

From A to Z:
Exhibition Vocabulary
ON HOW WE CREATE SCIENCE
AND TECHNOLOGY EXHIBITIONS

CosmoCaixa



We want to use this document to share our way of thinking and doing things. We want to present our way of working, our way of understanding the factual universe that goes into thinking up and producing exhibitions on science and technology through this lexicon.

We want to contribute towards raising awareness about a way of operating and understanding the world of exhibitions. We are making an effort to make our daily operations and our planning more objective and we are presenting the tools that make up this ecosystem, the invisible structures behind our working procedures.

A lexicon may seem merely cold and analytic. But, in practice, when applied it can become emotions and knowledge. This is the challenge we face every time we create an exhibition. We always keep the visitor in mind.

This collection functions like a dictionary and, therefore, you can start reading it from different starting points, following different paths. Some people may prefer to read it from A to Z, while others may prefer to wander, doing away with the order of the words, mapping it out in a different way.

We have chosen the lexicon format in order to avoid preaching and setting down models. The intention is for this to be a model that is open to more terms and to reinscribing through practice.

ACCESSIBILITY:

A fundamental part of design processes is about ensuring that the contents of an exhibition are physically accessible to all visitors, regardless of their characteristics. In fact, the intention that an exhibition does not exclude anyone involves all the processes from the beginnings of the exhibition project — it is not just related to the design work. Therefore, accessibility cannot be identified as a kind of final phase that is superimposed on a finished exhibition, it must be identified as a working philosophy that permeates the entire exhibition project from the start.

ADAPTATION:

Although all the development phases of an exhibition are fully interconnected, design work should be carried out based on a particularly broad context that will enable a broad overview of the exhibition process as a whole. This is an extremely important aspect to make the design — and the later production — fully adapt to the actual use and operation that the exhibition will later have, so that all challenges are fully resolved, from those related to the purely museographic objectives to those that are related to technical issues and related to assembly, transportation and maintenance.



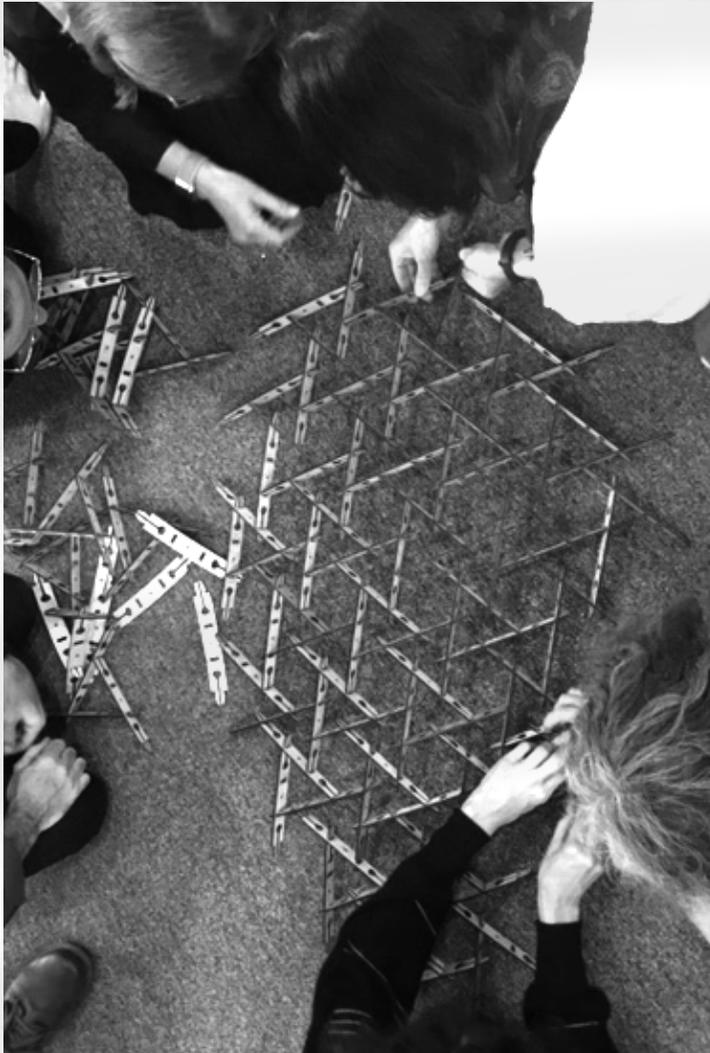
AS BUILT:

This is the latest version of the executive design document of an exhibition, which includes possible changes or revisions that have arisen during the production process.

AUTHENTIC/REAL PIECE:

Also called a real object, this is one of the resources of the museographic language based on tangibility. In science exhibitions, real pieces are a communication resource that provides assets with a profound narrative sense due to its authentic characteristics. Unlike art exhibitions, in science exhibitions real pieces are not necessarily characterised by their uniqueness, they are characterised because they have a message to communicate and are therefore defined more as means than ends in themselves.





AUXILIARY RESOURCES:

In exhibitions, resources can be used from other languages that have no relationship with the communication assets of tangible objects and phenomena, such as audiovisuals, multimedia developments or graphics. All of these will appear in an exhibition in a balanced way in the form of support resources to the tangible experience, meaning that they should not have excessive prominence or change from means to ends.

BARLEY GRAIN FINISH:

A finish that is given to the sharp edges of a piece of furniture so that it is safer in the context of an exhibition in the event of possible accidental impacts. The name is a metaphor that refers to the bevelled shape of a grain of barley.



BRAINSTORMING:

This is a meeting or series of preliminary meetings that are held based on the scientific documentation, in order to identify which contents are most suitable for the exhibition or which ones can be most effectively dealt with using the resources of the museographic language. These meetings take place in a shared environment that is deliberately uninhibited and open and involve various members of the project team in a context in which conversation is the key factor.

CONTENT(S):

This term – used in the singular or plural – includes all the concepts that, regarding a certain themed idea, will finally be included in an exhibition based on the communication resources of the museographic language. The contents must be evaluated and selected based on the scientific documentation in accordance with several criteria, depending on the educational objectives proposed for the audience that have been determined, and based on the museum permeability of these contents and on the technical and financial viability. It is advisable that the various contents that comprise the content of an exhibition have a meaning that is as concise, independent and complete as possible, because this will be an enormous help in the later work of developing the relevant museographic solutions.



CONVERSATION:

The dialogue that the members of a visiting group maintain between themselves during the visit experience and about it is one of the most significant products that an exhibition can aspire to, and it is the process where many of the intellectual and emotional assets of the visit experience reside. The communicative capacity of an exhibit has one of its most important indicators in the quantity and quality of the conversation it inspires. Exhibits capable of inspiring long periods of conversation among the members of a visiting group are also called APE (*Active Prolonged Engagement*) exhibits.

CURATOR:

This is a term imported from the world of art exhibitions. In scientific exhibitions, this concept identifies a respected expert in the subject of the exhibition who will globally represent the project with both a technical and social approach, with an especially important role in directing all types of public communication work about the exhibition. Sometimes the curator might have participated in the proposal and inspiration for the exhibition project, and might even play a role in various museum processes in the staging of the exhibition. In some cases the curator might do the work of the scientific advisor, although these are different roles that must be clearly differentiated.

DECLARATION OF INTENTIONS:

A brief, concise text that summarises the general vision of an exhibition. It must contain the general description and the basic criteria that will be used to select the contents. It can also define the intended social purposes and offer some brief descriptions about the possible museographic solutions that the exhibition will use. In the declaration of intentions it is also possible to indicate some preliminary ideas about the justification for the exhibition project in particular (which will express the fundamental reasons that motivate and vindicate the project) and about its frame of reference (which will determine the physical environment of the exhibition, its social reach and its duration). The declaration of intentions also has a recruitment purpose, because it will have to include the selection processes for various managers and decision makers.

DESIGN:

Considering that the exhibition has a physical, inhabitable existence in space, the design is a fundamental aspect of the staging of an exhibition that precedes the production processes. The design work is carried out by taking as a reference the museographic solutions that have been set out in the script and broadly described in the museographic element sheets. Design should never be confused with the concept of museographic solutions: they are different phases in the development of an exhibition that require differentiated professional assets. It is also not advisable that the same supplier do the design and then the later production work.



DISMANTLING:

When an exhibition reaches the end of its life cycle, its possible re-use or recycling must be planned. In the former case, the life cycle of an exhibition can be extended in the context of a museum or institution that wishes to continue using it, meaning that it can be sold or donated as a whole immediately after its retirement. If this is not the case, the elements of the exhibition must be categorised separately for their correct recycling or re-use, avoiding the option of provisional storage, which often ends up being a way of extending — with extra costs— the final future disposal.



DISPLAY CASE:

A term that refers to a piece of furniture that is specially designed so that what is inside can be seen. In science exhibitions, display cases are used in cases where it is necessary to exhibit an object that fulfils all the intended communicative functions by just displaying its external appearance, and that at the same time needs to be protected.



EXECUTIVE DESIGN:

Associated with the museographic element sheets, this document explains the technical perspective in detail. This exhaustive document is what will be used in the later production phase and is typically used in the tendering for the production process.

BASIC DESIGN:

A document that details the design and structure of the exhibition based on the contents, and that could be said to have a certain similarity to what the script represents in the development of contents. A sophisticated solution is provided for the physical structure of the exhibition, for the issues related to graphics and for the layout of spaces. It also determines the size of the elements and the external appearance of the furniture and museum elements.

EXHIBIT:

This term describes the minimum communication units of a science exhibition, that has full meaning and total conceptual independence and is formed as the final result of a museographic solution. It is essential to remember that the word 'exhibit' defines an element from a museographic and not technical point of view. Depending on its characteristics, an exhibit can be:



Visual: this involves pieces from a collection or other elements that do not require handling by visitors.

Interactive: this is based on electromechanical mechanisms and attempts to create a tangible phenomenon. This normally requires physical handling by visitors.

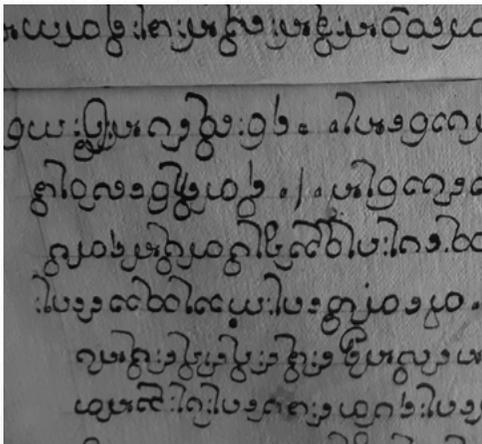
Multimedia: prepared based on various digital technology resources supported by a programming process that mixes photos, videos or sounds and that allows visitors to make a certain use of the programme. Virtual reality, augmented reality, motion graphics, animated infographics or stop motion.

Audiovisual: an exhibit that presents an audiovisual product using images and sounds, either recorded or created digitally, which have a determined duration and do not allow visitors the chance to handle them

Despite this classification, we should stress that exhibits can also appear in mixed formats. In these cases, they can be called installations.

FACSIMILE:

A particular case of a model applied to graphic elements.



FINAL REPORT:

The final task of an exhibition project takes the form of an extensive and exhaustive document that contains all the information about the process: from the scientific documentation to the plans of the basic and executive designs, also including the script, preliminary script and all the information related to the production. This document also includes the exhibition catalogue, the report on evaluation work, the financial documentation, a photographic or video report and all the original files relating to the graphic design, both for the exhibition and the communication material. As most exhibitions are projects with a limited duration, it is therefore very important, if possible, to preserve everything related to its staging, so that the exhibition can be used as a contribution to the know-how of the organisation and be used in various ways for future projects.

FINISHES:

A basic characteristic to be determined in design is related to the formal aspects of an exhibition. The same exhibition can be staged by using a wide variety of production processes – based on very diverse materials, for example –, something that will have a decisive influence on some aspects, such as the final cost. Although from a museographic point of view some exhibitions might have practically the same meaning, finishes should be well defined in the design processes, based on criteria such as the duration of the exhibition, the intended public image and its resistance to possible transportation or touring.



FOCUS GROUP:

This is one of the most effective qualitative evaluative resources of what are called self-report resources. This consists of organising a meeting in which a group of visitors participate simultaneously — normally between four and eight visitors, although this number is flexible — who are interviewed together by a suitably trained moderator. In this shared conversational context, enriched communicative dynamics are produced that, when properly directed and analysed, can offer information that is especially relevant concerning the impact of an exhibition.

GRAPHICS:

This term generally describes all the work related to the graphic design required for the staging of an exhibition, and that is generally organised as a differentiated part within the overall design processes. Graphics include work such as the graphic design of the exhibitions logo, the signs, the wall texts, the placards for exhibits and the graphic products required in communication, and they produce final artwork that will make it possible to carry out the necessary production processes. We should stress that graphic resources are an auxiliary asset of an exhibition and therefore they should not play an essential role.



HUMILITY:

The required characteristic for all evaluation activities of any scientific exhibition. It is accepted that the museographic experience is especially sophisticated and complex both at an intellectual and emotional and social level, and this can be seen in the context of profound interrelation with other intellectual life experiences. Therefore the evaluation of the impact of a museum on its visitors will always be a complex task and will have to involve a high degree of abstraction. However, science museums, although admitting the intrinsic complexity of the museographic experience, never cease in their work to find out as much as possible about it.

INDICATOR:

In the context of the evaluation of an exhibition and in order to verify the actual attainment of the specific objectives that were initially proposed for the exhibition, it is necessary to identify a series of associated observable external manifestations during exhibition visits, something that is directly related to the measurable nature of a specific objective. It is necessary to bear in mind that indicators will be more complex in terms of identification and measurement the more ambitious or sophisticated the specific associated objective is.

INTERACTIVITY:

This is a term from the first experiential science museums of the 20th century (called *interactive science museums*) and it was based on the aim to present sciences in a different way to traditional science collection museums, which became, to a certain degree, *one way*. This word was originally often associated only with the concept of *handling*, despite the fact that *interactivity* is not just a physical phenomenon but also a mental and emotional phenomenon, the context of which is a socially shared experience that takes place in a museum. Nowadays, contemporary science museums are identified as eclectic spaces using a variety of resources, which include elements from science collection museums. This, together with the use of the word *interactivity* in many other disciplines, has meant that this term is losing space and use in the context of contemporary science museums.



LAYOUT:

The transfer of the exhibition plan to the floor of the exhibition room at full scale. Masking tape stuck to the floor is usually employed to determine exactly where the various exhibits and elements of the exhibition will be placed, in order to achieve a suitable layout.

LIGHTING:

Physical spaces are of special importance in a museum experience, which, to a large extent, will be determined by the immersivity that the museum ambiances and spaces allow, meaning that visitors can enjoy immersive experiences from a physical, emotional and intellectual point of view. In this work, adequate, controlled and well-maintained lighting plays an essential role that goes far beyond supplying the light required to see, and is related to the special capacity of light to create spaces, highlight areas and intensify experiences, and provide a significant connotation of intimacy, seduction and attractiveness to an exhibition.



MAINTENANCE:

This is the name for the technical support that must be planned and confirmed so that an exhibition does not suffer deterioration compared to its original condition. This is extremely important — particularly when an exhibition is going to undergo very exhaustive use or frequent transportation — and requires personnel who are particularly specialised and with broad training in various technical disciplines, especially when an exhibition has interactive exhibits.



METAPHOR:

In contemporary science museology, the metaphor is a resource of the museographic language that consists of evoking a tangible phenomenon by using elements — that are also always tangible — that represent or evoke it without attempting to replace it, and which then lead to a specific kind of interactive exhibit. As an example we can point to the famous *Tornado* exhibit, which was developed by its creator Ned Kahn (a collaborator on *Exploratorium*) as a metaphor for the meteorological phenomenon of a real tornado, created by using artificial fog and carefully dispersed air currents.

MODEL:

This is another fundamental resource of the museographic language that is also characterised by being tangible, although this time it always represents a real element without any attempt to replace it. Although this term can be used metonymically to describe several kinds of tangible recreations based on the representation of real objects, models are preferably related with elements that change the scale of real objects that are too large or too small to be perceptible (e.g. the model of a paramecium on a scale of 1: 100).



MONITORING:

This is a technique employed in the evaluation of exhibitions, which consists of accompanying a visitor or group of visitors on their tour, discreetly observing their experience in the exhibition and making notes about the tours, stopping points and other aspects of a visit. Monitoring absorbs many resources, but it offers very comprehensive information for the analysis of an exhibition in relation to their various audiences.

MUSEOGRAPHIC ELEMENT SHEETS:

Each museographic solution is described, including all museographic and, as far as possible, technical details, to provide the later design phase with the guarantees of offering all the available information.



MUSEOGRAPHIC SOLUTION:

One of the key moments of the work of the museum team is the process of translating the selected contents into the museographic language, in order to create various museographic solutions, which will later be included in the design and production phases. The development of museographic solutions is based on the resources of the museographic language, which are related to tangible objects and phenomena, which are the assets that characterise the museum experience and that comprise the core business of museums as a contemporary means of communication. The process for the development of high-quality museographic solutions requires the application of intense, well-documented creative processes, which can take a long time with the quality of the museographic experience depending on their results, and, with this, the relevance and success of an exhibition. Good museographic solutions are not fantasies or sudden inspirations and have their basic foundation in their development while bearing in mind the objectives and the audience, particularly observing the aspects related to inclusivity.

MUSEUM R&D&I:

This concept describes all the development work concerning the museographic language possibilities that are established in a museum. Indeed, museographic solutions do not have to be conceived immediately, as they sometimes require research and development work that is suitable for their conceptual and technical resolution that can last several months. Before beginning any museum R&D&I work it is necessary to use resources to check that there is not something that has already been developed, whether on the market or in other exhibitions or museums, which in most cases would make it unnecessary or inappropriate to start an *ad hoc* R&D&I process, because of the special resources that are required.

This work is especially intense when concerning the preparation of interactive exhibits that represent tangible phenomena, because in these cases museum research takes the form of various electromechanical technological processes. In these cases it will be necessary to quantify the project globally, and then divide it into various technical elements that will be resolved separately. Once assembled as a whole, the prototype of a machine that can be configured as a museum exhibit can be created, to be used in the

exhibition room by the public to produce a certain museographic experience. The scheduling of the adjustments that the device requires for its usability and the resolution of its resetting (the return of the machine to its initial conditions after each use), are also fundamental aspects to be resolved. After passing a trial period at the R&D&I laboratory, the machine can be installed in the exhibition room, where it will undergo a second trial period of both technical and museum tests, now in contact with its real users, and will finally be configured in this case as an interactive exhibit. The regularly performed R&D&I work is related to the social relevance of an exhibition; it is key to the overall museographic influence of a museum and strongly defines it, and it can contain the attributes of a real own brand in various aspects.

We should stress that museum R&D&I is not just limited to processes for the development of interactive exhibits; it also describes all the work for the development of a museographic language in relation to its various resources.

OBJECTIVES:

Also in the context of the prior strategic analysis, it is necessary to determine, regarding scientific culture, what the best and most suitable content the exhibition can offer to the target audience, always in accordance with the educational needs that have been identified for this audience. These objectives can be of two kinds: general objectives (that express overall intentions) and specific objectives (that indicate concrete intentions and that must be measurable, practicable and with a defined timeframe), bearing in mind that each general objective may lead to several associated specific objectives. These specific objectives will also be key for organising the evaluation.

OBSERVATION:

Observation techniques make it possible to evaluate the experience of visitors in the exhibition room without them noticing. Using this system it is possible to discreetly observe various aspects of the visit experience, making it possible to discover very useful indicators, such as the time that visitors spend in front of a certain exhibit, or aspects of the usability of exhibits that can be handled. In later analysis, these indicators will make it possible to obtain conclusions about the impact of an exhibition on visitors.



PLACARD:

This is a term that comes from the world of art exhibitions. Placards in science exhibitions are a resource of exhibits that, by using a text or graphics, makes it possible to provide basic information. Placards should have a limited length and seek a balance that makes it possible to provide sufficient information about the nature of the exhibit and its possible handling, but without being excessively explicit, in order to also create visitor exploration spaces.

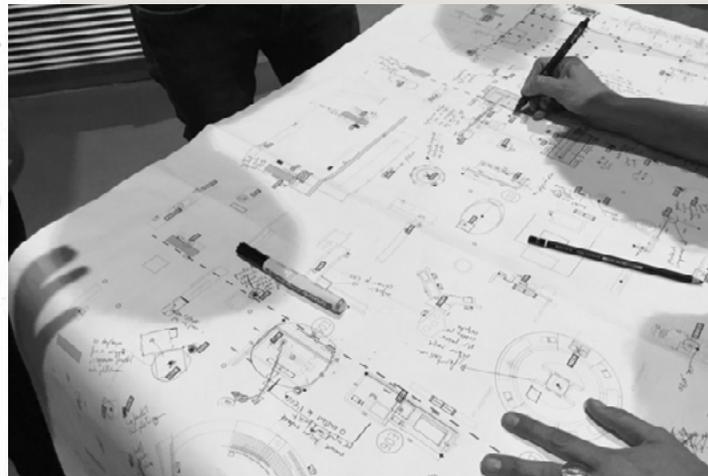
PRE-ASSEMBLY:

The final validation of an exhibition project might require prior and complete assembly, the same as if it were open to visits by the public. This prior assembly — which is generally performed in a non-museum space — makes it possible for managers who have to direct the validation process to enjoy a visit experience that is identical to the experience that will be offered on the day of the inauguration.



PRELIMINARY DESIGN:

This is the first document that is used in the design and could be said to have a certain similarity to what the preliminary script is to the development of contents. Due to influences by the architecture sector, it is sometimes also called a document of ideas or a concept and represents a preliminary approach to the exhibition from an architectural, spatial and graphic design perspective, proposing some preliminary solutions for guidance purposes.



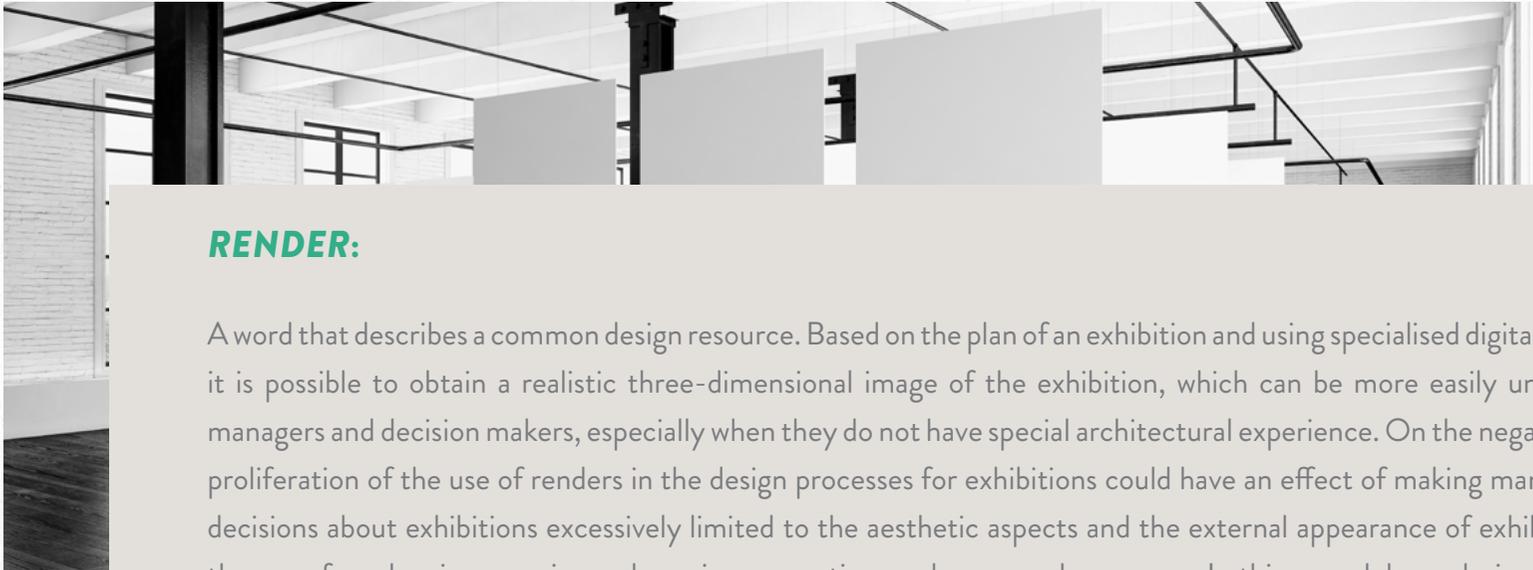
PRELIMINARY SCRIPT:

A document that contains exhaustive strategic information about the exhibition, such as objectives, the audience, justification and the frame of reference. It also includes information about the contents of the exhibition and, in particular, it defines its structure, organising it into sections and sub-sections. We should emphasise that this organisation of an exhibition into sections and sub-sections does not need to be physically confirmed in the exhibition room, but above all it should have a conceptual purpose, with the ultimate aim of facilitating the suitable layout of the content.

PROPOSAL:

The first step in the staging of an exhibition, normally based on an analysis of the audience and objectives. This is the first concept about the subject or title of an exhibition project. The proposal will lead to the declaration of intentions.





RENDER:

A word that describes a common design resource. Based on the plan of an exhibition and using specialised digital technology, it is possible to obtain a realistic three-dimensional image of the exhibition, which can be more easily understood by managers and decision makers, especially when they do not have special architectural experience. On the negative side, the proliferation of the use of renders in the design processes for exhibitions could have an effect of making many important decisions about exhibitions excessively limited to the aesthetic aspects and the external appearance of exhibitions. Also, the use of renders is expensive and requires many time and personnel resources. In this regard, large design firms have a considerable advantage because in a tendering process they can offer more and better renders to clients than those that a small firm can afford. This therefore runs the risk of not adequately valuing a good design project prepared by a small firm because in these cases it cannot afford to prepare renders of such high quality. In this respect it is advisable to limit the number and characteristics of the renders that can be provided, particularly in tendering processes, in order to maintain the same conditions for all participants.

When the function of renders is taken to the extreme, they can be replaced by tangible scale mockups that represent an exhibition in complete detail, in order to ensure that senior decision makers understand the perfection of the design's characteristics.

REPLICA/ REPRODUCTION/MOCKUP:

A particular case of a model that recreates a real element while trying to retain its fidelity.

SCENOGRAPHY:

A particular case of a model when inhabitable spaces are recreated on a real scale.



SCIENTIFIC ADVISOR:

A qualified person who accepts the responsibility of ensuring the scientific rigour of the contents of the exhibition, although they do not need to have museum experience. It is important to stress that exhibitions have two types of rigour: scientific rigour — which is about the scientific content and which is ensured by the scientific advisor — and museum rigour — which is about the exhibition as the product of a language and which consists of ensuring a relevant exhibition product that fulfils the social and educational objectives proposed for a particular exhibition. The museum team and not the scientific advisor handles this latter type of rigour, and it is as important as the scientific rigour; in fact, part of the success of an exhibition lies in exploring ways that will make it possible for both types of rigour to coexist.

SCIENTIFIC DOCUMENTATION:

A document provided by the scientific advisor that contains exhaustive and rigorous — but also suitably processed and organised — scientific information about the subject of the exhibition for its use in the museum project. This is a text with an educational tone that is accessible and will enable the exhibition team to identify the appropriate concepts to be conveyed in the exhibition in accordance with the social objectives of the exhibition and also depending on how they match the resources of the museographic language, which configure the *corpus* of the exhibition contents. Not all the scientific documentation will necessarily be included in the exhibition.

SCRIPT:

An exhaustive document that is fundamental for the later design and production phases, and that details the concepts that the exhibition intends to convey, including the respective museographic solutions, usually employing a double entry table.



SERVUCTION:

This is a neologism from the world of management that is used to refer to the production processes of a service, not of a product. An exhibition must be staged on two different levels: on one hand, it is a product that must be produced and, on the other, it is a service that must be ‘servucted’. It should be remembered that an exhibition project does not end when it is opened, rather this is the exact moment when the journey of an exhibition begins in the extent of the service that it aspires to offer. Servuction must consider various operational challenges related to external communication, the attraction and the management of various types of visitors or the administration of the educational project that might be aimed at certain audiences, such as schools or families.

SLOTTED HOLE:

An elongated hole that is usually made in a flat piece of metal. A slotted hole is typically made on the bed of an engine that has to transmit its rotation by means of a belt in an interactive exhibit. In this case, the slotted hole will make it possible to fix the engine using bolts at precisely the correct point, so that the tension of the belt is correct.



TANGIBILITY:

The museographic language is based on a series of assets related to reality, whether objects or phenomena. What characterises and makes a visit to an exhibition or museum unique is the chance to come into contact with different types of perceivable realities that comprise the special nature of the museum experience. Science museums were originally based on the tangibility of an object above all else (collections); science museums in the 20th century were based on a phenomenon (interactive experiences). Nowadays, museums seek approaches that can be used to combine the tangibility of both objects and phenomena, so that they can create a total museum experience.



THE AUDIENCE:

Prior to the conceptualisation of an exhibition, the characteristics of future visitors or beneficiaries must be identified in as much detail as possible, in the context of a strategic analysis that will precede any executive work. The aim of this work is not to *select* a certain audience, it is to clearly identify the audience that will have a special interest in attending a certain exhibition in particular, regardless of the likelihood that the exhibition may in the end be visited by a very diverse audience.



TOURING EXHIBITION:

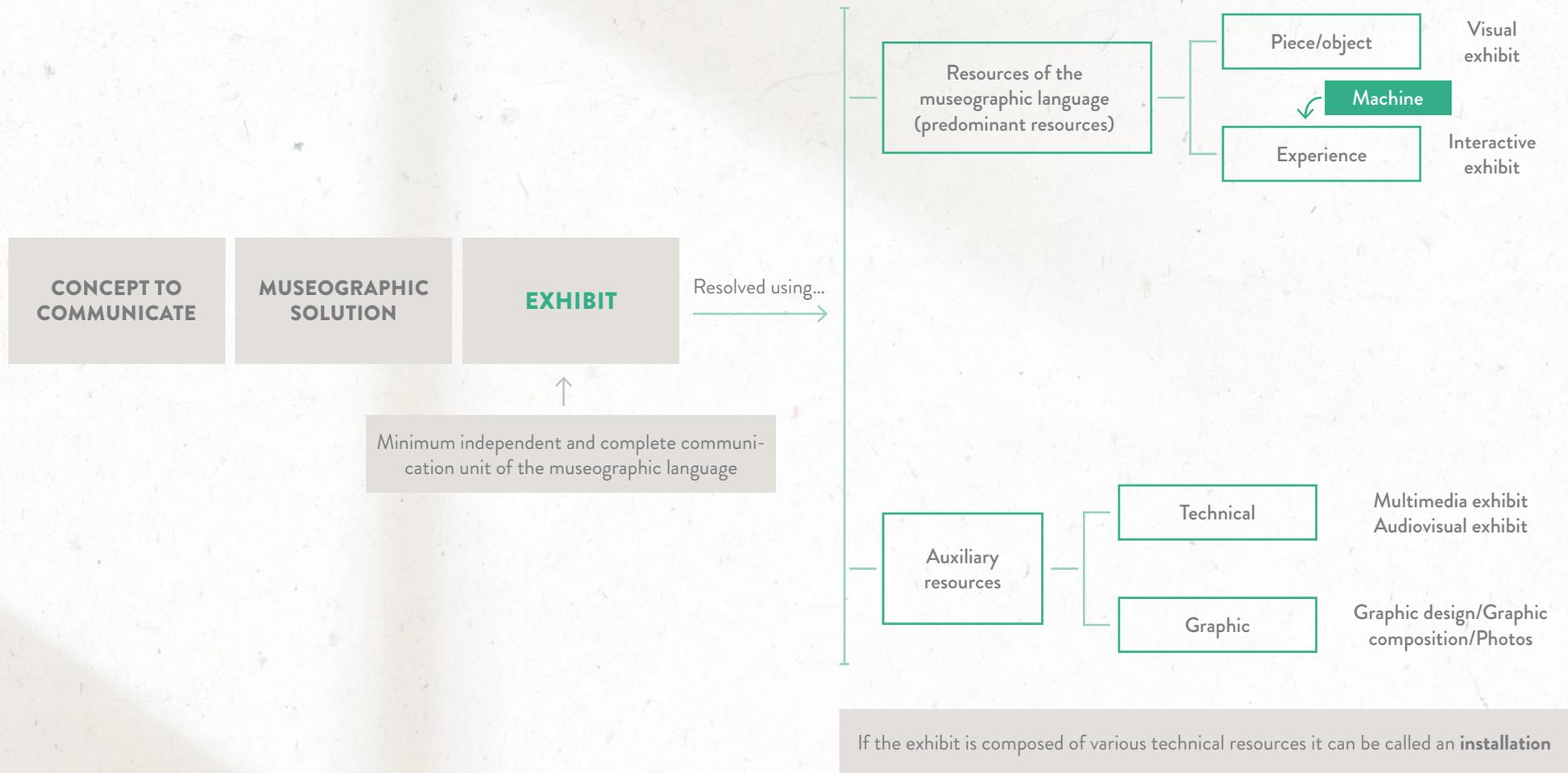
An exhibition created to be transported to different locations in order to stay for a certain time at each of them. In these cases, an exhibition can be located in premises or an exhibition room provided by the authorities of each town or city, in a flexible collapsible marquee owned by the exhibition or in a foldable unit. The latter is a rigid structure that is transportable by lorry, that is unfolded mechanically to become an indoor, habitable site that will house the exhibition. At the end of each temporary stay or exhibition, the foldable unit is folded away so that it can be transported. The maintenance and operational needs of touring exhibitions have various special particular features that differentiate them from an exhibition staged to always remain in the same space, and these must be considered from the start of the project.

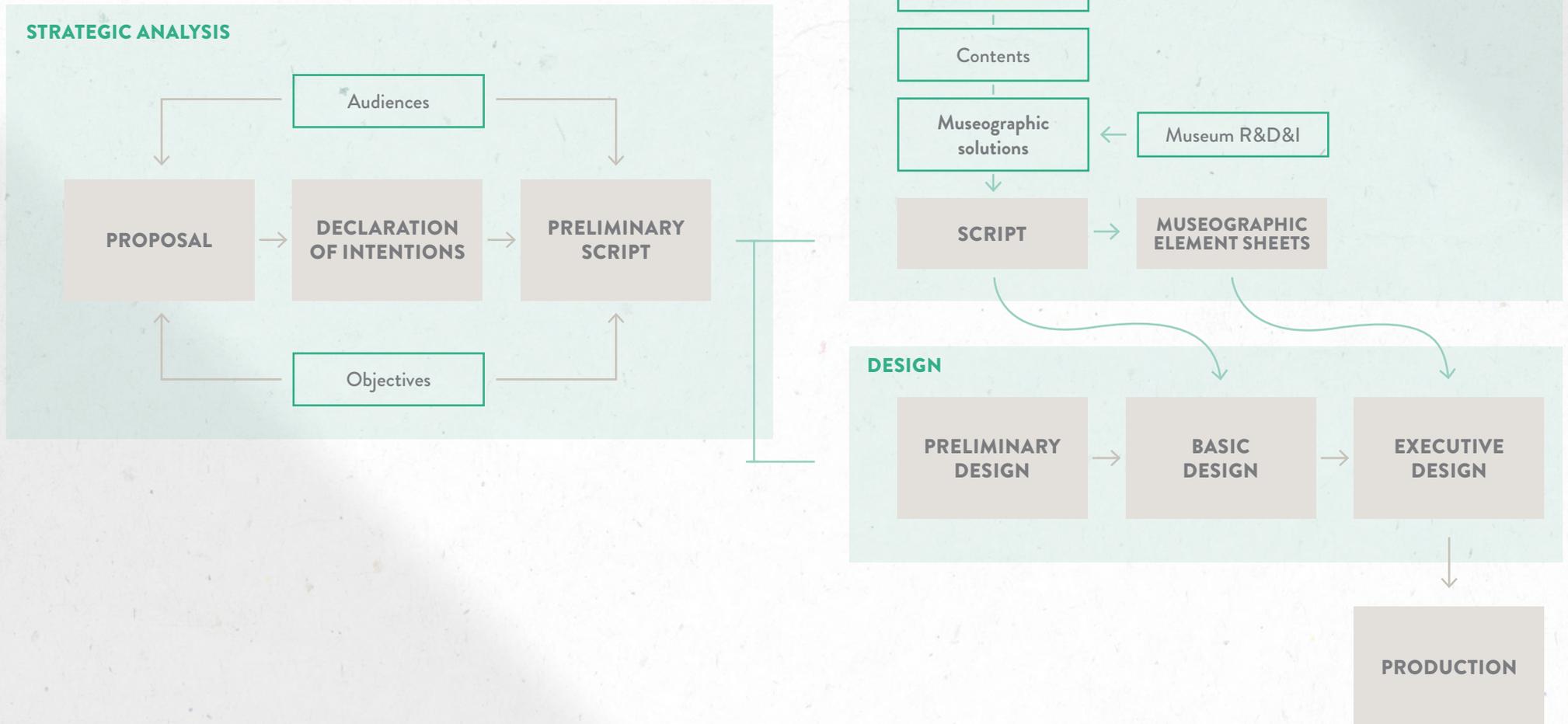
UNIQUENESS:

The quality that some objects have of being unique is elemental in the museographic language. Many pieces of museum interest have a fundamental asset in their uniqueness (The Rosetta Stone in the British Museum in London, for example). Uniqueness is equally important in the context of science museology (the amber fossil with encrustations of ants called *Jorge Caridad*, which is on show at CosmoCaixa, for example). However, the character of uniqueness is not particularly essential in a contemporary science museum, because the objects have their place in an exhibition for other reasons, such as not being easily accessible or because they are part of a broader story (a shark's jaw, for example).

VALIDATION:

In the museum context, this word refers to the approval process required in various phases of an exhibition project, which is verified by the relevant managers. Both the managers responsible for validation and the times and deadlines for the various validations that the exhibition has to pass must be carefully determined beforehand, in the initial phases of the exhibition. If not, the validation processes could cause serious disruption both to the budget and to the timeline of the exhibition.





IDEA AND EDITING:

"la Caixa" Foundation

AUTHOR:

Guillermo Fernández.

COORDINATION:

CosmoCaixa

WORK TEAM:

Laureano Agout

Guillem Bordes

Javier Hidalgo

Pau Matamala

José Santiago Rodrigo

Maria Dolores Ruiz

GRAPHIC DESIGN:

Neorg

TRANSLATION:

Solució de Continuitat, SLU