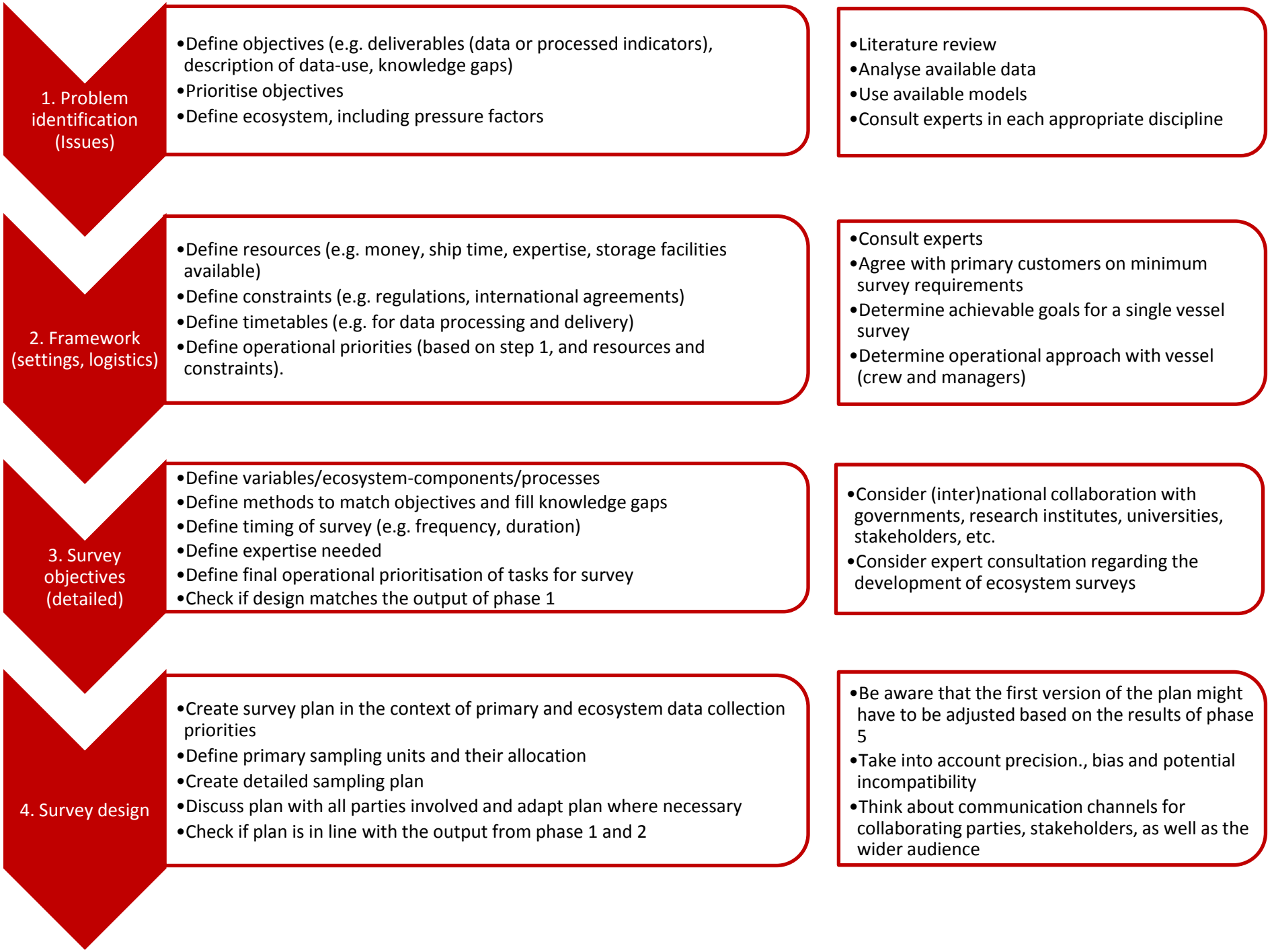
1. Problem identification (Issues)
•Define objectives (e.g. deliverables (data or processed indicators), description of data-use, knowledge gaps)
•Prioritise objectives
•Define ecosystem, including pressure factors
•Literature review
•Analyse available data
•Use available models
•Consult experts in each appropriate discipline
2. Framework (settings, logistics)
•Define resources (e.g. money, ship time, expertise, storage facilities available)
•Define constraints (e.g. regulations, international agreements)
•Define timetables (e.g. for data processing and delivery)
•Define operational priorities (based on step 1, and resources and constraints).
•Consult experts
•Agree with primary customers on minimum survey requirements
•Determine achievable goals for a single vessel survey
•Determine operational approach with vessel (crew and managers)
3. Survey objectives (detailed)
•Define variables/ecosystem-components/processes
•Define methods to match objectives and fill knowledge gaps
•Define timing of survey (e.g. frequency, duration)
•Define expertise needed
•Define final operational prioritisation of tasks for survey
•Check if design matches the output of phase 1
•Consider (inter)national collaboration with governments, research institutes, universities, stakeholders, etc.
•Consider expert consultation regarding the development of ecosystem surveys
4. Survey design
•Create survey plan in the context of primary and ecosystem data collection priorities
•Define primary sampling units and their allocation
•Create detailed sampling plan
•Discuss plan with all parties involved and adapt plan where necessary
•Check if plan is in line with the output from phase 1 and 2
•Be aware that the first version of the plan might have to be adjusted based on the results of phase 5
•Take into account precision., bias and potential incompatibility
•Think about communication channels for collaborating parties, stakeholders, as well as the wider audience

5. Pilot study

- Test sampling plan at sea (exploratory survey)
- Test collected information: e.g. analyse samples, test data infrastructure, analyse data, run models. Take into account different primary units for different sampling strategies

- Keep in mind this phase might result in an iterative process as:
- The result of the test at sea might change the sampling plan. Additional testing of the new sampling plan might be required
- The result of the analysis of the information collected might change the sampling plan. Additional testing of the new sampling plan is required

6. Survey

- Carry out the survey following the plan

- Communication about the survey, the progress and first results is highly recommended.
- Information exchange between collaborating ships is required
- Coordination of the sampling is required, also to be adaptive to e.g. weather circumstances, technical problems

7. Use of results

- Quality check data
- Analyse samples
- Use data (take into account the different primary units)
- Information exchange with collaborating parties
- If data/samples are not immediately used: store sustainably
- Evaluation and review (internal/external)
- Disseminate information collected (including survey report)

- The results of the analysis might lead to a change in survey design. If major changes occur, go back to phase 3 or 4 and consider if a test is required