GEMEINSAM DIGITAL: BERLIN

Strategy Annex





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ANNEX I: STRATEGY PROCESS

In the process of developing and implementing the strategy Gemeinsam Digital: Berlin, the city has opted to promote participation and active involvement. The strategy was developed based on the conviction that the challenges of the present and the future can only be successfully addressed by involving the entire urban community. For this reason, the strategy was not developed solely from within the administration: instead, new participatory approaches to strategy development were tested to serve as a learning experience for joint implementation.

Care was therefore taken throughout the process to ensure that as many Berlin perspectives as possible were represented. Berlin residents were to be given the opportunity to participate in the development, state the challenges and needs facing Berlin and their neighborhood from their point of view, formulate goals and propose measures.

The strategy process was accompanied by two committees in order to involve the different political levels of Berlin along with representatives of different groups from within the urban community. The Smart City Strategy Board - consisting of four State Secretaries from the Senate Department for the Environment, Urban Mobility, Consumer Protection and Climate Protection, the Senate Department for Urban Development, Construction and Housing, the Senate Department for Economics, Energy and Public Enterprises, and the Senate Department for Culture and Europe, as well as four district mayors and city councilors (Friedrichshain-Kreuzberg, Marzahn-Hellersdorf, Pankow, Treptow-Köpenick) - was chaired by the Chief Digital Officer of the State of Berlin, who, as State Secretary for Digitalization, also contributed the perspective of the Senate Department for the Interior, Digitalization and Sport. The Strategy Board accompanied the strategy process from a political perspective. The Smart City Strategy Advisory Board, consisting of representatives from business, academia, administration and civil society, contributed expert knowledge to the shaping of the strategy process.

The process sought to develop a strategy that is participatory and forward-looking and that addresses both the Berlin administration and the public. For this reason, multidimensional participation took place at different levels.¹ The strategy was developed in two phases: a concept phase and an elaboration phase. In the elaboration phase, the strategy, which was initially developed as a stand-alone Smart City Strategy, was merged with the Digital Strategy (formerly Senate Department for Economics, Energy and Public Enterprises) and the strategic aspects of administrative digitalization (Senate Department for the Interior, Digitalization and Sport).

The preliminary work carried out as part of the Digital Strategy² enabled additional insights into digitalization in the administration to be incorporated in the strategy. Digitalization has been happening for a long time and very successfully in Berlin's districts and Senate administrations.³ However, one key insight from the work done to date is that there is a need for central coordination and support of the transformation as well as more of a focus on central digital infrastructures, structures and processes.

Even in the very first phase of development, the **concept phase** (02/2021 - 05/2021), thousands of different voices were represented in the development of the strategic framework. The selected formats ranged from outreach participation of so-called silent groups⁴ in focus interviews to broad-based online surveys via mein.berlin.de and events. In addition, selected stakeholders were involved through interactive workshops and dialog-based advisory panels.

3 Senatsverwaltung für Wirtschaft, Energie und Betriebe (2020). Grünbuch für die Digitalisierungsstrategie des Landes Berlin. Available online: https://www.berlin.de/sen/wirtschaft/digitalisierung/digitalstrategie/201006_gruenbuch.pdf

¹ Adapted from the Extended Ladder of Participation, cf: Potapchuk, William (2007). New Approaches to Citizen Participation: Building Consent. National Civic Review 80(2). pp. 158 - 168.

² As part of a contract awarded by the Senate Department for Economics, Energy and Utilities, IPG GmbH, d.quarks GmbH and aufsiemitgebruell jointly developed and tested a process model, which has now been incorporated as a preliminary process in the implementation of the GD:B strategy as part of the merging of the two strategy processes.

⁴ Silent groups: So-called silent groups include Berlin residents who are otherwise rarely or hardly heard in participation processes: people with disabilities, people who have experienced displacement, people who have experienced discrimination, children and young people, and the homeless.

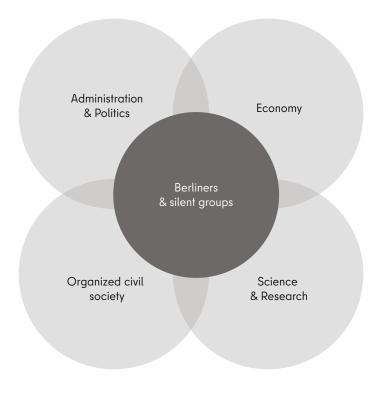


Fig. 1: Participating actors within the urban community

Even in the conceptual phase, the quintuple helix approach was used to promote interaction between the municipal administration, business, academia, civil society and silent groups as well as all Berlin residents. Numerous key players were activated to develop the strategy with and for the city. They were kept regularly updated during the strategy process, invited to contribute to public comments and attend events, and used as multipliers in their respective circles. In total, over 1,600 people participated in online surveys during the concept phase; 35 focus interviews were conducted; over 250 people participated in 21 workshops.

The strategic framework for the development of a new Berlin Smart City Strategy emerged from the content developed during the concept phase which involved the participation process as described above. With its guiding principles - which in an abridged version formed the basis for the Values Compass - principles for good practice and future perspectives, it provided the foundation for further concrete substantiation in the elaboration phase. In the **elaboration phase** (09/2021 - 05/2022), the fields of action and measures were developed that provide the substance of the strategic framework and breathe life into it in a way that is measurable. BerlinStrategie 3.0 and other urban strategies ⁵ provided orientation in achieving a conceptual merging of digitalization and urban development in line with the definition of the smart city. BerlinStrategie 3.0 was particularly important in this context as an interdepartmental guideline and key urban development strategy for Berlin.

In this phase, even greater care was taken to ensure that as wide a variety of Berlin perspectives as possible were involved in the development of the goals and measures. Whereas in the concept phase stakeholders tended to be involved separately, in the elaboration phase members of different stakeholder groups entered into dialog with one other. This was enabled among other things by the Digital Berlin Municipal Committee and the Smart City Administration Forum. Experts from business, academia, civil society and administration were also able to contribute significantly to the development of the goals and measures by participating in joint workshops and by means of online comments.

⁵ Der Regierende Bürgermeister von Berlin. Senatskanzlei (2021). BerlinStrategie 3.0. Available online: https://www.berlin.de/rbmskzl/_assets/politik/berlin-strategie-3-0-langfassung.pdf

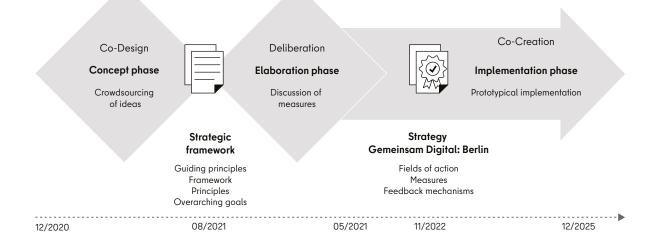


Fig. 2: Phases of strategy development

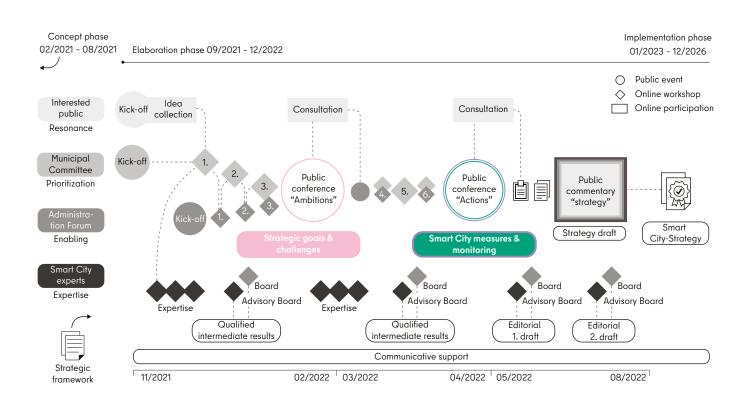


Fig. 3: Participants and formats of the elaboration phase

The central format for selecting participants in the development process was a lot-drawing procedure during the development phase, with 3,000 Berlin residents being invited to join the Municipal Committee for digital Berlin. From the feedback, a group of 75 people were selected to reflect Berlin's diversity as closely as possible based on certain demographic characteristics.⁶ Additional members were then also invited on an outreach basis via multipliers in order to have certain experiences represented on the committee.⁷

This committee first discussed the goals and fields of action, later focusing on measures for the strategy. The Municipal Committee was supplemented with broad administrative participation, the Smart City Administration Forum. All interested administrative employees were given the opportunity to participate in the process on a voluntary basis. This approach to involving the administration was a way of testing a new procedure to ensure the joint participation of both citizens and the administration.

The Municipal Committee for digital Berlin and the broad participation of the administration were supported by a group of experts representing four key groups from Berlin's urban community: business, academia, administration and civil society.

The outcomes of the discussions between the administration and the individuals drawn by lots were presented to those interested in public formats and commented on by them. This provided a feedback loop to the urban community. By combining these different strands of participation, the participatory process ultimately produced feasible proposals for fields of action and measures that gave rise to the strategy. Throughout the process, the public was kept informed of all key interim stages by means of newsletters, events, press releases, blogposts and the like. In this way, individual participation formats were closely interlinked and different actors were able to interact with each other in dialog.

Individual elements of the strategy and how they emerged.

Chapter 2 Values Compass: The main content derived from the participatory process in the concept phase. The vision for the future resulted in the four guiding principles. These formed the basis for the Values Compass.

Chapter 3 Fields of action: Building on the content of BerlinStrategie 3.0, smart city approaches were found for the various specialist strategies together with the experts. Initially, operational goals were sought in each case in order to be able to implement the goals of the specialist strategies more quickly using smart city approaches. In the course of the process, this led to the development of the fields of action. These highlight the topics where digitalization and smart city approaches are expected to have a particular impact.

Chapter 4 Measures: The selection of measures reflects the needs of the city. The measures initially selected were those for which testing was possible. The basis was provided by more than 600 contributions from various participation formats.⁸ The next stage was to condense and compare these with previously identified focal points put forward by the Advisory Board, the Board and the Core Team. The selection process took into account long-standing needs in terms of providing the foundations of a digital city – based on current and previous participation – as well as drawing on dialog and various position papers contributed by different stakeholders.⁹ The first measures to be presented in the strategy were selected because it was possible to define responsibilities and make resources available for them.

Chapter 5 Governance: Governance of strategy implementation incorporates the needs of various stakeholder groups from the participatory process. Here, formats were piloted and tested in the strategy process that are now being consolidated in the governance of the GD:B strategy. Furthermore, governance takes into account the great desire for further participation of the urban community.

- 8 Proposals include those to emerge from four expert workshops held in November and January 2021 and two expert workshops held in March 2022. These involved experts from business, academia, administration and civil society. Further suggestions for measures were collected at the meetings of the Digital Berlin Municipal Committee and the meetings of the Smart City Administration Forum and then submitted as proposals via mein.berlin.de.
- 9 Proposals were included from: position papers by various Berlin stakeholders (Smart City Berlin network, IHK Berlin, HTW, Hertie School, Bündnis Digitale Stadt) as well as strategies and practical experience drawn from other cities.

⁶ Additional voluntary demographic information was requested as part of the registration process: e.g. highest educational attainment, migration experience, nationality, and gender. Information on age and place of residence was known.

⁷ For example, older women were specifically sought to contribute their perspectives and experience.

Chapter 6 Implementation: The implementation model is based on the preliminary work done for the former Digital Strategy and the established approaches of agile project management and design thinking. This chapter presents a process for how measures are to be implemented. Initial measures whose responsibilities and funding are secured can already be piloted.

Chapter 7 Impact measurement: The chapter on impact measurement introduces the success factors. These are one of the outcomes of the Digital Berlin Municipal Committee. At the meetings, certain classic issues repeatedly emerged from the urban community. These were discussed together with the Municipal Committee at the last meetings. The outcome of the discussion and negotiation led to the nine success factors. See Annex III for a detailed description: Impact measurement.

ANNEX II: THE PRELIMINARY PROCESS

Digitalization measures are often launched without first defining a clear problem and an effective system of needs management, establishing a functioning coordination of all stakeholders based on the standards to be taken into account, and incorporating expert knowledge. The preliminary process for GD:B is to include all these points and ensure they are adhered to. It comprises five different formats that accompany and support a project team on a step-by-step basis.

The goal is to end up with an elaborated description of measures, ideally legitimized by the (political) leadership based on a powerful mandate.

In the broadest sense, a measure description is a project plan that is flexible enough to reflect the dynamics of the process in a meaningful way - while at the same time ensuring sufficient uniformity to guarantee recognizability and therefore provide structure. It should be emphasized that initial drafts of project plans are often elaborated by small groups under pressure of time, involving little or no interaction with those who will be involved in or affected by the project later in its life. This gives rise to the following problems in later project phases:

- Stakeholders do not feel fully valued and involved in the process
- New findings emerge but can no longer be integrated in the project plan, which has already been finalized
- Good ideas and important perspectives have not been incorporated in the writing process and are therefore lacking

As such, the stated goal of the preliminary process is that all key stakeholders are to be involved so that potential irritations and coordination problems in the further course of the project are prevented and a more stable foundation is created on which to build quickly and effectively.

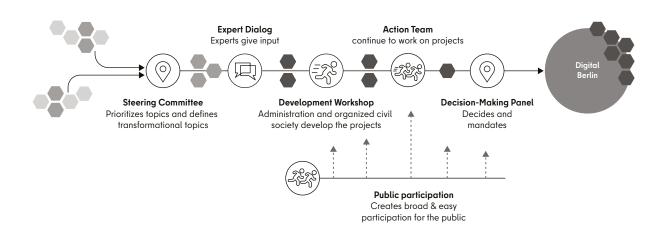


Fig. 4: Formats used in the preliminary process

Implementation of the measure is assigned to an Action Team at the end of the preliminary process, if not before. The Action Team may or may not overlap with the Steering Committee, but should at least have been legitimized by it. The previously developed participatory description of measures helps the team act at all times with the inclusion of expert and stakeholder perspectives.

The following formats are available:

Steering Committee

The task of the Steering Meeting is to plan and further develop the projects at governance and project levels – levels of action, fields of action and needs for action – in relation to the respective measure. This is where the direction is set for the measure concerned: it is structured, and at the same decisions are made as to which events are really needed for the measure, etc. This essentially involves exploring the question: what situation are we in and what challenge(s) do we need to overcome?

The Steering Committee is not necessarily made up of the same stakeholders as the Action Team. The former steers the process (answering the question: who do we need to involve?), while the latter takes care of implementation (answering the question: what needs to be done, in what time frame, with what resources?).

Who is involved

- Executive level of the Senate administrations
- Administrative experts
- Specialist level of the Senate administrations

Outcomes of the Steering Committee meetings

- The administrations involved (Senate/district level) get to know each other
- The objective and understanding of the task is clarified
- A mandate is provided for further collaborative work
- Initial transformational issues are identified, which can be explored in greater depth by expert input in the course of Expert Dialogs

Expert Dialog

Expert Dialogs are intensive conference and workshop formats that aim to bring together the best knowledge from practice and theory in order to delve deeper into specific issues and develop solutions based on the descriptions of measures in the levels of action and fields of action. They are designed to broaden the horizons of all participants and deepen specific knowledge. For the Expert Dialogs, we select the relevant stakeholders and bring them together with experts. The Expert Dialogs are closely aligned with the measure descriptions in their respective development phases and are intended to untangle knots in the development and implementation process by bringing together the necessary expertise, inspiration and practical experience and developing the foundation for specific innovations.

Who is involved

- Experts from politics and administration
- External experts
- Stakeholders

Results of the Expert Dialog:

- Possible solutions have become tangible and visible through best practice examples
- The discussion with experts has led to a deeper understanding of the field among all participants

Development Workshop

The goal of the Development Workshop is to guide all stakeholders towards intense and productive collaboration. Involving a range of perspectives, the measure description document is created to provide the basis for specific project plans. During, before or after the Development Workshop, an Action Team is formed to write up this project plan and is then deployed for its subsequent implementation. The Development Workshop can constitute an initial work phase of this Action Team, backed up by an extended group of actors.

Who is involved

- All Berlin actors relevant to a topic

Outcomes of the Development Workshop

- A description of measures that is filled in as far as possible
- This is enriched by the Steering Committee and the Expert Dialog and completed in the Development Workshop. As such it provides a basis from which the Action Team subsequently writes a detailed project plan

Public participation

The Berlin public is involved in the entire development of the measures. Citizens can regularly provide feedback on the projects and contribute their own ideas via online formats and the mein.berlin.de portal.

Who is involved

The Berlin public

Outcomes of public participation

- Evaluation of draft ideas
- Feedback and additions to objectives

Decision-Making Panel

Finally, the Decision-Making Panel issues a mandate and approves the necessary resources to make the measure a reality. This provides the Action Team with the necessary reinforcement to implement the envisaged project plan.

Who is involved

- The State Secretaries relevant to the project

Outcomes of the Decision-Making Panel

- A sound mandate for the implementation of the measure
- Provision of the necessary resources (financial, personnel)
- Senate resolution or similar where applicable

Note:

Even if the process is linear, loops can be incorporated at any time. At the same time, the format sequence is adaptable in terms of the quantity of events required. In this sense, the preliminary process follows a flexible modular principle.

In adherence to the modular principle and with the support of professional process facilitators, the formats can be designed in such a way that they are appropriate to the respective situation.

ANNEX III: IMPACT MEASUREMENT

Level 1: Measures implementation

Smart city indicators

Chapter 7 **Impact measurement** refers to Action Teams developing their own indicators. Among other things, they can use the commonly available smart city indicators. These can be found on the following websites:

- United For Smart Sustainable Cities
 <u>https://www.itu.int/en/ITU-T/ssc/united/Pages/publica-</u>tion-U4SSC-KPIs.aspx
- ISO 37120:2018 Sustainable cities and communities Indicators for city services and quality of life https://www.iso.org/standard/68498.html
- ISO 37122:2019 Sustainable cities and communities Indicators for smart cities https://www.iso.org/standard/69050.html

Other indicators are presented in the manual with the implementation model. In addition, measures **Z5 Transparency and openness in the implementation of digital projects** and **N2 SDGs at the district level** include developing and sharing local indicators.

Level 2: Measure selection and Values Compass

The currently identified success factors of the Values Compass contribute to the long-term benefits for the city. As explained in this chapter, they are used at different points in the strategy and vary in their application. They are used as a checklist for the Action Teams, while at the same time placing a focus on impact mechanics and therefore on individual success factors. The success factors are explained in detail here:

1. Functional responsibilities

In order to strengthen the capacity of the city and its public institutions to act in the long term:

- We take responsibility for decisions based on competencies and level of knowledge.
- We work on complex issues across departments and hierarchies and communicate new responsibilities vis-à-vis the city.

 We are committed to a strong administration whose resources enable effective cooperation with the various actors of the urban community.

2. Adaptive regulation

In order to coordinate key infrastructure and the provision of fundamental services for and with the city:

- We support capacity-building for owner-operated municipal enterprises, e.g. in connection with a digital sustainability check.
- We examine which regulatory framework conditions are conducive or obstructive to smart implementation of the measures.
- We make proposals for legal adjustments so as to accelerate Berlin's transformation in line with the guiding principles.

3. Sharing of tools

In order to ensure the independence of the urban community:

- We use tools (e.g. methods, templates, processes) and open technologies that can be co-designed by interested parties (open data, open source or open source).
- We ensure that these tools or technologies are easily accessible.
- We contribute to their further development.

4. Visibility in the urban space

In order to make the digital city an experience for everyone:

- We make implementation visible in the urban space and link digital with analog approaches.
- We ensure that these services can be used by all residents without restriction (including those on low incomes, with limited mobility or with little knowledge of German).

5. Sustainable use of resources

In order to ensure long-term conservation of the basis of existence, we take into account limited urban open space and natural resources by:

- Prioritizing decisions based on agreed sustainability and value creation goals.
- Consuming only what is necessary and taking care of what we have in order to preserve it (sufficiency).
- Treating resources as part of material cycles and making them as environmentally compatible as possible (consistency).
- Using material resources more efficiently through technical renewal or multiple use (efficiency).

6. Co-determination

In order to strengthen democratic processes:

- We invite the urban community to participate effectively in fundamental decisions in connection with planning and implementation.
- We actively approach residents who are affected by engaging with them in their everyday lives and using appropriate participation opportunities (outreach participation formats).
- We offer opportunities to experience self-efficacy in democratic processes so as to increase motivation and acceptance for joint decisions.

7. Creativity and diversity

In order to illustrate Berlin's contribution as a creative capital in a changing world:

- We encourage creativity in our processes and are open to new ideas.
- We communicate comprehensibly with inclusive descriptions and in multiple languages.
- Our Action Teams reflect the diversity of Berlin and ensure the equal influence of all employees.
- We take into account that different actors administration, residents, business, academia, civil society - have differing options for action available to them, and we implement a culture in which feedback is taken seriously.

8. Knowledge exchange and further development

In order to enable a learning urban community:

- We publish all the necessary information in a clustered and easy-to-find manner, and we keep it up to date, e.g. new functions, forms, laws, etc.
- We promote the organized sharing of knowledge between the administration, academia, organizations, startups and the day-to-day experience of all residents.
- We create the necessary processes so that we can jointly try out new knowledge, review measures and improve them.

9. Long-term benefits for the city

In order to contribute to a sustainable economic model in the long term:

- We create processes in which the administration, civil society and business jointly assume the public tasks of basic services (community-oriented operating models).
- We ensure that value creation is measured not only in terms of gross domestic product, but also in terms of other variables - biodiversity, social welfare, health, satisfaction, etc. - for the prosperity of society.
- We plan in such a way that future generations will benefit, too.

Systemic effect

It is possible to respond to both simple and complicated tasks with perception and understanding. In the case of complex interrelationships, the only way to achieve a model-based understanding is through systemic analysis of influencing variables and their effects on each other. Based on the well-tested method of the sensitivity model, interventions can be designed and their effects recorded in a controlled, experimental manner. This makes it possible to draw reliable conclusions, based on experience, for future action in line with the system.

In a smart city, this method can be used to determine influencing variables with observable interrelated effects. There are three different types of success factors. In this context, levers are those influencing variables that take effect in a way that is relatively uninfluenced by others, while reactive influencing variables hardly take effect themselves but are heavily influenced by others. Critical influencing variables that trigger numerous and powerful effects, as it were, but are also influenced by others, can enable the most systemically effective changes.¹⁰

In the context of GD:B, we call these critical influencing variables success factors (SF): based on these, measures can ultimately be prioritized. For example, if GD:B stakeholders

¹⁰ Context Collective (2022). Komplexe Strukturen smarter Städte erkennen – für ein systemisch wirksames politisches Handeln. Available online: https://medium.com/@context_collective_berlin/komplexe-strukturen-smarter-städte-erkennen-für-einsystemisch-wirksames-politisches-handeln-64990d2b1ff7

collectively believe that there is a particularly powerful effect to be derived from the combination of the success factors tool sharing and knowledge exchange, this supports the prioritization of measures to do just this. In the following section, we briefly present this process; it should essentially be gone through with all stakeholders together.

Description of the cause-effect relationships

The systemic approach provides a tool to help constructively discuss an intervention and its effectiveness. It is important for the representatives of the urban community to develop a common understanding of how success factors are identified at a strategic level and how they potentially influence each other. This is documented in a simple matrix in which each effect strength is characterized by a number from 0 – 3:

- 0 = no effect between two factors
- 1 = a limited effect, i.e. "a lot does very little"
- 2 = a proportional effect, i.e. "the more/less, the more/less"
- 3 = a powerful effect, i.e. "a little does a lot"

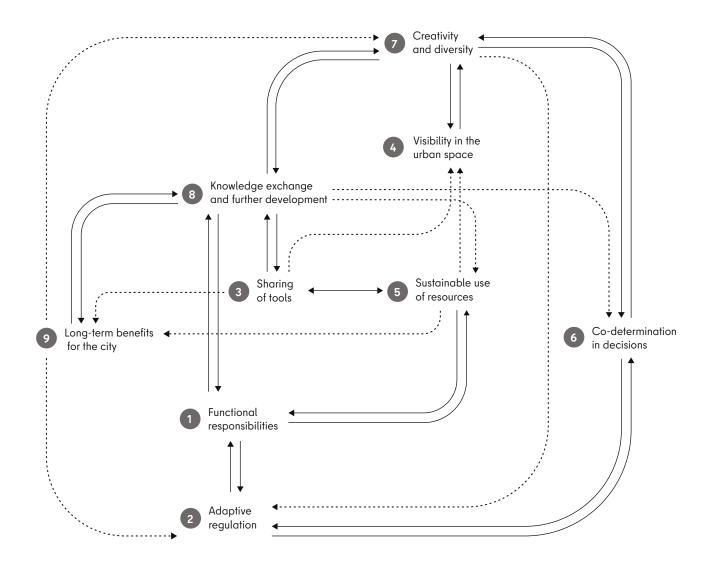


Fig. 5: Feedback loops

Effect of Variable I on Variable \rightarrow	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	AV Sum total
SF1: Functional responsibilities	Х	2	1	0	3	2	2	2	2	14
SF2: Adaptive regulation	2	Х	1	1	2	2	2	2	2	14
SF3: Sharing of tools	2	2	х	2	2	1	2	3	3	17
SF4: Visibility in the urban space	1	2	1	х	1	1	2	2	2	12
SF5: Sustainable use of resources	3	2	2	2	х	0	1	0	3	13
SF6: Co-determination in decisions	1	2	1	1	2	Х	2	2	2	13
SF7: Creativity and diversity	2	2	2	2	1	2	х	2	2	15
SF8: Knowledge exchange and further development	3	1	2	1	3	2	2	Х	3	17
SF9: Long-term benefits for the city	1	2	1	2	1	0	2	0	Х	9
PV Total	15	15	11	11	15	10	15	13	19	

Fig. 6: Underlying effect matrix

The numbers, like their graphic distinction, signal the strongest effects within a system. This is based on a qualitative analysis: in this context there was discussion of which values influence each other and why. However, this presupposes that actors are able to describe among themselves what an effect is, and that they have a common understanding of the given influencing variables. This common understanding is also expressed by assessing the current level of achievement on a scale that identifies weak and strong effects.

An example of this would be the proportional effect of **adaptive regulation** (see above. SF2) on **co-determination** (see above. SF6), which can be described as follows: pilot projects and living labs (examples of adaptive regulation) that identify hurdles in current legislation and possible alternatives in this regard can potentially make it more likely that citizens will be able to observe and actively participate in change.

The figure allows the total effects of a success factor to be read across one line (active value, AV) i.e. the statement of how active an influencing factor is on all others as a sum total. The influence of one success factor by all others, i.e. how reactive it is, can be read as a sum from a column (passive value, PV). This scheme reveals the roles inherent in each success factor - active, reactive or critical. For example, **tool sharing** (see #3 above) is a lever because it has a relatively strong active effect with a ratio of 17:11 (AV:PV). Critical influencing variables are SF1 **Functional responsibilities** and SF2 **Adaptive regulation** (both 14:15).

In the next step, a decision is arrived at – again in joint discussion with the actors – which two to three success factors have the most powerful effect on the respective success factor (see Fig. 1, figures colored in red). The outcome is visualized in the form of effect arrows in an effect network. In some cases, effects show up between two factors that go back and forth and are shown as a double red arrow in the graph. This is called a short feedback loop.

It is therefore possible to select from the many existing feedback loops those that have characteristic properties with regard to selected, possible success factors or interactive effects.

Selection of measures based on the Values Compass

The final step involves prioritizing the various measures based on joint discussion oriented towards the success factors. Here, the GD:B team already examined how the eight success factors can be taken into account based on previous project descriptions and initial concepts. Ultimately, the selection of measures remains a political balancing act in which even measures with relatively few points can be chosen because other important factors weigh in favor of their selection. In these cases, the success factors can be used as a tool to further develop these measures in line with the strategy and in the interests of the urban community. The following points have currently been awarded:

- 0 = Success factor is not taken into account
- 1 = Success factor is taken into account to some extent
- 2 = Success factor is fully taken into account
- 3 = Success factor also has an effect on other factors (see Fig. 2)

	SF1: Functional responsibilities (38 points out of 60 awarded)	SF2: Adaptive regulation (27 points out of 60 awarded)	SF3: Sharing of tools (45 points out of 60 awarded)	SF4: Visibility in the urban space (33 points out of 60 awarded)	SF5: Sustainable use of resources (31 points out of 60 awarded)	SF6: Co-determination (30 points out of 60 awarded)	SF7: Creativity and diversity (27 points out of 60 awarded)	SF8: Knowledge exchange (49 points out of 60 awarded)	SF9: Long-term benefits for the city (40 points out of 60 awarded)		
Centralized, decentralized and network measures											
Z1 Build capacity and skills for the digital transformation (17 out of 27 points)	2	3 (on SF1)	3 (on SF8)	0	1	2	1	3 (on SF7)	2		
Z2 A binding procedu- re for the implementa- tion of IT projects (18 out of 27 points)	3 (on SF8)	3 (on SF1)	2	1	1	2	1	3 (on SF7, SF 3)	2		
Z3 Collaboration tool- kit - Basic Collabora- tion Service (18 out of 27 points)	3 (on SF8)	1	3 (on SF8)	1	2	1	2	3 (on SF7, SF 3)	2		
Z4 Establishment of an overarching public data infrastructure (19 out of 27 points)	3 (on SF5, SF8)	2	3 (on SF5, SF8)	1	2	2	1	3 (on SF6, SF 7)	2		
Z5 Transparency and openness in the imple- mentation of digital projects (21 out of 27 points)	3 (on SF2, SF8)	2	3 (SF0, SF5, SF8)	2	2	2	2	3 (SF0, SF5, SF7)	2		
Z6 Facilitation of the awarding of IT services (14 out of 27 points)	3 (SF2)	2	2	0	2	0	1	2	2		
Z7 The Berlin platform (18 out of 27 points)	2	1	3 (on SF0, SF8)	3	2	1	2	2	2		
D1 Participatory Budgeting and Smart Participation (16 out of 27 points)	1	2	2	2	2	3	2	0	2		
D2 Digital X Energy - Networking to Save Energy (16 out of 27 points)	1	1	1	2	3 (on SF3, SF4)	2	2	2	2		

D3 Needs-driven expansion of the char- ging infrastructure (14 out of 27 points)	2	2	2	2	2	0	0	2	2
D4 Life situation concept (13 out of 27 points)	2	0	1	2	0	2	1	3 (on SF1)	2
D5 Pandemic Radar (9 out of 27 points)	2	1	0	1	0	0	0	3 (on SF1)	2
D6 Smart Space Har- denbergplatz (17 out of 27 points)	2	2	1	3 (on SF7)	1	2	2	2	2
D7 Comprehensible Language (15 out of 27 points)	1	0	3	2	1	2	1	3 (on SF0, SF1)	2
N1 Data & Smart City Governance Based on the Example of Air Quality Management (15 out of 27 points)	3 (on SF2, SF8)	2	3 (on SF0, SF5, SF8)	0	1	1	1	2	2
N2 SDGs at district level (16 out of 27 points)	0	0	3 (on SF5, SF8)	2	3 (on SF1)	2	2	2	2
N3 Kiezbox 2.0 - Data in Everyday Life and Crisis (14 out of 27 points)	2	0	3 (on SF0, SF8)	2	1	1	1	2	2
N4 Learning Places of the Future (16 out of 27 points)	0	0	2	3 (on SF7)	3 (on SF3, SF5)	1	2	3 (on SF3, SF5, SF7)	2
N5 Mobile CityLAB (17 out of 27 points)	1	1	3 (on SFO, SF8)	2	0	3 (on SF2, SF7, SF8)	2	3 (on SF0, SF1, SF7)	2
N6 Smart Water (16 out of 27 points)	2	2	2	2	2	1	1	3 (on SF1, SF6)	2

Fig. 7: Evaluation of the measures based on the success factors

Level 3: Learning strategy

Level 3: Learning strategy

The procedure described above is a guide that we can use to transparently record what we find useful, thereby providing a basis for discussion. This makes it possible to apply a holistic system analysis to the Berlin influencing variables, interrelationships and proposed measures so that they can be used for steering purposes in the future without having to resort to methods which are still problematic to some extent, such as website votes.

The 20 existing measures are relatively balanced in terms of success factors. They were initially evaluated and selected using the method described above, among others. This procedure is to be applied in even greater depth to evaluate possible measures from the Arena of Ideas when it comes to the selection of further measures. The values and priorities of Berlin's urban community will continue to change in the coming years as a result of social developments and initial insights gained from implementation of the strategy. For this reason, the Values Compass is constantly reviewed and renewed at a workshop together with the urban community.

At this workshop, each of the elements of the Values Compass is introduced and the terminology is assessed. The goal is to build a common understanding and apply it to concrete situations. The next stage involves using this to develop the indicators further and describe short and medium-term effects. Finally, an agreement is arrived at in the workshops as to how the effects are to be evaluated.

Regular evaluation of ongoing measures and the success factor feedback loops may sometimes require the portfolio of measures to be realigned. By viewing the impact dashboard, it is possible to analyze retrospectively to what extent the portfolio of measures achieves the desired effects. If the planned effect has not been achieved, there is the option of adding new measures when measures are next selected that have an impact in specific fields of action that have received less attention to date, thereby closing identified gaps. The same logic can be used to adapt or terminate measures. In concrete terms, this means for the Action Teams that they meet annually in GD:B exchange formats and share their concrete learning experiences with each other.

Application of humble government

The concluding stages consist of those used at the beginning to successfully establish the foundations of **humble government** in GD:B strategy development:

- Way-Forward Consensus agreement on direction, mission and overarching goals – is reflected in the strategic framework, aligned with BerlinStrategie 3.0 as the interdepartmental framework for Berlin's development up until 2030.
- Decentralized Problem-Solving different actors participate in the implementation of measures: actors can implement projects independently, based on the jointly developed Values Compass.
- 3. Experience-Based Learning regular feedback on the advancement of the process is reflected in the monitoring process mentioned at the beginning, which makes collective knowledge accessible to others.
- 4. Strategic Alignment revision of the fields of action and the Strategy Values Compass based on shared learning: the appropriateness of the Strategy Values Compass is surveyed annually among project teams, and the fields of action are reviewed to ensure that they are up to date.

