBJECTIVES (PROJECT MONITORING / EVALUATION)

Has project monitoring been carried out or is an evaluation planned? To what extent were the indicators geared to the strategy and did they help to achieve the strategic objectives? Were the indicators measurable?

Comments on the status of the (internal) project:

Achievement of objectives

**Score
(Max. 3)**

Weak (describable achievement of goals) 1

Moderate (measurable achievement of goals) 2

Strong (strategy-oriented) 3

3.2 INDICATORS

Have targets and indicators been defined for the project based on the criteria of relevance, availability, reliability and comparability?

- 1) Qualitative targets and corresponding indicators
(project-specific indicators)
- 2) Quantitative targets and corresponding indicators
(project-specific indicators)
- 3) Objectives relate to interconnected aspects of the projects and networking
(cross-project indicators)

Comments on the status of the (internal) project:

Indicators

Score (Max. 3)

Weak (qualitative targets)

1

Moderate (and quantitative targets)

2

Strong (and networked goal description)

3

The background is a solid blue color with a subtle gradient. There are several decorative elements: a small light blue square in the upper left, a dark blue square overlapping a light blue square in the upper right, a dark blue square overlapping a light blue square in the lower left, and a light blue square in the lower center. All squares have a slight drop shadow.

4. PROCESS, TRANSFER AND CONSISTENCY

4.1 PROCESS QUALITY

How was the project set up, implemented and completed in the following areas?

The following aspects can be used to assess:

- 1) Project management (professionalism, continuity etc.)
- 2) Networking of project participants
- 3) Workflow planning
- 4) Definition and monitoring of milestones
- 5) Monitoring of indicators
- 6) Project documentation and impact assessment
- 7) Securing results
- 8) Documentation of lessons learnt

Comments on the status of the (internal) project:

Process quality

Score (Max. 3)

Weak (2–3 of 8 criteria)

1

Moderate (4–6 of 8 criteria)

2

Strong (7–8 of 8 criteria)

3

4.2 TRANSFER QUALITY

Was the transfer of the results carried out within the company's own organisation?
Were the results made available to other municipalities and regions?

- 1) Incorporated into a new routine process within the company's own organisation based on the specific project
- 2) Cross-project into a modified (optimised) form of cooperation
- 3) Within the project and as an example of good practice for other municipalities and regions

Comments on the status of the (internal) project:

Transfer quality

Score (Max. 3)

Weak (1)

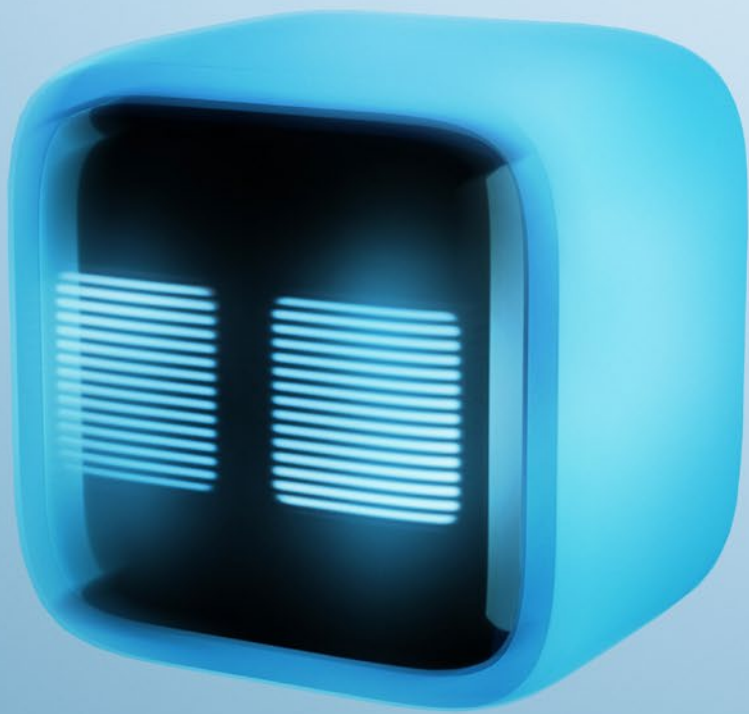
1

Moderate (1) + (2)

2

Strong (1) + (2) + (3)

3



The page features a blue gradient background with several decorative squares of varying sizes and shades of blue, each with a long shadow cast to the right. One square is in the top left, another in the top right, a larger one in the middle right, a dark one in the middle left, and a light one in the bottom right.

5. SMART CITY DIMENSIONS

5. SMART CITY (INNOVATION) DIMENSIONS

In what dimensions of innovation in a smart city can the project be categorised and what contribution does it make to one or more fields of innovation? The holistic smart city taxonomy encompasses the following dimensions:

- 1) Technological-economic
- 2) Social-societal
- 3) Sustainable-ecological
- 4) Institutional-organisational
- 5) Participatory & human-centred (co-design)
- 6) Purpose orientation

On the diagrams you will find a brief description of the individual dimensions. The dimensions can be evaluated individually and as a whole (systemically). The more smart city dimensions can be assigned to the evaluated project, the better.

In order to assess the overall perspective, the following questions may be asked:

- Why are we working on the project in isolation?
- Would there be an added benefit in integrating additional dimensions?

5.1 TECHNOLOGICAL-ECONOMIC INNOVATION DIMENSION

Which technological and/or economic challenges does the project address?

In-depth questions for reflection and description are:

- What innovations and business models are planned?
- How can they be described succinctly?
- Which partners are necessary?
- Have the results of the project screening changed/advanced the project creation?
- How can project results be consolidated?

Comments on the status of the (internal) project:

Contribution to the technological-economic innovation dimension

Score (Max. 2)

Dimension is not being addressed

0

Dimension is being addressed

2

5.2 SOCIAL-SOCIETAL INNOVATION DIMENSION

In addition to technological innovations, social innovations are playing an increasingly important role in cities, as they help to find – often digital – solutions to specific social issues of urban society and urban development.

Which social or societal challenges does the project address and solve?

In-depth questions for reflection and description:

- What innovations and business models are planned?
- How can they be described succinctly?
- Which partners are necessary?
- Have the results of the project screening changed/advanced the project creation?
- How can project results be consolidated?
- What is the social impact (SIMPACT)?

Comments on the status of the (internal) project:

Contribution to the social-societal dimension of innovation

Score (Max. 2)

Dimension is not being addressed

0

Dimension is being addressed

2

5.3 SUSTAINABLE-ECOLOGICAL INNOVATION DIMENSION

Which ecological innovation dimensions does the project address or include?

In-depth questions for reflection and description are:

- What innovations and business models are planned?
- Are resource efficiency and the circular economy taken into account?
- Are possible rebound effects of the project discussed?
- Does the project contribute to climate action and climate neutrality?
- Does the project contribute to the bioeconomy?
- How can the contributions be described succinctly?
- Which partners are necessary?
- Have the results of the project screening changed/advanced the project creation?
- How can project results be consolidated?

Comments on the status of the (internal) project:

Contribution to sustainable-ecological innovation dimension

Score (Max. 2)

Dimension is not being addressed

0

Dimension is being addressed

2

5.4 INSTITUTIONAL-ORGANISATIONAL DIMENSION

What institutional-organisational dimensions of innovation does the project include and how does it change the working processes and structures of the participating organisations? Is the topic of organisational development part of the project?

In-depth questions for reflection and description are:

- Working in networked, agile and co-creative structures and innovation ecosystems requires new skills in collaboration and cooperation. Are they described and addressed as part of the project?
- Are the content-based aspects of the project related to the organisation?
- Will the structural forms of cooperation (temporary or permanent) change in order to optimise results?
- Are new skills for collaboration and cooperation necessary to achieve objectives – are they described and worked on?
- Will internal workflows be readjusted and adapted?

Comments on the status of the (internal) project:

Contribution to the institutional-organisational innovation dimension

Score (Max. 2)

Dimension is not being addressed

0

Dimension is being addressed

2

5.5 PARTICIPATORY & CO-DESIGN DIMENSION

Citizen participation is a key and often underestimated dimension in several respects. Since smart city projects deal with the entire city and thus directly or indirectly with urban society, the involvement of civil or urban society in innovation projects is almost always a must. Therefore, the initial question is: Is, and if so, how, civil or urban society involved or considered?

In-depth questions for reflection and description are:

- Why do we involve civil or urban society?
- When do we involve civil or urban society?
- Which participation formats do we use?
- Do we interact with civil or urban society on an equal footing?

Comments on the status of the (internal) project:

Contribution to the participatory & co-design dimension

**Score
(Max. 2)**

Dimension is not being addressed

0

Dimension is being addressed

2

5.6 PURPOSE ORIENTATION

Smart city projects need an answer to the why, the purpose of the project. This is outside of technology, because digitalisation and the use of data are means to an end. Therefore, an understanding of the meaning and understanding of the purpose of a smart city project is the pivotal point for acceptance and benefit beyond the immediate project. The initial question is therefore: Is there an overarching purpose that gives the project meaning? Is it known?

In-depth questions for reflection and description are:

- Why does purpose orientation matter to us?
- Is the purpose orientation helpful for the project parameters?
- Should no overarching orientation be established in the project?
- If yes, why?
- What does this mean for the location of the project?

Comments on the status of the (internal) project:

Contribution to purpose orientation

**Score
(Max. 2)**

Dimension is not being addressed

0

Dimension is being addressed

2

6. EVALUATION RESULT

(overview – please enter numerical values from all evaluation areas)

Testing and self-evaluation aspect	Score (min. – max.)	Score (evaluated project)
1.1 Good-practice screening in advance	0–2	<input type="text"/>
Environmental monitoring	0–2	<input type="text"/>
2.1 Project documentation	0–2	<input type="text"/>
2.2 Strategic orientation	0–2	<input type="text"/>
2.3 Strategic fit	1–3	<input type="text"/>
Strategic and systemic analysis	1–7	<input type="text"/>
3.1 Achievement of objectives	1–3	<input type="text"/>
3.2 Indicators	1–3	<input type="text"/>
3.3 Effectiveness orientation	1–3	<input type="text"/>
Monitoring	3–9	<input type="text"/>
4.1 Process quality	1–3	<input type="text"/>
4.2 Transfer quality	1–3	<input type="text"/>
Process, transfer and consistency	2–6	<input type="text"/>
5.1 Technological-economic	0–2	<input type="text"/>
5.2 Social-societal	0–2	<input type="text"/>
5.3 Sustainable-ecological	0–2	<input type="text"/>
5.4 Institutional-organisational	0–2	<input type="text"/>
5.5 Participatory & human-centred	0–2	<input type="text"/>
5.6 Purpose-oriented	0–2	<input type="text"/>
Smart city dimensions	0–12	<input type="text"/>
Evaluation of overall result	Max. 36	<input type="text"/>
		Scoring assessment
	26–36	Good (necessary score)
	16–25	Moderate (necessary score)
	6–15	Weak



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