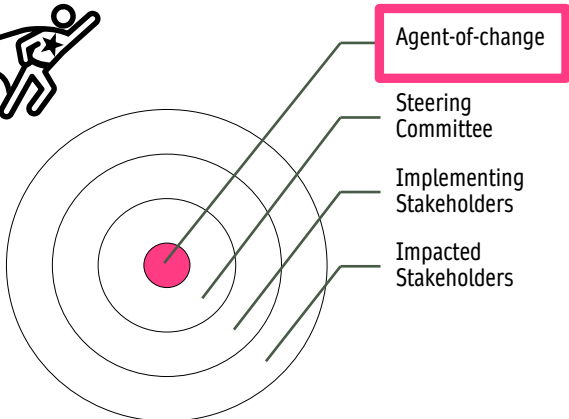


## Phase I - Initiation

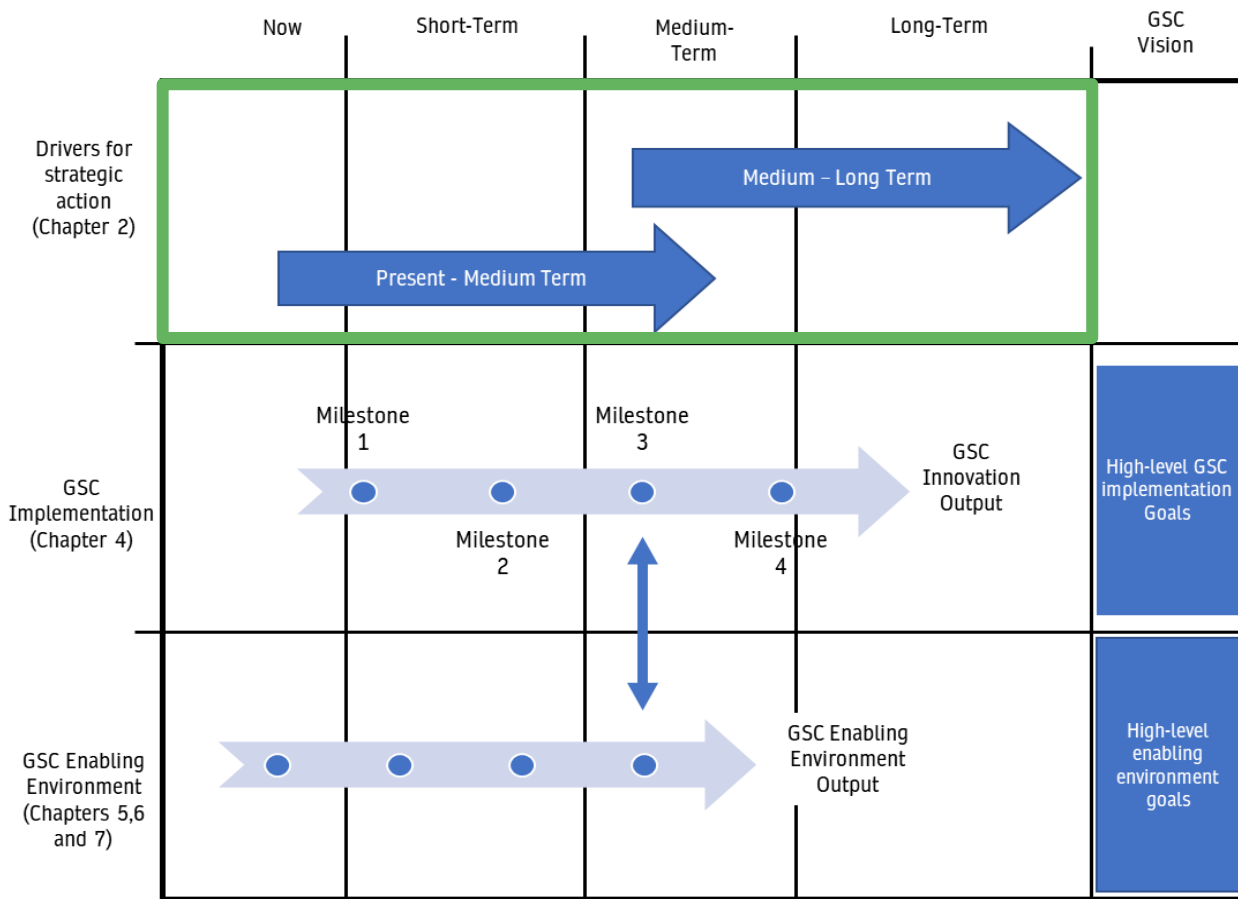
*Where are we now?*



Stakeholders have highlighted how a single agent of change can catalyze strategic action to advance green and sustainable chemistry.

This practical guidance aims to inspire agents of change to initiate this planning process. Upon completion of Phase 1, the original user of the guidance will have the support of a dedicated steering committee to continue the planning of the strategic action.

A key output of Phase 1 will be a group of motivating trends or “drivers” for strategic action to advance green and sustainable chemistry. They can be inserted into the top of the road map chart, outlined by the green box below.



## Phase I - Initiation

*Where are we now?*

Define the setting in which the strategic action will make an impact and which stakeholder groups will be involved in its planning and implementation.



In this step, the setting or area where the strategic action will take place is chosen by defining a set of boundaries. Strategic action to advance green and sustainable chemistry can be planned for a city or an entire nation, an SME or an international brand. Boundaries do not need to necessarily be geographic; they could be defined by a certain industrial sector or a particular group of companies with common characteristics. After deciding on the boundaries, an initial list of key stakeholder groups within those boundaries can be compiled.

### Examples of Boundaries for Strategic Action



**Gujarat Cleaner Production Centre** – The state of Gujarat, including policymakers, academic institutions, the chemical industry and SMEs.

**Zero Discharge of Hazardous Chemicals (ZDHC)** – The global textile supply chain, from chemical manufacturers, to textile processors to brands and retailers.

**WHO Chemicals Roadmap** – The entire health sector including Member States, the WHO secretariat, other UN bodies and non-state actors.

**American Chemical Society (ACS) Green Chemistry Education Roadmap** – The higher education system in the United States of America, including faculty, students and future employers of graduates.

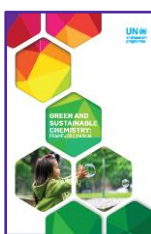
**International Sustainable Chemistry Collaborative Centre (ISC3)** - When setting up the ISC3, the German Federal Ministry for the Environment envisioned an institution that would accelerate the adoption of sustainable chemistry at the global level.

### Advancing Green Chemistry in Washington State

In this [roadmap](#), the boundaries were defined as the state of Washington in the USA. The roadmap aimed to facilitate capacity building and collaboration among universities, companies and government agencies within the state to promote green chemistry.

They identified specific outcomes to be realized within the boundaries such as the establishment of a Washington State Green Chemistry Technology Center.

Motivating factors particular to the defined area were also covered like the release of copper to a key waterway which harmed local salmon populations.



These sections of the Framework Manual may be helpful in identifying stakeholder groups to be involved in the planning and implementation of the strategic action.

Who are the Stakeholders encouraged to use this Manual - Page 5

Lists the target stakeholder groups for the Manual and briefly describes their potential roles to advance GSC

Figure 3.2 - Page 30

Depicts key stakeholder groups which can contribute to advancing green and sustainable chemistry along the value chain

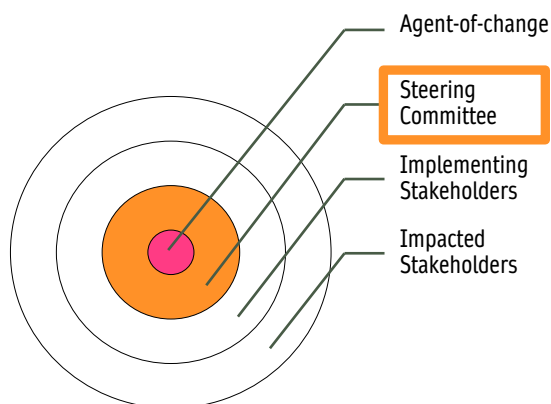
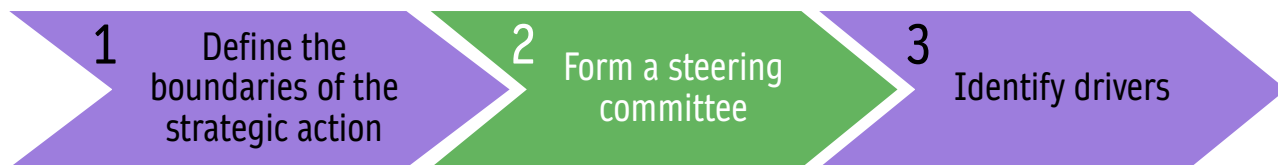
Opportunities to develop Green and Sustainable Chemistry Road Maps - Page 85

Provides examples of boundaries for strategic action to advance green and sustainable chemistry

## Phase I - Initiation

*Where are we now?*

Assemble a team of individuals, representative of key stakeholder groups, who will help lead the planning of the strategic action.



A core group of dedicated individuals, or steering committee, will work together to direct the planning of the strategic action. They will provide continued direction during implementation. The list of key stakeholder groups from the previous step may be a valuable resource to form a steering committee that is diverse, and representative of the activities and stakeholders within the defined boundaries. Keep in mind that additional stakeholders will be engaged later in the planning process.

### Examples of possible steering committee members



Elected official with history of promoting sustainable policymaking

Board member at an NGO working to eliminate toxic chemicals from products

Executive at a large chemical producer

Leader of an academic laboratory performing GSC-relevant research

Manager at a brand or retailer which sells chemically intensive products (i.e. apparel, construction materials or electronics)

Links to examples of steering committees from institutes and initiatives meant to promote strategic actions

[Steering Committee for the Sustainable Water and Energy Solutions Network](#)

[Green Chemistry & Commerce Council \(GC3\) Board of Directors](#)

[Berkeley Center for Green Chemistry Board](#)

[Zero Discharge of Hazardous Chemicals \(ZDHC\) Board](#)

[SuSCHEM Board](#)

[UNEP FI Global Steering Committee](#)

[SIRIM Berhad Malaysia - Board of Directors](#)

## Phase I - Initiation

*Where are we now?*

Determine the rationale for the strategic action by identifying “drivers” to advance green and sustainable chemistry.



In this step, the rationale and motivation for carrying out the strategic action will be determined by defining “GSC drivers”. The drivers will be a helpful resource when engaging a wider group of stakeholders. The drivers may be specific to the boundaries of the strategic action or can refer to wider trends. It may be useful to back up the drivers with data, and to classify them as short- medium and long-term drivers.

### Examples of drivers for strategic action to advance green and sustainable chemistry



**Gujarat Cleaner Production Centre** – Green and sustainable chemistry innovation has the potential to help achieve the institution’s cleaner production goals

**ZDHC** – Green and sustainable chemistry is an essential approach to address a growing market drive from consumers for more sustainable products, tightening regulations, and a desire to improve the public reputation of the textile industry

Stakeholders have emphasized a forward-looking approach when determining the rationale and potential for strategic action to advance green and sustainable chemistry.



*The value of today is not the value of tomorrow, the chemical processes of today are not the chemical processes of tomorrow, the molecules of today are not the molecules of tomorrow.*

### Examples of GSC drivers categorized with the STEEP Model



**Social –**  
consumer behavior, demographics and values

- Increasing citizen demand for a healthier environment
- Growing consumer desire for sustainable products

**Technological –**  
innovation trends, research and development and product life-cycles

- Digitalization will unlock new possibilities in manufacturing to be leveraged by GSC innovation
- GSC innovation can drive sustainability in key sectors such as energy, building and construction, and agriculture

**Economic –**  
consumer’s buying position, international trade frameworks and job markets

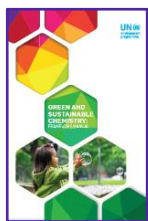
- Strategic GSC action results in the creation of green jobs
- Increasing waste management costs make GSC innovation economically attractive

**Environmental –**  
resource consumption, environmental and human health impacts

- Increasing levels of hazardous and recyclable waste being dumped in landfills
- Energy intensive and unsafe manufacturing processes
- Increasing concentration of POPs in human breast milk (see [UNEP POPs monitoring dashboard](#))

**Political –**  
policy, regulation and legislation

- Increasing scope and demands of multilateral environmental agreements and chemical regulation frameworks
- Commitments made to protect workers – such as in the [ILO declaration on fundamental principles and rights at work](#).



These sections of the Framework Manual may be helpful in identifying drivers for initiating and carrying out the strategic action to advance green and sustainable chemistry.

Why is systemic action to advance green and sustainable chemistry needed? - Section 2.1	Elaborates on trends from the GCO-II (UNEP 2019) and provides the rationale for advancing green and sustainable chemistry action
Opportunities for green and sustainable chemistry to advance circularity - Page 22	Describes how green and sustainable chemistry innovation can contribute to a circular economy
The market potential for green and sustainable chemistry - Page 24	Elaborates on the market for green and sustainable chemistry enabled products and substances
Chemistry and technology innovation to advance green and sustainable chemistry - Chapter 4	Provides a research agenda for green and sustainable chemistry technologies and their potential

The drivers which were determined in Phase 1 can be inserted into the roadmap diagram according to their timeline in the top section, as outlined by the green box below.

