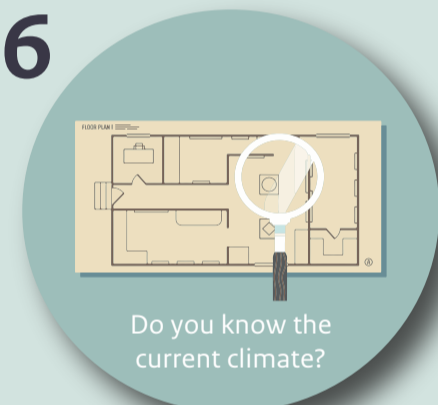
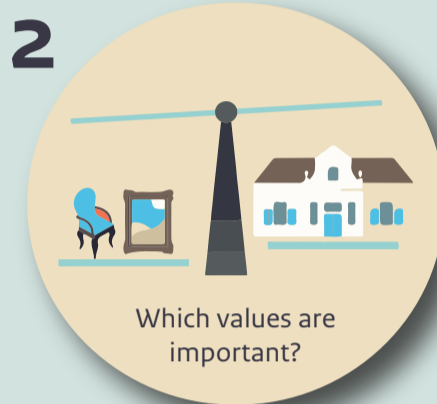




# MANAGING INDOOR CLIMATE RISKS IN NINE STEPS

Defining the arguments to reduce indoor climate risks is a complex business: the stakes are high, the information is complex, it is time consuming and often very expensive. For many, developing options to reduce indoor climate risks is not a daily task. Heritage institutes typically undergo large refurbishments once every 50 years. We believe that investing time and effort in the decision-making process will result in long-term savings. But most importantly, this investment is precisely the main measure that should be taken to reduce the risk of an incorrect climate and an incorrect climate control! The decision-making process that helps choose a climate strategy that best fits the institutional ambitions, the collection and the building needs, includes nine steps:



1 - The decision context and decision process are explored to prepare a balanced decision. The goals of the heritage institute and the stakeholders involved are expressed.

2 - The significance of the building and of the movable collection are made explicit. The values and significance provide the overall framework within which options for modifying the building and/or the environment around the objects can be considered and evaluated.

3 - The collection needs are defined. The collection can be divided into sensitivity categories containing materials / objects that have different environmental needs. Subsequently, the climate-related risks that must be reduced are determined for each category.

4 - Those parts of the building that are considered valuable and susceptible to certain climate conditions are identified. The building needs are defined. The building materials can be divided into sensitivity categories containing materials / objects that have different environmental needs. Subsequently, the climate-related risks that must be reduced are determined for each category.

5 - The climatic requirements for the human occupants are defined for each climate zone.

6 - A building provides a (natural) environment with a certain indoor climate. Understanding the building physics enables an assessment of the building envelope's properties which can be optimised to reduce risks to the moveable and immovable collection.

7 - The climate needs for collection, building and humans are combined with the understanding of the indoor climate and the objectives to develop the climate specifications for the climate zones within the building.

8 - Within the value framework established in Step 2, the options to improve the indoor climate are considered and selected. Different strategies for the efficient and sustainable implementation of climate control are then developed.

9 - A cost-benefit analysis is undertaken. Alternative strategies developed in Step 8 are evaluated by the goals developed in step 1. The strategy that helps achieving most objectives will be the optimal solution.