

## Method for mapping biobased value chains

In order to map biobased value chains in the North Sea Region, BBOBB partners developed a joint methodology for mapping and improving regional biobased value chains. In Fryslân, the province of Fryslân and Vereniging Circulair Friesland (VCF) work closely with Building Balance within the framework of the National Approach to Biobased Building (NABB). This national approach is structured around biobased value chains, illustrated in Figure 1, but its implementation varies across Dutch regions due to socio-cultural and economic differences. This model is translated to BBOBB in order to help partners in mapping existing regional actors and identify missing links. This mapping helps inform interventions – either to stimulate business development to fill gaps or to shorten the chain where possible, making it more efficient and locally embedded.



Figure 1 Biobased value chain according to Building Balance

The way the value chain is structured differs between applications. For example: using flax as a resource for the purpose of insulation requires different processing steps compared to using flax as a resource for sheet material. To identify key stakeholders in the biobased value chain, we ask specific questions at each stage of the value chain. The next page shows an overview of questions at each stage.

## Agro

## Industry

## Construction

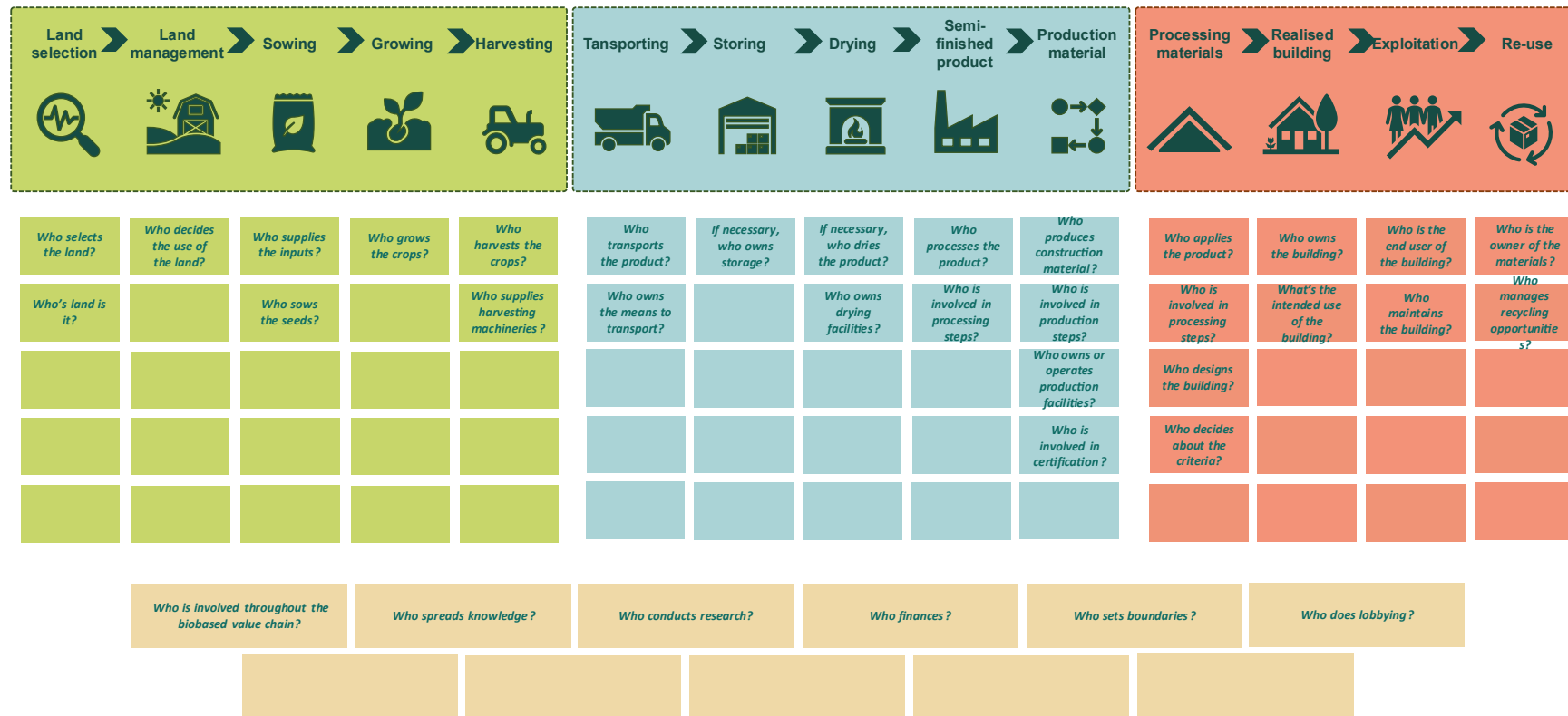
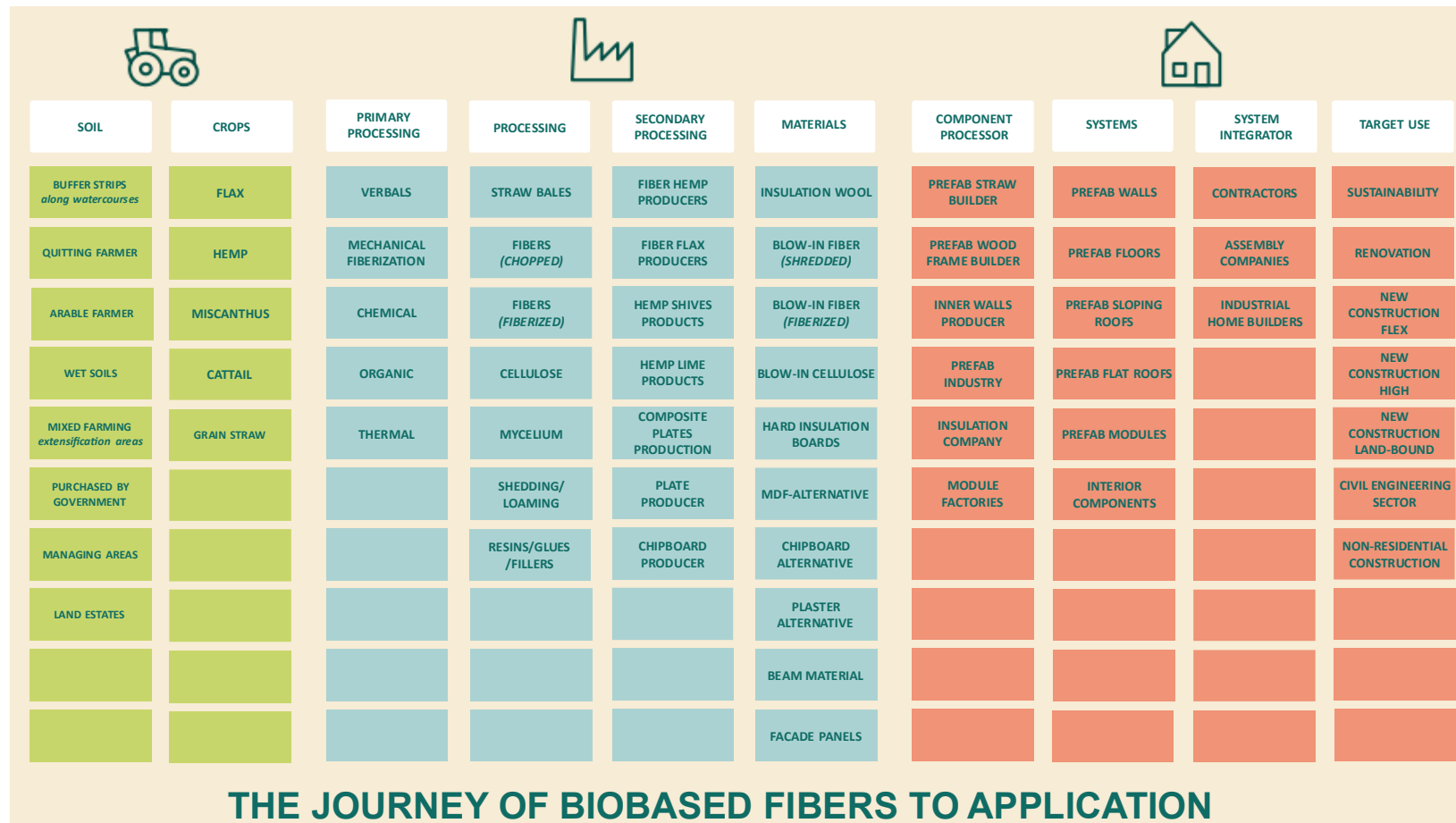


Figure 2 Identification of key stakeholders

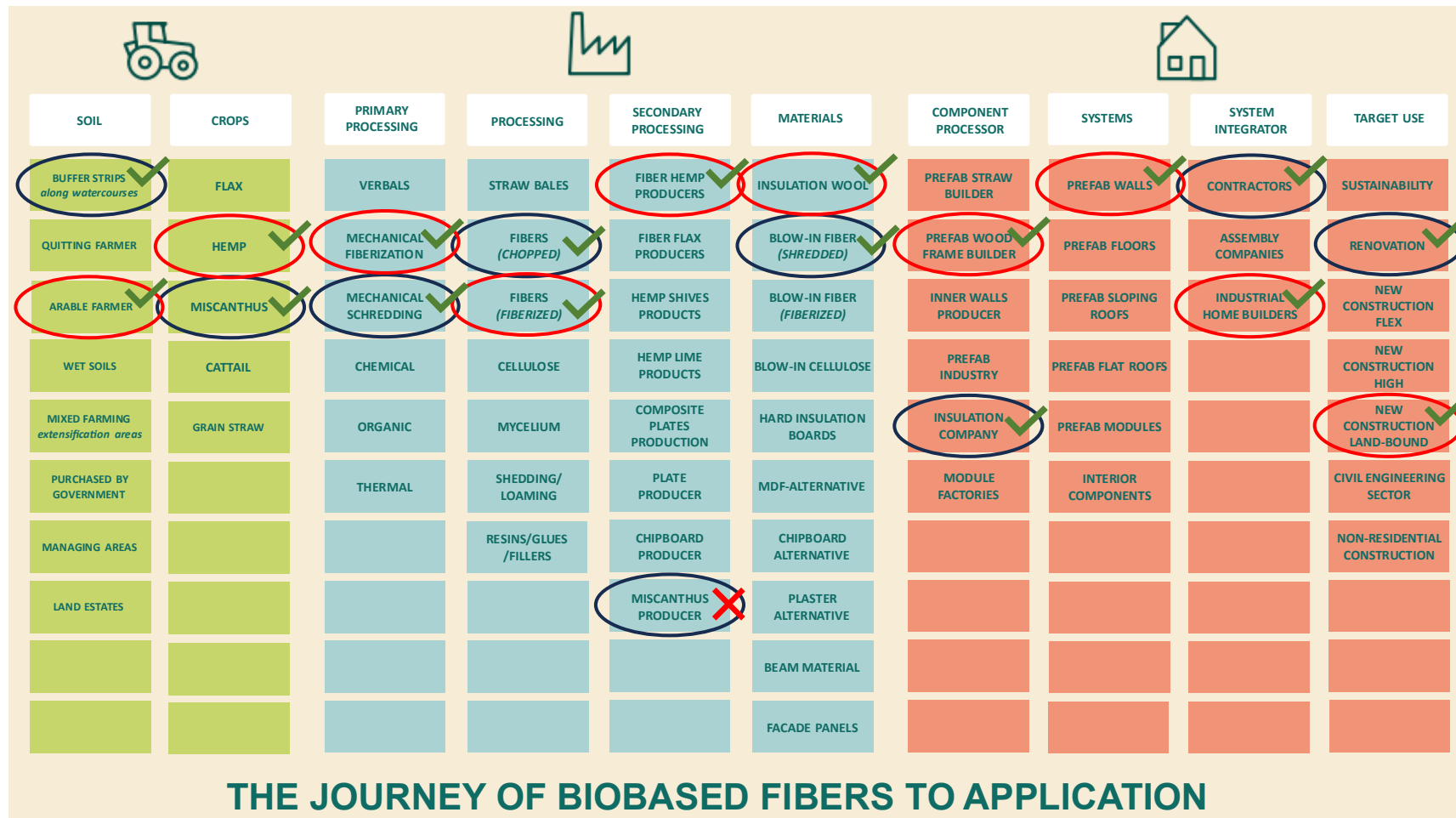
To map the stakeholders effectively, we formulated key questions for each stage of the value chain, resulting in a clear overview of the most important actors involved. During the analysis, you may find that the actual value chain in your region includes more stages than the standard format offers. We recommend writing out your responses in a separate document and adding additional steps where needed. For instance, the semi-finished product stage may involve multiple processing steps before the material is ready to move forward. In your document, you can include a process overview outlining all relevant parties involved at each stage, tailored to your specific regional context.

## Value chain of a specific application

Once all key stakeholders in the broader value chain have been identified, the next step may involve specifying the value chain for different crop applications. This can be done using a morphological chart to map the various possibilities across the stages of the chain:



The image above presents a range of requirements, methods, applications, and other elements, organized by links in the value chain. Based on this information, it becomes possible to identify and highlight combinations of links that together form a functional value chain.



The image above shows two fictional value chains: one based on hemp and the other on elephant grass (miscanthus). By mapping the links in this way, it becomes possible to indicate whether specific parts of the chain are present in the region. This can be done using check marks, crosses, or even logos of active businesses within each link. In this example, the hemp value chain appears complete, while the miscanthus chain is still under development, indicated by a red cross at the secondary processing stage. This visual approach clearly highlights missing elements and helps guide efforts to address gaps in the chain in North Sea Regions.