

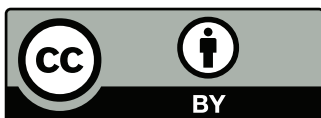
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Glossary

Given several proper names of processes that are described in this document, the following glossary provides an overview of all German designations and their corresponding English translations that were used.

German designation	English translation
Berichtswesen	Reporting
Bezirkliche Ersuchen	District Requests
BohrIS – Nachverfolgung	BohrIS – Tracking
BohrIS – Vollständigkeit	BohrIS – Completion procedure
BSW (Behörde für Stadtentwicklung und Wohnen)	Authority for Urban Development and Living
BUKEA (Behörde für Umwelt, Klima, Energie und Agrarwirtschaft)	Authority for Environment, Climate, Energy and Agriculture
Bürgerschaftliche Eingaben	Citizen submissions
Geologisches Landesamt	Geological State Office
IDM-Tool (Intelligentes Dialogmanagement)	Intelligent Dialogue Management Tool
Imputing-Verfahren	Imputing procedure
Infoboxen	Info boxes

German designation	English translation
Marktüberwachung	Market surveillance process
Physischer Posteingang	Physical inbox
Potentialanalyse	Potential analysis
Schriftliche Kleine Anfragen	Brief written inquiries
Senatsdrucksachenabstimmung	Senate printed matter coordination
Wärmekataster	Heat cadastre
Wissensmanagement	Knowledge Management

List of abbreviations

Abbreviation	
AI	Artificial intelligence
BSW	Behörde für Stadtentwicklung und Wohnen
BUKEA	Behörde für Umwelt, Klima, Energie und Agrarwirtschaft
GLA	Geologisches Landesamt
IDM	Intelligent Dialogue Management
ML	Machine learning

Current situation analysis

This deliverable is a diagnosis report and analysis of the current situation regarding the administrative processes of the authorities BUKEA and BSW. As a result, this deliverable presents a list of processes to be analysed in detail in the following deliverables (short list).

Executive Summary

This current situation analysis is the Deliverable 2 of the project “Determination of the potential for digitisation and harmonisation of processes of the City of Hamburg”. The structure of this document is as follows: Firstly, an introduction and a review of the existing situation at BUKEA (Behörde für Umwelt, Klima, Energie und Agrarwirtschaft) and BSW (Behörde für Stadtentwicklung und Wohnen) is given, including the analysis of the current situation regarding the digitalisation and automation of administrative processes, the assessment of the relevant legal framework and the identification of key problems and risks. This is followed by a presentation of the methodology used to identify processes with automation potential and the processes identified. The annex contains the organisational charts of BUKEA and BSW, the workshop presentation presentation, a list with the participants of the workshop, the list of stakeholders that were interviewed as part of the stakeholder interviews and the interview guideline that was used for these interviews.

Activity 2 consisted of six steps: the information gathering, in which all available documents to processes and systems were gathered, the definition of a set of processes to be supported by the Software and the review of the existing situation, by analysing the gathered documents and conducting 13 Stakeholder interviews. In addition, Activity 2 consisted of the exchange of information between the beneficiary and the EU authorities covered by the monthly reports, as well as the identification of business requirements and a workshop with stakeholders of the City of Hamburg held on May 19, 2022. The activity 2 includes three deliverables: the current situation analysis, the business process model and business requirement catalogue. These three deliverables were written collectively and complement each other's information.

It was decided to examine not only processes that can be automated using the IDM (Intelligentes Dialogmanagement) tool, but also processes that can be automated using other AI and statistical technologies. On the short list of 5 processes with automation potential, which were discussed and agreed upon in a workshop, are processes that can be automated with the IDM tool (or extensions) as well as with other technologies.

Introduction

This Deliverable is an analysis of the current situation at BSW and BUKEA. It contains an analysis of the current situation regarding the digitalisation of administrative processes as well as an assessment of the relevant legal framework and a description of identified process and project key problems and risks. The deliverable also includes an introduction and presentation of the methodology used to identify relevant processes that can be automated. In addition, the technologies and systems are described and the long and short list of processes with automation potential is presented.

The information for this Deliverable was gathered through desk research of documents and files provided by BUKEA (Behörde für Umwelt, Klima, Energie und Agrarwirtschaft) and BSW (Behörde für Stadtentwicklung und Wohnen) via a shared drive as well as detailed interviews at an operational level with stakeholders and process owners and a workshop conducted with representatives of the City of Hamburg.

Review of the existing situation at BUKEA and BSW

This chapter provides a review of the current situation at the authorities BUKEA and BSW.

This includes 1) an analysis of the current situation regarding the digitalisation and automation of administrative processes, 2) an assessment of the relevant legal framework and 3) the identification of key obstacles and challenges as well as their corresponding risks in the current situation.

Analysis of the current situation regarding the digitalisation and automation of administrative processes

In its Digital Strategy 2020¹, the City of Hamburg emphasises that a digital transformation and its resulting new forms of work and collaboration are essential to remain competitive. New digital and technologies that can automate processes are, according to this strategy, a fundamental pillar of the administration of the City of Hamburg. Citizens increasingly expect administrative services to be digital, available 24/7 and user-friendly, as they are already used to in their private environment.

Digitalising and automating administrative processes have also become a priority for the City of Hamburg due to the fact that a retirement wave and the demographic change in the next five years will aggravate the already existing staff shortage, according to the strategic interviewees conducted in Activity 1. In some departments, this would lead up to a 25 % decline in employees. Parallely and partly caused by the staff shortage, several interviewees point out that the workload in administrations increases continuously.

In this context, automation and digitalisation of administrative processes are conceived, according to the interviewees, as a possibility to reduce administrative burden, to optimise processes and to support employees in their task completion. The interviewees thereby highlighted several **priorities** of the City of Hamburg with respect to identifying automation potential:

- Focus on such processes that can be transferred to other fields of application
- Prioritising processes that are expected to yield to substantial efficiency gains
- Concentration on processes that can relieve employees from routine or rather unattractive tasks

In the light of the strategic objectives mentioned above, the authorities **BUKEA and BSW currently aim to digitalise various internal administrative processes as well as processes that include external stakeholders** such as citizens, enterprises and other authorities and administrations at a federal and a national level. It was further confirmed that various large Hamburg-wide digitalisation projects have been rolled out in order to accelerate the digitalisation of administrative processes. Such projects include ePob or the extension of existing software such as SAP. ePob is a project of the Senate Chancellery (Senatskanzlei) that aims the digitalisation, proceeding, classification and allocation of all incoming paper mail and will be piloted in Q4 of

¹ The City of Hamburg, 2020. Digitalstrategie für Hamburg.

2022 at BSW. The broader rollout is expected for Q3 of 2023. Other projects focus on assessing the possibilities of existing software such as SAP to scale or extend digital solutions. The large financial volume of that is currently invested in the digitalisation of these processes demonstrate the efforts to enhance the digital capacities of BUKEA and BSW. A process analysis conducted by a BUKEA official that was carried out parallelly to this Activity 2 analysed the digitalisation potential in depth.²

Digitization, as a **highest priority** at BUKEA and BSW, is being actively implemented and is a fundamental prerequisite for the automation of processes. The **automation of processes**, which is a **major priority** following digitization, is implemented wherever possible **as a second step**. However, no dedicated resources are currently allocated to the development of automated processes.

However, as was pointed out by many stakeholders that were interviewed on an operational level as part of Activity 2, the **degree of digitalisation of processes varies substantially** both across and within the departments of BUKEA and BSW.

Some departments such as ABH (Department for Building Regulations and Structural Engineering; Amt für Bauordnung und Hochbau) at BSW **confirm that all core operational processes have already been digitalised** several years ago. Regarding the automation of processes there are ongoing discussions about a potential use of AI-assisted building permit proceedings. Given the complexity and the high degree of decision-making of the processes at ABH as well as the legal framework, **no concrete automation project has been fostered so far**.

In several departments, the **use of e-mailing and generic mailboxes is an important digital tool** for the respective processes. Examples include the allotment process (Kleingartenbeschwerden), the info boxes (Infoboxen) and different types of inquiries such as parliamentary inquiries (parlamentarische Anfragen) and brief written inquiries (schriftliche kleine Anfragen) in both authorities. In these types of processes, data and information is forwarded via mail to the corresponding departments and stakeholders. The process of selecting the department or person in charge takes place via implicit knowledge or the use of internal organisation charts.

In several departments, **internal knowledge management** plays an important role in the fulfilment of tasks. As confirmed by the presidential department (Präsidualabteilung) at BSW, data and information is **currently stored on a drive** which, however, is **oftentimes only accessible for the respective unit** and does not allow cross-unit or even cross-department access of data that might also be relevant for other departments. Implicit and non-written knowledge are important to orientate oneself in the broadly branched folder structures.

Assessment of the relevant legal framework

Many administrative processes involve sensitive data or imply legally binding decisions. This includes adhering to legally binding deadlines and forms when processing and responding to requests, decisions, and permits. We therefore identified the relevant legal framework during the desk research and Stakeholder interviews, paying special attention to legal restriction.³ During the interviews conducted as part of Activity 2, few legal restrictions were mentioned in particular, which we would like to explain briefly in the following chapter.

We will further analyze and elaborate on these initial identified legal constraints during the creation of the use cases in Activity 3.

Identification of key problems and risks

The following chapter sets out our current understanding of the main risks and challenges associated with carrying out the project. These were identified based on the information gathered during the kick-off

² BUKEA- and BSW-internal project carried out by Sven Hauenstein (Head of Office Projects). The objective is to record processes within BUKEA and BSW that have digitalisation potential.

³ We however must exclude any formal legal advice as this would have to be implemented over a separate contract with our Deloitte Legal entity.

meeting, steering committee meeting as well as during the strategic and stakeholder interviews conducted during the activity 1 and 2.

The table below provides a structured list of obstacles and challenges and their corresponding risks regarding the automation of processes at BUKEA and BSW. The obstacles and challenges were clustered into five categories, namely 1) legal aspects, 2) technical aspects, 3) procedural aspects and 4) structural aspects.

Table 1: Key obstacles and challenges and corresponding risks regarding the automation of processes at BUKEA and BSW

#	Obstacles and challenges	Risks
1. Legal aspects		
1.1	<p>Obligation to constitutional jurisprudence</p> <p>Some processes are bound by constitutional case law (Art. 25 of the Constitution of the Free and Hanseatic City of Hamburg (HV)) to legally compliant deadlines and forms</p>	Due to the legal binding, it is mandatory to comply with these required deadline and forms and therefore minimize the risk of errors and possible slowdowns.
1.2	<p>Processes with sensitive information subject to strict data protection regulations</p> <p>Many processes involve the proceeding of sensitive personal data. Data protection issues are of particular relevance in these cases and the corresponding legal requirements must be complied.</p>	If sensitive personal data is involved, the risk of errors must be minimised. Further, the access to this information by unauthorised persons must be prevented. However, the procedures in place to meet these legal requirements can still lead to errors and unintended access to sensitive information.
1.3	<p>Legal setup and framework of BUKEA and BSW</p> <p>The legal setup and framework of both authorities has, by definition, a very narrow legal scope. Officials are in a subordination relationship (<i>Weisungsgebundenheit</i>).</p>	The legal setup entails more complex confirmation, approval and communication mechanisms and therefore contains an implicit risk of more intricate processes and digitization procedures.
2. Technical aspects		
2.1	<p>Media discontinuity and manual work</p> <p>Many processes are characterised by a high amount of manual work and media discontinuity. Examples include the use of different formats, scanning of documents to digitalise them and the switch between phone, mail, post letters, fax and other.</p>	The high degree of media discontinuity and manual work entails the risk that actuality, consistency, correctness and completeness of data cannot always be ensured.
2.2	<p>For cross-department processes almost no system integration</p> <p>The exchange of knowledge across departments is very limited as cross-department system integration (e.g. common storage, shared drives) are almost non-existent.</p>	The lack of system integration could lead delays and time lags in processing and in communication which, in turn, could lead to double work and inconsistencies.
2.3	<p>Exchange of data is cumbersome</p> <p>The exchange of data between departments and across authorities is cumbersome and laborious</p>	Despite manual controls, the risk of inconsistencies remains. Increased time expenditure due to the necessity of additional controls is a consequence.

#	Obstacles and challenges	Risks
	as there is little system integration and the exchange in many cases takes place via mail.	
2.4	<p>Concentration of communication via generic mailboxes</p> <p>For various processes, communication is bundled via generic mailboxes, where citizen concerns, general request and also sensitive information are received.</p>	The bundling of communication via generic mailboxes could lead to an information overload and a risk of incorrect forwarding of sensitive information.
2.5	<p>Large amounts of data cannot be sent via mail</p> <p>Some processes (such as approval processes) involve the transfer of large amounts of data. Currently, this data is mostly sent via mail or sent in a paper form. As there is a limit of 20 MB, large amounts of data cannot be sent via mail.</p>	This fact could slow down processes, entails the risk of losses of information and implies that information must either be printed out or other workarounds must be found.
3. Procedural aspects		
3.1	<p>Legal timeframe and tight deadlines</p> <p>Many requests for permits and applications from citizens and enterprises need to be delivered in a very tight timeframe (the night work permit is a particular example of such quick deliveries). Reaction cycles are becoming shorter, so decisions must be made quickly, even at night and on weekends.</p>	The tight deadlines that result from the legal timeframe involve the risk of extra hours and a high workload that could be prone to errors. The expected staff shortages in the coming years could further aggravate this risk.
3.2	<p>High degree of stakeholder involvement in most of the processes</p> <p>Many processes involve a high degree of stakeholder involvement, oftentimes from various units or across departments. This imposes protraction and a high degree of coordination especially in the case of complicated approval processes and when different tools are used.</p>	In processes with a high degree of stakeholder involvement there is a risk for process owners to obtain relevant information and a risk of higher efforts to collaborate efficiently.
3.3	<p>Complex and multifaceted processes</p> <p>Various processes (including approval processes regarding construction sites) have a high degree of complexity and/or involve long time horizons, sometimes over years.</p>	Such complex and multifaceted processes entail the risk of losses of knowledge, in particular when employees retire or when documentation takes place either implicitly or is largely paper based.
3.4	<p>Heterogeneous client groups</p> <p>Client groups of processes that involve external communication with citizens and enterprises are very heterogeneous with respect to their demands, need and level of digital knowledge.</p>	Heterogeneous needs, demands and levels of knowledge could lead to higher and more targeted efforts to proceed requests and could also involve (the combination of) more tools (paper-based, phone, mail, fax, scanned documents).
3.5	<p>Implicit and non-written knowledge of processes</p> <p>The knowledge about some processes (especially those that are not (fully) digitalised) consists mainly of implicit and non-written knowledge.</p>	If process owners retire or change departments, the stock of knowledge for a respective process could go lost.

#	Obstacles and challenges	Risks
	Written process charts and information about procedures are oftentimes nonexistent.	
4. Structural aspects		
4.1	<p>Complex organisation charts with many departments</p> <p>Both authorities BUKEA and BSW have a complex organisational structure with many departments, subdepartments and units involved.</p>	The complex organisation of both authorities increases the risk of protractions in processes, anonymity and slow knowledge transfers.
4.2	<p>Dynamics in the organisation tht involve changes in responsibilities</p> <p>At the beginning of, but also within a legislative period many lead and head roles and their responsibilities change.</p>	Dynamics in responsibilities could lead to losses of knowledge and protractions in communication regarding the person that replaces the role.

Source: Deloitte 2022

The following table provides an overview of the key obstacles and challenges and their corresponding risks that are inherent to the implementation of this project. This risk log will be updated throughout the project to ensure a continuous tracking of involved project risks, threats, and issues.

Table 2: Key obstacles and challenges and corresponding risks regarding our project

#	Obstacle and challenges	Risk
1	<p>Acceptance of employees</p> <p>Employees that are the process owners of processes with automation potential could perceive the project as a threat and hence reject it because their jobs could be at risk.</p>	Since the input and cooperation of the employees is of great importance for both the analysis and the automation of the processes, a rejection of the employees could delay and even jeopardise the project.
2	<p>Communication problems</p> <p>Close communication with process owners is required to schedule appointments (Interviews, Workshops, etc) and gather new information. The input from the process owners is crucial to understand and elaborate the processes.</p>	Lengthy and inconvenient communication channels with delayed scheduling pose a risk of not involving the process owners sufficiently in the project and of running into time delays due to scheduling difficulties.
3	<p>New and complex AI technologies</p> <p>The IDM (Intelligent Dialogue Management) tool that will be extended and applied (conceptually) to other use cases during the project as well as other AI technologies involve complex and new AI technologies.</p>	The conceptualisation of use cases with new technologies could entail the risk that the application might not be possible for the specific circumstances and that other unforeseen hurdles must be overcome.
4	<p>Compatibility of processes with automation potential in BUKEA and BSW</p> <p>Each process with automation potential that was identified during Activity 2 of the project should have a counterpart (i.e. a similar</p>	This procedure imposes the risk that for processes in one authority that might be very suited for an automation no counterpart in the other authority can be found. Such processes would therefore then – despite their potential – not be considered further.

#	Obstacle and challenges	Risk
	process) in the other authority to be accepted for the short list.	

Source: Deloitte 2022

Identification of relevant administrative processes

Introduction

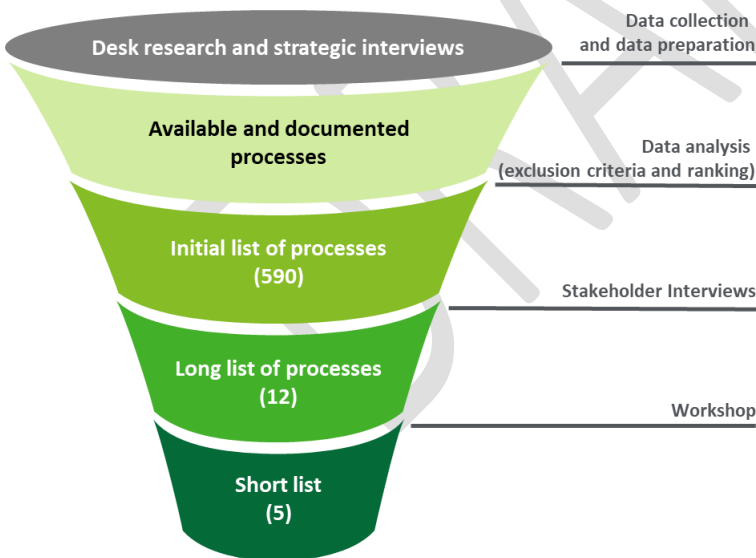
This chapter outlines our methodology in order to determine the short list of processes that will be analysed in detail in the upcoming deliverables. Thereafter, a detailed examination of the administrative processes both from a business and from a technological perspective will be presented. The chapter concludes with the presentation of the long list and the description of the short list of processes.

Methodology

In order to obtain the short list of five processes, a tailored methodology was developed. This methodology consists of a four-step funnel approach to screen and analyse the administrative processes of BUKEA and BSW.

The following figure provides an overview of this methodology that was used to determine the short list of processes.

Figure 1: Four-step funnel approach to determine the short list of processes



Source: Deloitte 2022

Building on the existing desk research and the strategic interviews that were conducted in Activity 1, the basis for the analysis of administrative processes consisted in various sources:

- **Aris:** software that is currently in use at the City of Hamburg to create process graphics. The software is used for processes with a need of visualization, e.g. for analysis / optimization purposes
- **ViFlow:** software that was formerly used to create process graphics. The software was used for processes with a need of visualization, e.g. for analysis / optimization purposes.

- **Potential analysis (Potenzialanalyse):** BUKEA- and BSW-internal project carried out by Sven Hauenstein (Head of Office Projects). The objective is to record processes within BUKEA and BSW that have digitalisation potential.

As a first step, the **data collection and data preparation available and documented processes** was conducted with the aim to collect and prepare all available (documented) processes within BUKEA and BSW that were gathered through the sources from Aris, ViFlow and the potential analysis (Potenzialanalyse). It is important to note that an overall overview (neither graphically nor as a textual description) does currently not exist at BUKEA and BSW. Having collected all available and properly documented processes, an **initial list of 590 processes** was created. In total, approximately 200 processes resulting from the excerpts from the provided documentation (Aris, ViFlow) and another approximately 390 processes from the potential analysis (Potenzialanalyse) were listed. A duplication check was conducted thereafter to delete duplicate processes.

In a second step, the **data analysis** and, as part of it, the application of the exclusion criteria was conducted. Each of these processes was checked whether a predefined exclusion criterion was applicable. In the case a process was classified with one or various of the six exclusion criteria, this process was not considered for further analysis. The exclusion criteria and their definition are listed in the table below.

Table 3: Preliminary exclusion criteria for evaluating the automation potential of processes

#	Criterion	Definition
1	No time criticality	The process is not time-critical (e.g. to be closed within a certain number of days)
2	Low volume	The process is not performed on a frequent cycle and does not involve a lot of manual labour
3	High complexity	The process is highly complex with both structural and functional as well as dynamic properties
4	Little relevance	The process is not relevant and important for the daily work of the City of Hamburg
5	Not properly defined	The process is not properly defined or changes frequently. The tasks performed in the process are not repetitive or processed in the same order, and use systems that change (frequently)
6	Not rule-based	A process in which employees do not follow a strict set of predefined rules with no discretionary decision-making

Source: Deloitte 2022

The remaining processes were ranked according to their relevance regarding automation potential. Therefore, scores between 0 and 10, with 0 being the lowest relevance and 10 being the highest were assigned.

In the third step, **stakeholder interviews** with process owners for the highest-ranking processes were conducted. In sum, 13 stakeholder interviews with stakeholders on an operational level from both BUKEA and BSW were conducted during April and May 2022. A specific interview guide with questions regarding the scope, volume, involved stakeholders and other details of the respective process as well as regarding the current situation was developed (see Annex).

In a fourth step, a detailed assessment of all processes mentioned in the stakeholder interviews was conducted using a predefined list of criteria (**long list process assessment using long list criteria**). The following table presents the long list criteria that were used to determine 12 processes for the long list. All processes on the long list fulfill these criteria at least to a high degree.

Table 4: Long list criteria

#	Criterion	Dimensions
1	Scalability of the process	Yes, no
2	Volume of the process	[in time dimensions]
3	Rule based process	Yes, no
4	Time saving potential	[in minutes]
5	Transferability of the process	Yes, limitedly, no
6	Relevance of the process for the authority	Low, medium, high
7	Potential for future use of the process	Low, medium, high
8	Complexity of the process	Low, medium, high
9	Time criticality of the process	Low, medium, high
10	Definition of the process	Yes, no

Source: Deloitte 2022

All long list processes were further examined along the following three dimensions:

1. The extent of process modifications to adapt the process to the existing Intelligent Dialogue Management (IDM) software that was developed in the context of the citizen letters project
2. The need to add functionalities to the IDM software itself
3. The potential to automate this process with another AI technology

In a fifth step, the **short list of processes with automation potential was determined**. Therefore, a workshop presentation (see Annex) that summarised the outputs of the steps that had been carried out so far was prepared. This presentation also included a preliminary suggestion of five short list processes by the project team. The aim of this workshop was to develop the **final short list of four to five processes** which will be analysed in the subsequent deliverables in more depth. During the workshop with participants from the Hamburg-internal steering committee (see Annex), all long list processes were discussed in-depth. The outcome of the workshop was a preliminary validated short list that was approved subsequently by the Hamburg-internal steering committee. All short list processes were discussed regarding their potential for automation with the (modifications and/or extensions of) the IDM tool or other AI technologies. The following table lists the short list criteria that were used to determine the short list.

Table 5: Short list criteria

#	Criterion
1	Expected reduction in workload
2	Scalability of the AI technology for other use cases and processes
3	Expected quality improvement
4	Technical feasibility of the automated solution
5	Procedural feasibility of the automated solution
6	Automation potential of the process: <ul style="list-style-type: none"> - IDM compatibility - Other low-threshold AI solution - AI use case

Source: Deloitte 2022

Further in-depth analyses of the short list processes will be conducted during the creation of the business cases in Activity 3 and the to-be model in activity 4.

Examination of administrative processes that could be automated

Assessment from a business perspective

The various administrative processes at BUKEA and BSW can, from a business perspective, be clustered into various subgroups. As resulted from our analysis and examination described in the subchapter on methodology, not all process groups are equally suited for automation. During the analysis of the administrative processes, it became clear that some process clusters are more suitable than others.

The following table provides an overview of process clusters and their suitability for automation that was developed during Activity 2.

Table 6: Process clusters

Process cluster	German translation	Suitability for automation
Approvals	Genehmigungen	Medium
Allocations of responsibility	Zuständigkeiten, Zuordnungen	High
Updates and analysis of data (e.g. in Excel)	Einpflegen und Analyse von Daten (z.b. in Excel)	High
Applications	Anträge	Medium
Requests	Anfragen	High
Completeness checks	Vollständigkeitsprüfungen	High
Subsequent requests	Nachforderungen	High
Creation of notifications	Erstellen von Bescheiden	Medium
Planning procedures	Planungsprozesse	Low
Plausibility and adequacy checks	Prüfungen auf Plausibilität und Angemessenheit	Low

Source: Deloitte 2022

Given the **varying degree of automation potential** of the different process clusters, the project team only focussed on those processes that are expected to have an automation potential that was at least ranked as medium.

Besides the suitability for automation, several **external factors** must be taken into consideration when assessing the business perspective.

- One important aspect refers to the **legal framework**, i.e. data protection issues and competencies of officials that cannot be delegated to AI technology. Approval processes and creations of notifications must therefore be considered with particular diligence as the setup of an AI technology could already be a legal grey area. A potential automation of those processes must therefore be analysed also regarding its potential legal consequences.
- Another factor refers to the involvement of **human decision-making within a hierarchic context**. Planning procedures as well as plausibility and adequacy checks are therefore processes that are both too complex and involve too much decision-making at various levels for an automation.

- The **involvement of external stakeholders** (such as other authorities, citizens and enterprises) oftentimes involves interfaces and the use of different tools as well as diverging levels of knowledge, linguistic expression and other. Processes such as applications and approvals that involve external stakeholders should therefore also be considered be reviewed thoroughly.

From a business perspective, processes that involve allocations, updates and analysis of data, completeness checks and subsequent requests are therefore particularly suited to be automated.

Assessment of the technologies and systems for automation of processes

During Activity 2, the project team also assessed technologies related to AI that could be used to automate the processes that were identified as suitable from a business perspective (see above). Seven technologies have been as particularly relevant in the context of these processes.

The following section describes the technologies and IT systems that can be used to automate the selected processes. A closer examination and use of the technologies will be examined in the course of Activities 3 and 4.

Table 7: Technologies and systems supporting the processes

Technology / System	Short description
IDM (Intelligent Dialogue Mangement) Workflow	<p>In an earlier project, the administration of the City of Hamburg, in cooperation with DG REFORM, developed an IT system, to support the processing of unstructured interactions with citizens, the so-called citizens' letters. This was subsequently elaborated for further use and renamed intelligent dialogue management (IDM). The IT systems are currently in production with the following building blocks: Search function, Rights administration, and determination of responsibility. An e-mail routing support as add on is planned.</p> <p>The overall metadata of the IDM tool includes mainly the information about the process, such as details, history, comments, and dispositions, participants, and attachments. The information that can be displayed with the IDM workflow are listed below.</p> <ul style="list-style-type: none"> • Details: Transaction number, Sender, Subject, received on, Response deadline, Release required, Sensitive information, Processor, Status, Priority. • History: What action, at what time, was performed by whom. • Comments and dispositions: Free text in comment form • Participants: who is authorized to participate in the process • Attachments: additional files <p>The IDM-Tool further contains an editor window for the responses and citizen letter, an operation overview and transparent work organization, a search function with database for closed processes and a transfer function to select the routing.</p>
Intelligent search: Dense Information Retrieval	<p>In our case, the information retrieval system is an internal search engine backed by modern technologies such as AI (Artificial intelligence) and ML (machine learning). It can be used asymmetrically, like a google search, by entering some keywords and finding relevant documents corresponding to the search query or symmetrically were e.g., a hole pdf document is used as search query to find similar documents. The dense information retrieval systems can be extended to search other documents as well. For example, an image can be used to find correpsoning texts or video files in the internal system. Intelligent search can deliver smarter results faster and provides a single point of access to enterprise content sources, allowing data to be enhanced, searched, and analyzed in both structured and unstructured formats.</p>

Technology / System	Short description
Dashboards	In information management, a dashboard is a graphical user interface used to visualize data. Commonly used tools in a Dashboard are the target-actual comparison, traffic light warnings and progress curves
Imputing	Missing values in Datasets can cause problems for many machine learning algorithms and can impact the quality of data. Therefore, it is good practice to identify and replace missing values. A popular approach for data imputation is to calculate a statistical value for each column (such as a mean) and replace all missing values for that column with the statistic. Imputed values can be an estimate or an implicitly derived value with no uncertainty.
Named Entity Extraction	Name entity recognition is a subtask of Natural Language Processing that seeks to locate and classify named entities mentioned in unstructured text into pre-defined categories such as person names, organizations, etc. With named entity extraction, it is possible to understand the subject or theme of a body of text and quickly group texts based on their relevancy or similarity.
Predictive Analytics	Predictive analytics is a branch of advanced analytics that makes predictions about future outcomes using historical data combined with statistical modeling, data mining techniques and machine learning.
Classification / Determination of responsibilities	Classification models are a subset of supervised machine learning and can be performed on structured or unstructured data. Classification is a technique where data is categorized into a given number of classes. The main goal is to identify the category/class to which a new data should be assigned. In this case, classification can be used for the determination of responsibilities.

Source: Deloitte 2022

Long list of processes with automation potential

After having conducted the process analysis and having obtained detailed information from the stakeholder interviews, the long list of processes was determined. This list contains processes from both authorities as well as processes with different business perspectives.

The following table contains the long list of 12 processes with an automation potential that was presented in the workshop with the Hambur-internal steering committee members.

Table 8: Long list of processes

#	Long list process (German denomination)	English translation	Process cluster	Organisational setting of the process ⁴
1	BohrIS – Vollständigkeit	BohrIS Completion procedure	Completeness check	BUKEA -> W -> W3 (Geologisches Landesamt)
2	BohrIS – Nachverfolgung	BohrIS Tracking	Subsequent requests	BUKEA -> W -> W3 (Geologisches Landesamt)
3	Bezirkliche Ersuchen	District Requests	Requests	BUKEA -> P (Präsidialabteilung)
4	Bürgerschaftliche Eingaben	Citizen submissions	Requests	BUKEA -> P (Präsidialabteilung)

⁴ A detailed organisational chart of BUKEA and BSW is provided in the Annex to this document.

#	Long list process (German denomination)	English translation	Process cluster	Organisational setting of the process ⁴
5	Senatsdrucksachen-abstimmung	Senate printed matter coordination	Allocation of responsibility	BUKEA -> P (Präsidentialabteilung)
6	Schriftliche Kleine Anfragen	Brief written inquiries	Allocation of responsibility	BUKEA -> P (Präsidentialabteilung)
7	Physischer Posteingang	Physical inbox	Allocation of responsibility	BSW and BUKEA
8	Marktüberwachung	Market surveillance process	Updates and analysis of data (e.g. in Excel)	BUKEA -> E1
9	Wärmekataster	Heat cadastre	Updates and analysis of data (e.g. in Excel)	BUKEA -> E1
10	Wissensmanagement	Knowledge Management	Data updates and data analysis	BSW -> P (Präsidentialabteilung)
11	Infoboxen	Info boxes	Allocation of responsibility	BSW -> V213 (Innerer Dienstbetrieb)
12	Berichtswesen	Reporting	Updates and analysis of data (e.g. in Excel)	BSW -> VR V2

Source: Deloitte 2022

Each of these processes was presented during the workshop and the short list recommended by the project team was presented and discussed. The feedback and comments of the workshop participants on the individual processes were discussed and recorded and are briefly summarized below.

There were general feedbacks on the scalability of the individual processes to other authorities, which will be investigated in more detail in the next activity. In addition, it was decided to find other BSW-specific processes for the 'BohrIs' process that could be automated using the same technologies. A few processes were identified (more on this in Deliverable 3) and the process is now called the 'Imputing Procedure' and is demonstrated using the BohrIs process as an example. For all of the five selected processes, further discussions will be held as part of activity 3 with the process owners in order to deepen further details such as volume, scalability etc.

Short list of processes with automation potential

After presenting and discussing the long list of processes in a workshop with stakeholders from the City of Hamburg (see Annex), a short list of five processes was agreed upon. This list contains processes with a high automation potential, as well as a high degree of scalability to other departments as well as other authorities within the City of Hamburg.

The following Table presents the 5 processes that were agreed on for the short list including a short description. These processes will be presented in detail in Deliverable 3.

Table 9: Short list of identified processes with short description

#	Process	Short description
1	Brief written inquiries (Schriftliche Kleine Anfragen)	Brief written inquiries are inquiries on public matters, which are addressed to the Senate by members of the Parliament. These inquiries are transmitted forthwith to the Senate and are to be answered in writing by the Senate within eight days.
2	Knowledge Management (Wissensmanagement)	The knowledge management describes a process, where officials from the unit P1 at BSW store, document and access information on a shared drive. This folder system can only be accessed by officials from this unit and has been maintained since 2005. As main activity of this process, officials access this folder system and try to extract relevant documents and information.
3	Info boxes (Infoboxen)	The info boxes are a generic mail address (funktionales Mailpostfach) that serves as a collection point for a wide variety of inquiries. The requests vary from daily topics on procurement procedures and budgetary requests to applications for tender procedures. Those inquiries are then forwarded to the relevant departments.
4	Imputing procedure (Imputing-Verfahren)	With regard to the general process "Imputing procedure", several processes were found in the course of the process evaluation, on the basis of which the AI-supported imputing procedure can be represented. For the short list and as well as for the illustration of this process in this deliverable, the process of drilling indications was selected. This process describes the various steps involved in processing and completing the of drilling indications.
5	Senate printed matter coordination (Senatsdrucksachenabstimmung)	Senate printed matter coordination are issues of fundamental importance, which are decided by the Senate. These issues are regulated on the Senate's Rules of Procedure (<i>Geschäftsordnung</i>) and are addressed by the respective departments of the authorities (e.g. in the case of ordinances or draft laws). This is a completely internal process.

Source: Deloitte 2022

Annex

The annex includes the following elements:

- organisational charts of BUKEA and BSW
- the list of stakeholders that were interviewed as part of the stakeholder interviews
- the interview guideline for these stakeholder interviews
- the participants of the workshop
- the workshop presentation

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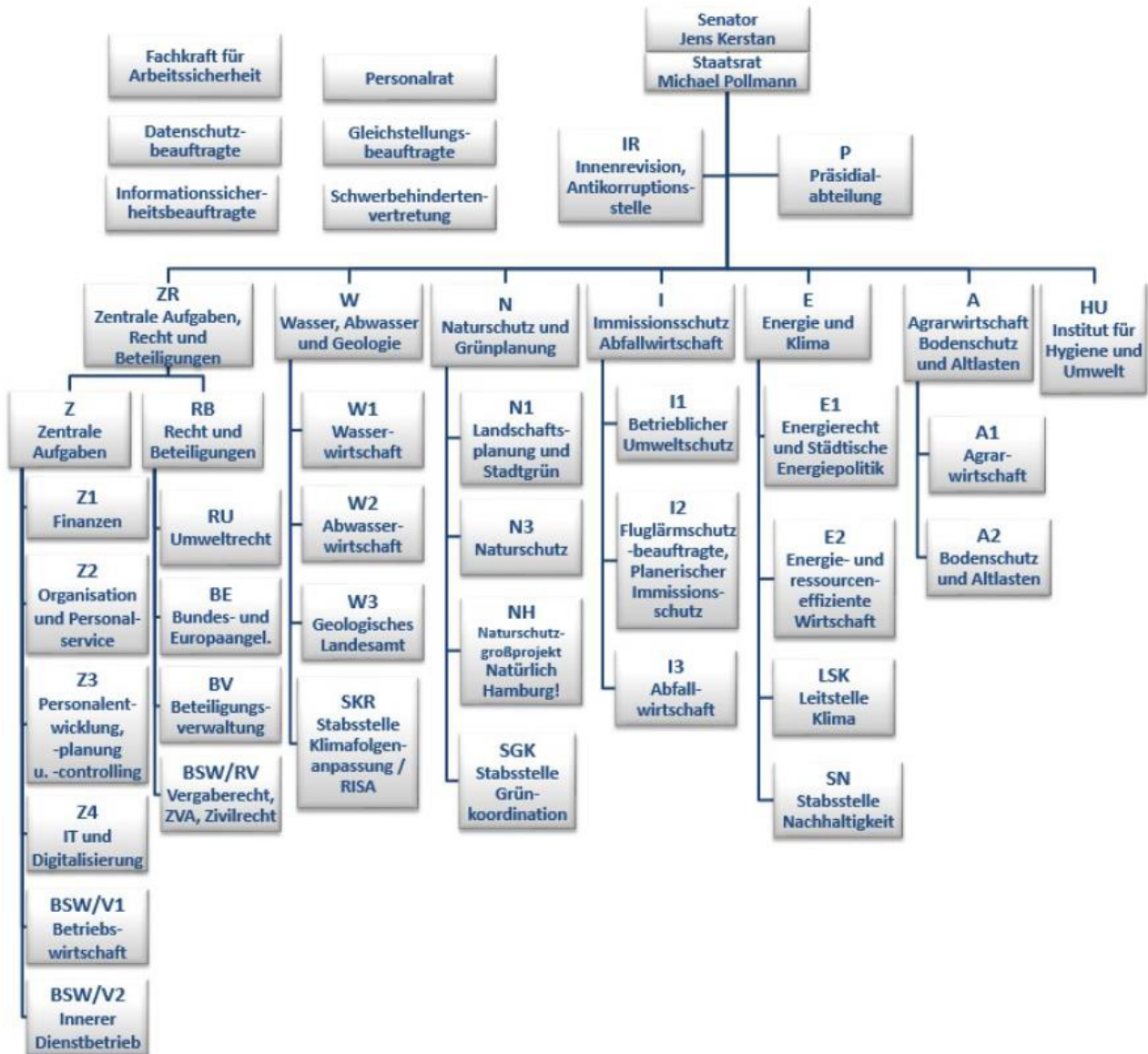
Organisational charts of BUKEA and BSW

Given several references to departments within BUKEA and BSW in this document, high-level organisation charts from BUKEA and BSW are provided below.

Organisational chart of BUKEA

The following illustration provides an overview of the organisational structure of BUKEA (Behörde für Umwelt, Klima, Energie und Agrarwirtschaft) as of April 2022.

Figure 2: Organisational chart of BUKEA

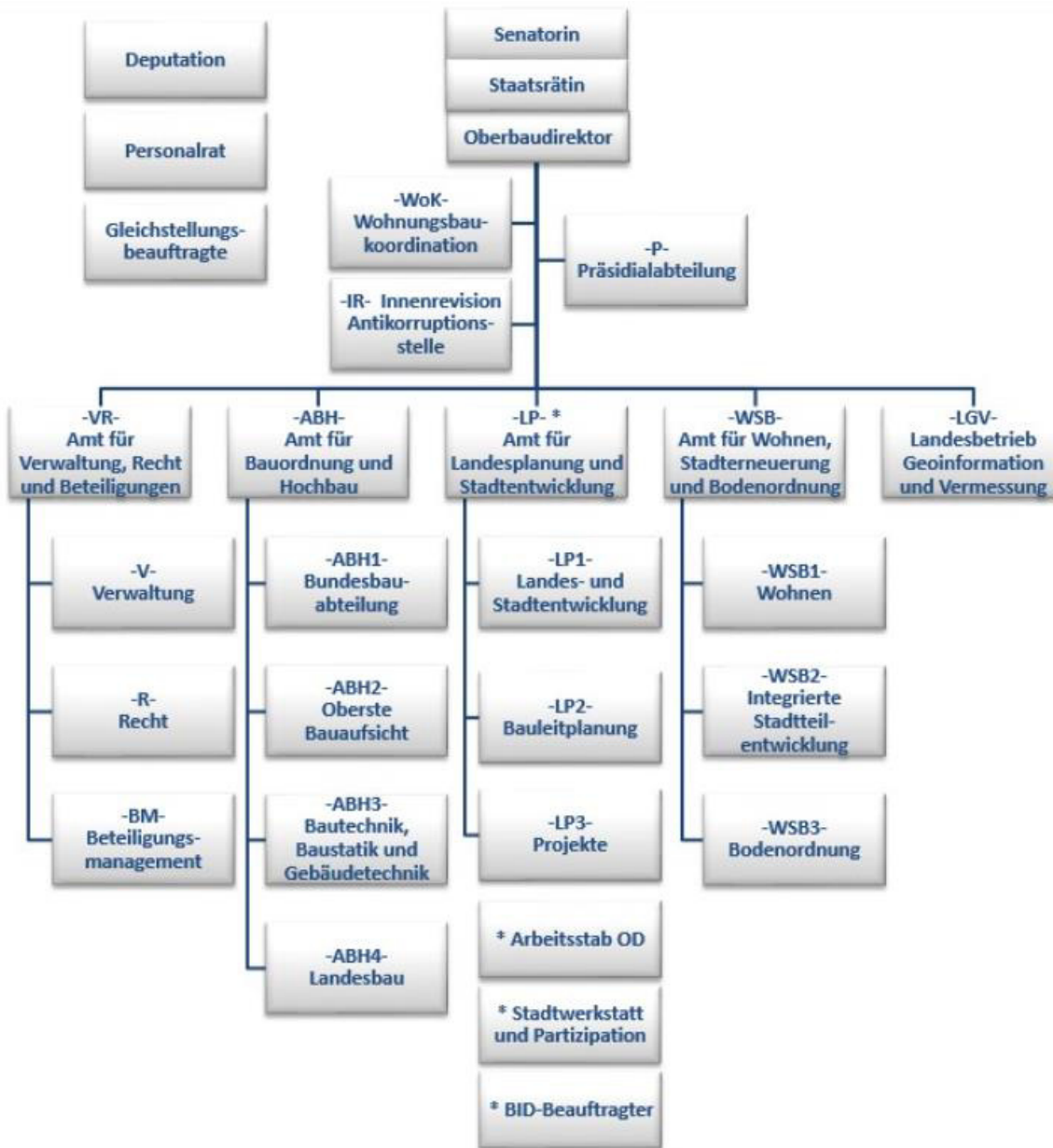


Source: City of Hamburg, FHH Portal (2022).

Organisational chart at BSW

The following illustration provides an overview of the organisational structure of BSW (Behörde für Stadtentwicklung und Wohnen) as of April 2022.

Figure 3: Organisational chart of BSW



Source: City of Hamburg, FHH Portal (2022).

List of interview stakeholders

The following table provides a list of stakeholders including their functions in the respective departments within the City of Hamburg that were interviewed as part of activity 2. Processes marked in **bold** are short list processes. The list is presented chronologically according to the time the interview took place.

Table 10: List of stakeholder interviews in Activity 2

#	Names	Function	Processes
1	Nicolai Schulz-Witte, Dionysios Arsenis, Jan Skillandat	Head of Digitalization Staff Unit (<i>Leiter Stabsbereich Digitalisierung</i>), ABH201 (BSW)	<ul style="list-style-type: none"> · Citizen submissions (<i>Bürgerschaftliche Eingaben beantworten</i>) · Issue statement approval IS (<i>Aussagegenehmigung erteilen IST</i>) · Process claim notification (<i>Schadensmeldung bearbeiten</i>) · Create distribution plan (<i>Aufteilungsplan erstellen</i>)
2	Thomas Haupt, Susanne Aarburg, Johanna Berckhan	State Geological Office (<i>Geologisches Landesamt</i>), BUKEA	Drilling indications (<i>Bohranzeigen</i>)
3	Caroline Lorenz, Angela Henkies	Service provider, not directly employed by BSW, BSW	Review disbursement request for release (<i>Auszahlungsanforderung zur Freigabe prüfen</i>)
4	Kristina Höcker, Gerrit Osterrath, Dragen Petrikic	Presidential Department (<i>Präsidialabteilung</i>), BUKEA	<ul style="list-style-type: none"> · District Requests (<i>Bezirkliche Ersuchen/Anfragen</i>) · Citizen submissions (<i>Bürgerschaftliche Eingaben</i>) · Senate printed matter coordination (<i>Senatsdrucksachenabstimmung</i>) · Brief written inquiries (<i>Schriftliche kleine Anfragen</i>)
5	Christiane Wichmann, Martina Spriewald	Head of Unit V213 - Internal Service Operations, Department V Administration (<i>Verwaltung</i>) BSW, also responsible for internal service boxes, among others	Info boxes (<i>Infoboxen</i>)
6	Britta von Hollen	Head of Unit N140, Department N1 Landscape Architecture and Green Cities (<i>Landschaftsplanung und Stadtgrün</i>), BUKEA	Complaint letter allotment area (<i>Beschwerdeschreiben Kleingartenbereich</i>)
7	Tobias Meyer	Head of Unit Internal Operations (<i>Innerer Dienstbetrieb</i>), BSW	Physical inbox (<i>Physischer Posteingang</i>)
8	Jan Hüttemann	Officer at Z412 Project and Process Management Office (<i>Projekt- und Prozessmanagement-Office</i>), Office for Central	<ul style="list-style-type: none"> · 51 Permit (<i>51er Genehmigung</i>) · Application procedure in general (<i>Antragsverfahren allgemein</i>) · Water permits (<i>Wasserrechtliche Erlaubnisse</i>)

#	Names	Function	Processes
		Tasks, Legal Affairs and Participations (<i>Amt für zentrale Aufgaben, Recht und Beteiligungen</i>), BUKEA	<ul style="list-style-type: none"> Leaf blower (example) (<i>Laubbläser (Beispiel)</i>) Air quality plan (<i>Luftreinhalteplan</i>)
9	Sven Hauenstein	Head of Unit Z410 - Project and process management office, Department Z 'Central Tasks (<i>Zentrale Aufgaben</i>), BUKEA	<ul style="list-style-type: none"> 51 Permit (<i>51er Genehmigung</i>) Application procedure in general (<i>Antragsverfahren allgemein</i>) Water permits (<i>Wasserrechtliche Erlaubnisse</i>) Leaf blower (example) (<i>Laubbläser (Beispiel)</i>) Air quality plan (<i>Luftreinhalteplan</i>)
10	Fabian Preiß	Head of Unit P1, Presidential Department (<i>Präsidialabteilung</i>), BSW	Knowledge Management (<i>Wissensmanagement</i>)
11	Harald Lenuweit	Head of Unit V2 Internal Operations (<i>Innerer Dienstbetrieb</i>), Department V Administration (<i>Verwaltung</i>), BSW	Reporting (<i>Berichtswesen Haushalt</i>)
12	Matthias Erhard	Officer at E1 (<i>Energierrecht und Städtische Energiepolitik</i>), E – Energy and Climate (<i>Energie und Klima</i>) BUKEA	<ul style="list-style-type: none"> Market surveillance process (<i>Marktüberwachung</i>) Energy transition in private households (<i>Energiewende in den privaten Haushalten</i>) Heat cadastre (<i>Wärmekataster</i>)
13	Andrea Stöckmann	Planning (<i>Planungsstab</i>) Administration Office, Senate Chancellery (<i>Senatskanzlei</i>)	Brief written inquiries (<i>Schriftliche kleine Anfragen</i>)

Source: Deloitte 2022

Interview guideline

The following interview guideline is a translation from German to English and was sent to the stakeholder interviewees as a basis for the interviews.

Introduction to the project

The Free and Hanseatic City of Hamburg Administration designed, in collaboration with DG REFORM, in a previous engagement an IT system to support the processing of unstructured interactions with citizens, referred to as citizen letters. This prior engagement was collaboratively developed with a team from Deloitte and addresses all the essential processes and elements defined specifically for the processing of citizens letters. Following the experiences of this pilot project, the scope of determining the potential and automation and digitisation of processes should now be extended to further administrative processes of the City of Hamburg. Concretely, this project aims to identify and map the relevant structures, processes, information flows and information, communications, and technology (ICT) systems involved. To this end, the ICT system currently in production is to be reused for other, more 'generic' tasks and processes.

Background information on the interviews

Interviews will be conducted as part of the project with the aim of taking into account the expertise and opinions of a wide range of stakeholders and gathering as much information as possible about the administrative processes. The interviews will be conducted to identify those processes that have a high potential for automation.

The questions listed below reflect our information needs within the project. However, not all questions need to be covered, they serve more as "conversation support" and focal points may vary depending on the background, expertise and prioritization of the interviewee. Interviews will be conducted via telephone or video conferencing (e.g. Skype for Business, Zoom, Microsoft Teams). The length of the interviews will be approximately 60 minutes.

The information transmitted during the interview will be treated confidentially and the knowledge gained will only be recorded anonymously. The personal data that are collected to conduct the interviews are processed in accordance with the GDPR.

Interview questions

Part A: Introduction

1. About your background: What role and activities do you have in the administration of the City of Hamburg? What specific points of contact / tasks do you have in relation to this project?
2. Please describe the most significant and/or largest internal process groups and workflows (e.g., approvals, application processes, etc.) in your office/area. Do you recognize any particular patterns or groupings, e.g. by type or subject area of processes, that you consider particularly relevant?

Part B: Questions about the individual processes

We would like to discuss with you in detail the process(es) mentioned by Jan Billhardt.

3. Stakeholder
 - Which and how many stakeholders (areas and people) are involved in these processes?
 - Who is the contact person (technical) for this process?

4. With regard to the processes you have just mentioned, we still have various detailed questions per process:
 - Is the process scalable? (yes, no)
 - What is the volume of the process (in hours, how many repetitions, what frequency)? (Answer in hours)
 - Is the process rule-based? (yes, no)
 - What potential savings in minutes could an automation solution yield? (Answer in min)
 - Is the process transferable to other areas? (yes, conditionally, no)
 - How relevant is this process in general? (low, medium, high)
 - How relevant will this process be for the future? (low, medium, high)
 - How time critical is this process? (low, medium, high)
 - How complex is this process? (low, medium, high)
 - Is the process well defined? (yes, no)
5. Which IT tools have been used for this process so far?
6. What challenges do you see in automating this process??
7. What other reasons speak in favor of automating the process? - Qualitative reasons (less error-prone, 'troublesome' processes), cost reasons, personnel reasons, political/strategic reasons, other reasons
8. Do you already have possible solution ideas for automating this process?

Part C: General questions (short)

1. Which additional processes from your field of activity are particularly labor-intensive and/or repetitive and would therefore also have automation potential?
2. What changes should generally be made through the automation and digitization of processes? Which aspects do you consider particularly important here?
3. How can you measure efficiencies or efficiency gains in your specific area of activity?
4. The following table shows the preliminary list of evaluation criteria that will be used to assess the automation potential of various processes. How do you assess the suitability and relevance of the individual criteria? Which would you add?

Evaluation criteria	Suitability	Relevance
Expected time savings		
Expected cost savings		
Technical feasibility/implementability		
Procedural feasibility/implementability		
Degree of automation of the solution		
Others, if applicable:		

Participants of the workshop on the determination of the short list

The following table provides a list of stakeholders including their functions in the respective departments within the City of Hamburg that were participants of the workshop on the determination of the short list as part of activity 2.

Table 11: List of workshop participants (determination of the short list)

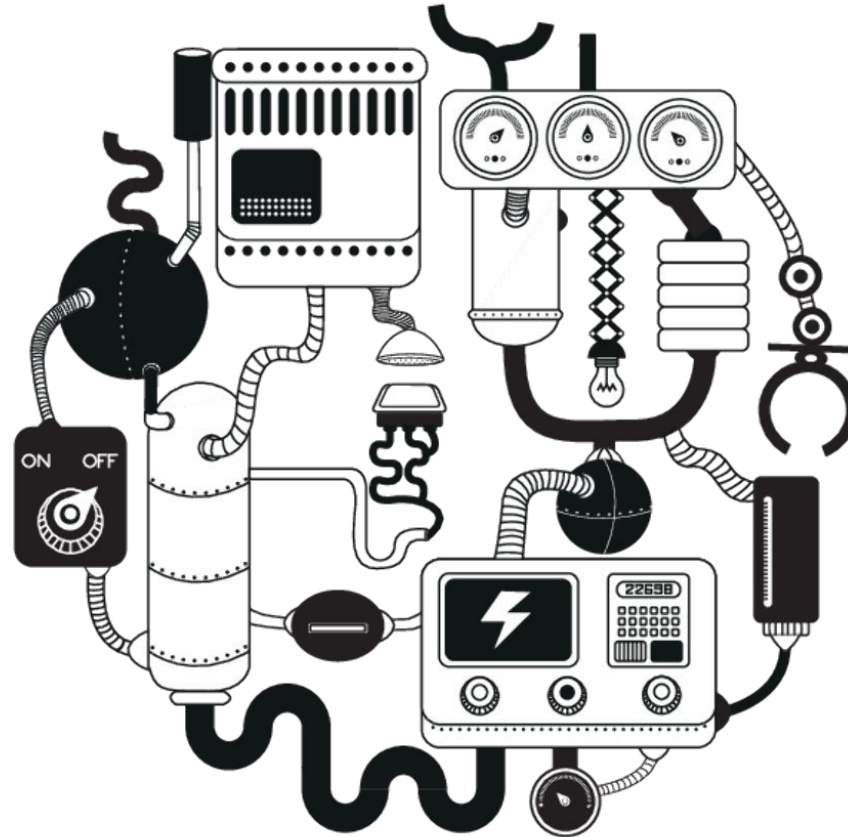
Name	Function	Department within the City of Hamburg
Jan Billhardt	<ul style="list-style-type: none"> Head of unit Z43 "Innovation and Information Management, IT Finance" 	BUKEA and BSW IT Service
Dipl.-Ing. Mathias Bock	<ul style="list-style-type: none"> Chief Digital Officer (BUKEA and BSW) Member of the City of Hamburg-internal project steering group 	BUKEA and BSW IT Service
Dr. Nadine Bräuninger	<ul style="list-style-type: none"> Head of Administration ZR 'Central Fields of Activity, Legal, Holdings' (<i>Amt für zentrale Aufgaben, Recht und Beteiligungen</i>) Member of the City of Hamburg-internal project steering group 	BUKEA
Dr. Annika Busse	<ul style="list-style-type: none"> Head of Unit 'Digital automation of the administration' Deputy Chief Information Officer (CIO), Member of the City of Hamburg-internal project steering group 	Senate Chancellery (Senatskanzlei)
Rüdiger Junge	<ul style="list-style-type: none"> Head of Administration VR (Amt für Verwaltung, Recht und Beteiligungen), BSW 	BSW
Dr. Maik Möller	<ul style="list-style-type: none"> Head of Department Z Central tasks (<i>Zentrale Aufgaben</i>) 	BUKEA
Normann Röder	<ul style="list-style-type: none"> Head of Department V (<i>Verwaltung</i>) BSW Representative member of the Digital Management Board of the City of Hamburg 	BSW

Source: Deloitte 2022

Presentation of the workshop on the determination of the short list

The following slides are the output slides that were presented on 19th May 2022 for the determination of the short list.

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Workshop zur Erstellung der Short-List

Projekt: "**Determine the potential for digitization and harmonization of administrative processes**"

Arbeitstitel: Bürgerbriefe Wiederverwendung

19.05.2022

Agenda

Uhrzeit	TOP
15:30	Vorstellungsrunde
15:35	Übersicht über das Projekt Automatisierungspotenziale und Ziele des Workshops
15:40	Vorstellung der Longlist
15:40	Methodik
15:45	Die 12 ausgewählten Prozesse
16:00	Vorstellung der Shortlist
16:00	Methodik
16:05	Die 5 vorgeschlagenen Prozesse
16:10	Moderierte Diskussion und Feedback
16:50	Ergebnissicherung und Nächste Schritte

Deloitte.







Das Projekt Automatisierungspotenziale - Übersicht

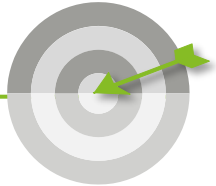
Ziel des Projektes ist es, Potenziale zur Automatisierung von Verwaltungsprozessen der Stadt Hamburg zu identifizieren. Unser Projekt ist nach fünf Aktivitäten strukturiert:

Projekt Übersicht

- 01** Projektauftritt
- 02** „Ist-Zustand“ und Prozessmodell
- 03** Erstellung eines Business Cases
- 04** Definition des „Soll“- Modells & einer Roadmap
- 05** Projektabschluss & Kommunikationsmaterial

Ziele des Workshops

-  Vorstellung der Methodik und Longlist
-  Vom Projektteam empfohlene Shortlist vorstellen und diskutieren
-  Ihre Rückmeldungen und Kommentare zu den einzelnen Prozessen diskutieren und aufnehmen
-  **Prozesse der Shortlist validieren und Vorschlag für den Lenkungsausschuss festlegen**



Methodik und Longlist

Anhand von Recherchen, Interviews und Screening-Kriterien haben wir Prozesse mit Automatisierungspotenzial identifizieren und eine Longlist an Prozessen mit automatisierungspotential erstellt

01 Initiale Liste an Prozessen erstellen

Initial desk research

- Aris
- Viflow
- Potentialanalyse

Stakeholder Interviews

- 13 Interviews mit Stakeholdern von BUKEA und BSW

+

Initiale Liste an Prozessen

02 Screening

Kriterien:

- Zeitkritisch
- Volumen
- Komplexität
- Relevanz
- Gut definiert
- Regelbasiert

➔ **Analyse der "Show-Stopper" für die Automatisierung**

03 Long List

Die Interviews der initialen Liste wurden bewertet und auf eine **Longlist mit 12 Prozessen** zusammengefasst:

low	Further consideration needed	Likely to automate
high	Not suitable	Further consideration needed
	many	little

1. BohrIS - Vollständigkeit

2. BohrIS - Nachverfolgung

3. Bezirkliche Ersuchen

4. Bürgerschaftl. Eingaben

5. Senatsdrucksachen-abstimmung

6. Schriftl. Kl. Anfragen

7. Phys. Posteingang

8. Marktüberwachung

9. Wärmekataster

10. Wissensmanagement

11. Infoboxen

12. Berichtswesen

Longlist - Prozesse

Folgende Prozesse haben wir für die Longlist gesammelt, diese möchten wir gerne einzeln kurz darstellen

#	Prozess	Verantwortliche	Kurze Beschreibung	Lösungsidee	IDM
1	BohrIS - Überprüfung Vollständigkeit der Daten	Thomas Haupt	Überprüfung ob die im Rahmen der Bohranzeigen eingegangenen Daten zu Bohrung, Koordinaten, Schichten vollständig sind und die Beschreibung anhand der Proben, die dem GLA zugesandt wurden, stimmt. Aktuell per Mail und Telefon	Workflowmanagement durch IDM, Datenkontrollen (Imputing-Verfahren)	Ja
2	BohrIS - Nachverfolgung eingegangener Daten	Thomas Haupt	Neuer Prozess ab Sommer 2022 im Zsgh. mit dem Geologiedatengesetz: Abgleich und Überprüfung der eingegangenen/nicht eingegangenen Daten sowie verschiedene Eskalationsstufen; manueller Zugriff muss vorhanden bleiben (fachliche Überprüfung ganz am Ende oder ganz am Anfang)	Workflowmanagement durch IDM	Ja
3	Bezirkliche Ersuchen / Anfragen	Kristina Höcker; Fabian Preiß	Verschiedene Ersuchen und Anfragen, Volumen variiert, gesetzliche Fristen; Dringlichkeit gering	Zuständigkeitsfindung	Ja
4	Bürgerschaftliche Eingaben	Kristina Höcker; Fabian Preiß	Prozesse teilweise schon digital (Weiterleitung und Freigabe), Zeitkritikalität ca. 4-6 Wochen, Volumen ca. 1x pro Woche (BUKEA) + 1x pro Woche (BSW), Senatskanzlei etwas mehr	Zuständigkeitsfindung	Ja
5	Senatsdrucksachenabstimmung	Kristina Höcker; Fabian Preiß	Volumen gering und einmalig im Inhalt (alle paar Jahre evtl. Aktualisierung); komplett interner Prozess; Idee: wenn Vorblatt ausgefüllt wird – in komprimierter Form die Textblöcke wiedergeben (Zusammenfassung, zb. Zielsetzung etc.)	Key Information Extraction, Template-Erfüllung, Workflow-management durch IDM	Tw.

Longlist - Prozesse

Folgende Prozesse haben wir für die Longlist gesammelt, diese möchten wir gerne einzeln kurz darstellen

#	Prozess	Verantwortliche	Kurze Beschreibung	Lösungsidee	IDM
6	Schriftliche Kleine Anfragen	Kristina Höcker; Fabian Preiß	Volumen BUKEA & BSW: je ca. 10 pro Tag, Volumen Senatskanzlei: generell 50-70 Anfragen in der Woche; sehr politisch und rechtliche Rahmenbedingungen; Zeitkritischer Prozess: vorgegebene 8 Tage bis Beantwortung, Zuständigkeitsprüfung evtl. schon bei Senatskanzlei anfangen	Zuständigkeitsfindung, intelligente Suchmaschine für schon beantwortete SKAs (Dense Information Retrieval), Workflowmanagement durch IDM	Tw.
7	Physischer Posteingang	Tobias Meyer	ePob zur Digitalisierung als Grundlage, ca. 5 Personen bei physischem Posteingang, Volumen: 8-15 Kisten an Briefen; 3-4 min. max. pro Brief. Regelbasierter Prozess: Manuelle Weiterleitung nach Stichwörtern und Adressanten. Skalierbar auf die ganze Verwaltung der Stadt HH.	Angeschlossen an ePob, Document Understanding (Key Information Extraction, für Fälle die noch nicht von ePob abgedeckt werden)	Nein
8	Marktüberwachung verbrauchsel. Geräte	Erhard Mathies, Thomas Ringleben- Fricke	Prozess zur Effizienzüberprüfung und Qualitätssicherung von Elektrogeräten, 2-3 Personen für Hamburg (Länderebene), 6 Kampagnen pro Jahr. Prüfschritte aus einem Katalog werden in einer Datenbank gespeichert, dort könnte man evtl. ein Workflow einführen. Schriftwechsel mit Hersteller und Händler bei Mängelbeschreibungen.	Monitoring, Scraping, Workflowmanagement, Statistische Verfahren zur Repräsentativität der Stichproben	Tw.
9	Wärme-kataster	Erhard Mathies	Kein Prozess, eher eine Idee: Wo könnte man noch Fernwärme anbieten? Anhand von Daten und Gebäude erkennen, wo diese noch nicht angeschlossen sind und Effizienzen berechnen. Unterschiedliche Arten von Quellen verbinden (vorhandene Daten der Behörden und öffentliche Daten)	Predictive Analysis	Nein

Longlist - Prozesse

Folgende Prozesse haben wir für die Longlist gesammelt, diese möchten wir gerne einzeln kurz darstellen

#	Prozess	Verantwortliche	Kurze Beschreibung	Lösungsidee	IDM
10	Wissensmanagement	Fabian Preiß	Ordnersystem auf dem Laufwerk, seit 2005 gepflegt; Zugriff/Extraktion von relevanten Informationen	intelligente Suchmaschine (Dense Information Retrieval), Dashboard	Tw.
11	Infoboxen	Christine Wichmann, Martina Spriewald	Mailadresse: Sammelbecken für unterschiedlichste Anfragen (digitaler Eingang), Weiterleitung an relevante Abteilungen; ca. 1000 Anfragen pro Jahr, während Corona eher weniger; Anfragen von tagesaktuellen Themen über Vergabeverfahren, Haushaltsanfragen, Verfahrensvereinfachungen (Hinweis: Bürgerbriefe an die Infoboxen werden an die Software Bürgerbriefe/IDM-Tool weitergeleitet.)	Named Entity Extraction, Klassifizierung, Zuständigkeitenfindung	Ja
12	Berichtswesen	Harald Lenuweit	Das Haushaltsberichtswesen wird jeden Monat per Excel verwaltet, überprüft und aufgearbeitet. Hoher manueller Aufwand bei guter Digitalisierbarkeit und Fehlerreduktion.	Dashboard (Soll- Ist Abgleich, Ampelwarnungen, Verlaufskurven); Evtl. Predictive Analytics (Zeitreihenanalyse)	Nein

Short List

Ziel der Short List war die Identifizierung von 4-5 Prozessen, die in den nachfolgenden Deliverables intensiv analysiert werden.



Diskussion und Feedback

Wir möchten mit Ihnen nun zunächst die Auswahl der Short List diskutieren.

Diskussionsfragen	Rückmeldungen und Kommentare
Stimmen Sie den Auswahlkriterien zu? Welche Kriterien fehlen Ihnen ggf.?	Als weitere wichtige Kriterien wurden genannt: <ul style="list-style-type: none">- Skalierbarkeit für die Stadt Hamburg (Thema für Gesamtstadt und ITD)- <i>Wirtschaftlichkeit / Effizienz</i> – Bewertung der Wirtschaftlichkeit dann im Nachgang (Business Case); quantitative Metriken, um das zu messen (Paolo Kalkhake reicht dies nach)
Stimmen Sie der Liste an vorläufig ausgewählten Prozessen zu? Wenn ja, warum? Wenn nein, welche Prozesse hätten Sie stattdessen auf der Short List?	<ul style="list-style-type: none">- BohrIS: sehr BUKEA-spezifisches Thema – abklären ob skalierbar- Senatsdrucksachenabstimmung (da Menge sehr relevant, Problem jedoch: einmaliger Vorgang – Drucksache geht nur einmal in Bearbeitung) + SKA – nochmal mit der Senatskanzlei abklären bzgl. Details und Volumen der Prozesse- Berichtswesen: bzgl. Haushaltswesen passiert schon viel, vorher abklären, was es bereits gibt und was bereits in Planung; Bedenken bzgl. Abstimmung, auch mit Haushaltsabteilung – nochmal informieren- Wissensmanagement: sehr unterstützenswert, da skalierbar hinsichtlich Umfang und Themen (z.B. Bilddatenbank)- Infoboxen: Thema Anfragen (per Mail) könnte zunehmen; abklären, ob spezifisch für BUKEA/BSW oder noch weiter skalierbar; mit Prozessverantwortlichen nochmal sprechen (auf operativer Ebene) bzgl. Akzeptanz
Weitere Diskussionspunkte: Grundsätzliches	<ul style="list-style-type: none">- Wenige BUKEA/BSW-spezifische Themen (bis auf BohrIS) in der Short List, da Aufwand, Abstimmung etc. bei unspezifischen Prozessen sehr hoch Hierzu Mathias Bock: Verwaltungsprozesse war Fokus des ersten Projekts, BSW/BUKEA als Treiber/Vorreiter bzgl. anderer Behörden- Doppelarbeit vermeiden; vorher abklären, ob/was es bereits schon gibt

Ergebnissicherung

Folgende Prozesse wurden im Workshop für die Short List vorgeschlagen:

#	Festgelegte Prozesse der Short List
Prozess 1	Schriftliche Kleine Anfragen
Prozess 2	Wissensmanagement
Prozess 3	Infoboxen – nochmal mit Prozessverantwortlichen sprechen bzgl. Akzeptanz
Prozess 4	<i>Berichtswesen? – vorher mit Haushaltsabteilung abstimmen, ob schon ähnliche Projekte</i>
Prozess 5	<i>Senatsdrucksachenabstimmung? – nochmal mit Prozessverantwortlichen sprechen bzgl. Volumen und Umfang</i>
Prozess 6	<i>BohrIS? – nochmal mit Prozessverantwortlichen sprechen bzgl. Skalierbarkeit</i>

Grün: Zustimmung von allen Workshopteilnehmenden

Kursiv: Vorläufig auf die Short List aufgenommen vorbehaltlich weiterer Rückfragen/Abstimmung

Nächste Schritte

Die laufende Aktivität 2 beinhaltet die Fertigstellung der Deliverables 2, 3 und 4 und die Abgabe dieser Deliverables zum 24.06.2022.

Projektübersicht

- 01 Projektaufakt
- 02 „Ist-Zustand“ und Prozessmodell
- 03 Erstellung eines Business Cases
- 04 Definition des „Soll“- Modells & einer Roadmap
- 05 Projektabschluss & Kommunikationsmaterial

Deliverable	Beschreibung	Abgabetermin
Deliverable 2 Ist-Situation	Der Bericht zur Ist-Situation (Bestandsaufnahme) dient der Beschreibung der Status-quo Situation der Prozesse der BUKEA und BSW.	24.06.2022
Deliverable 3 Ist-Geschäftsprozessmodelle	Ein Bericht, der das Ist-Geschäftsprozessmodell mit der Detaillierung der Verwaltungsprozesse der Stadt Hamburg für die ausgewählten Prozesse, im BPMN Format, darstellt.	24.06.2022
Deliverable 4 Anforderungskatalog	Im Anforderungskatalog werden formale und inhaltliche Anforderungen an das zukünftige Konzept festgehalten.	24.06.2022



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