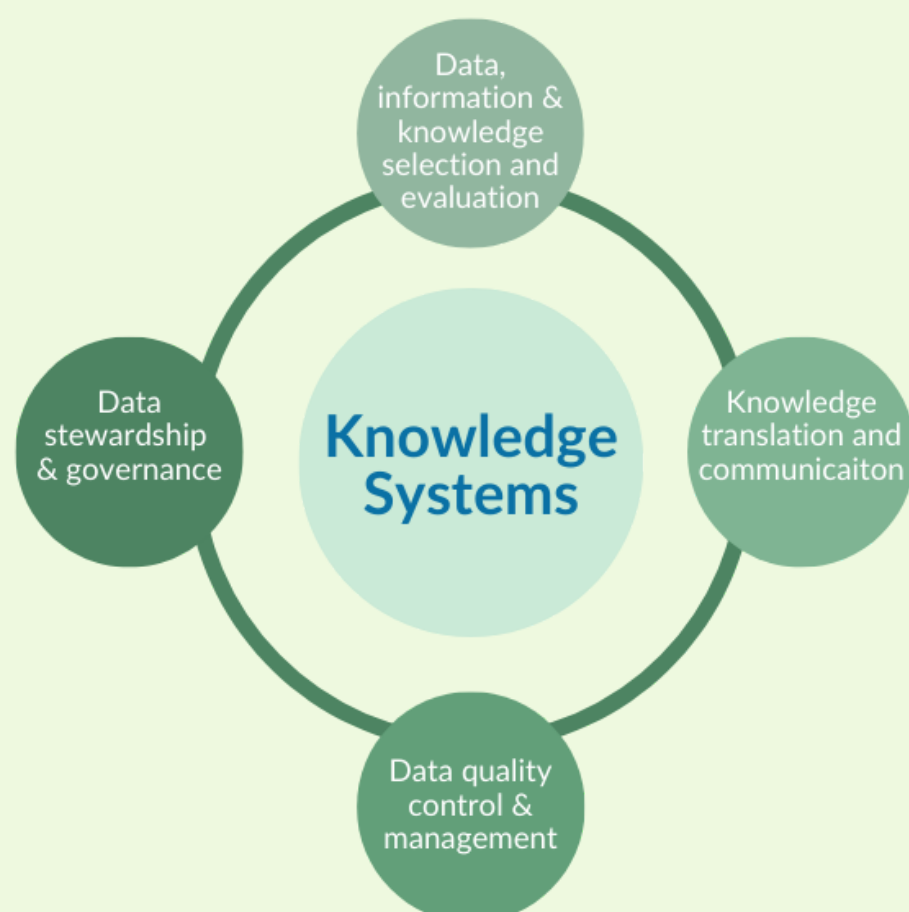


What makes a climate service robust, usable and trustworthy?

Climateurope2 has identified four main components as a step towards defining the boundaries of climate services, which will help support the discussions on what constitutes a quality-assured and equitable climate service. One of these four components is the **knowledge systems**. It relates to climate data, but not only. Environmental, social, economic and technical, as well as engineering data and local knowledge to develop and implement local adaptation and mitigation strategies, are relevant here too. This is also the case of all selection, evaluation and translation processes related to this data, as well as data accessibility, storage and stewardship.

Sub-components of knowledge systems

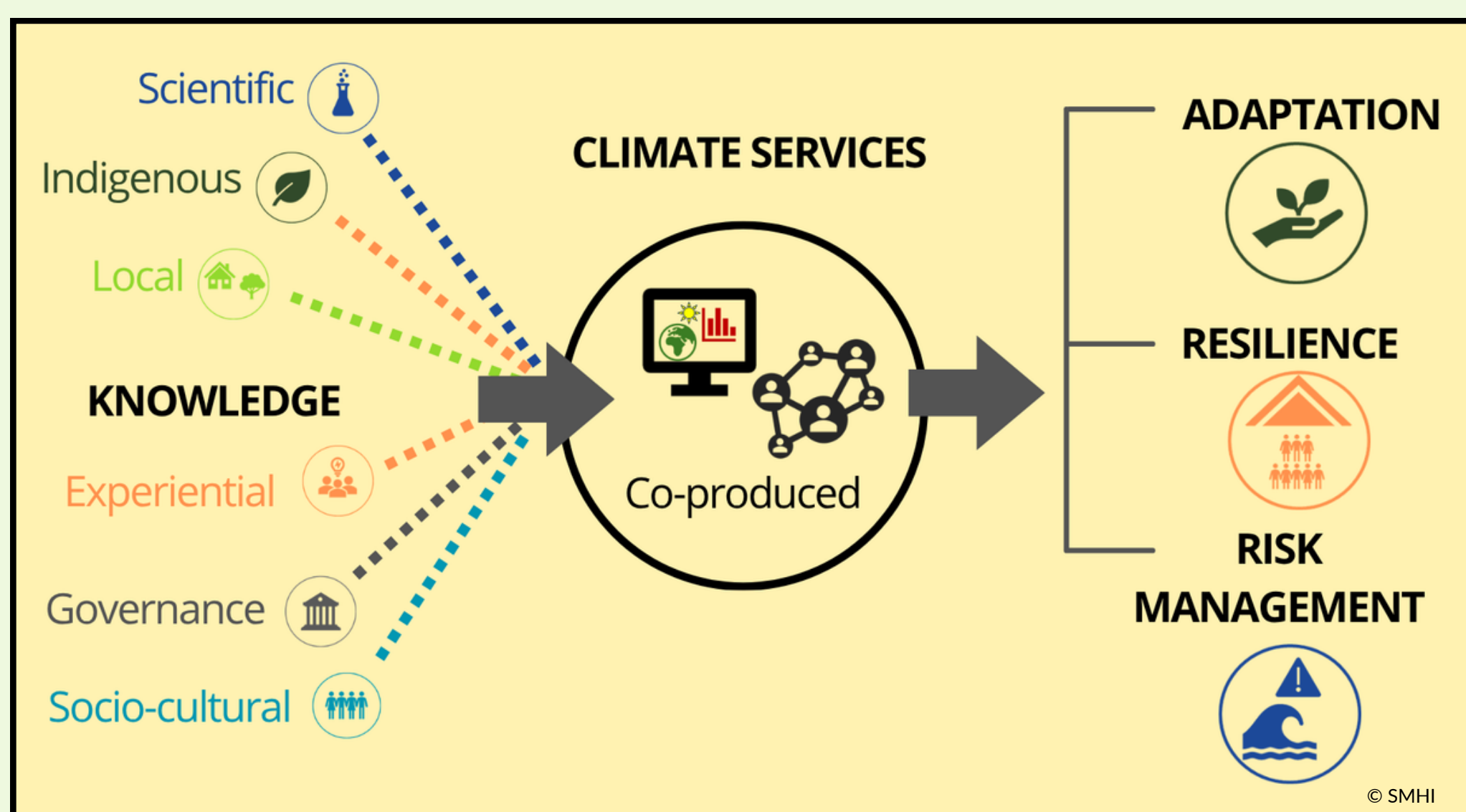


Together, these sub-components ensure the knowledge foundations of a climate service are not only scientifically robust, but also usable, trustworthy, and appropriately governed. Standards addressing all these elements can support climate services that are credible, contextually appropriate, and capable of delivering sustained decision value.

Climate services draw on multiple knowledge traditions beyond climate science, combining scientific and applied knowledge with indigenous, local, experiential, governance, and socio-cultural knowledge, depending on the decision context in which a service is intended to operate. This diversity of knowledge is essential for ensuring that climate services can support adaptation, resilience, and risk management in ways that are meaningful for real-world users and institutions. Granularity in this area helps guide the development of auditable requirements for standardisation.

Identifying key sub-components clarifies how different forms of knowledge are selected, translated and managed within the development of a climate service. Key sub-components include the **selection and evaluation of relevant data, information and knowledge**; the **translation and communication of knowledge**; **data quality assurance and management**; and **data stewardship and governance**.

Multiple knowledge traditions to support adaptation, resilience and risk management



Glossary - The **knowledge value chain** describes the dynamic, non-linear process through which diverse forms of knowledge— scientific, technical, experiential, local, and policy—are mobilised, integrated, and transformed into usable information and action.