

# **Circular Economy in China: Translating Principles into Practice.**

## **SUPPLEMENTARY INFORMATION**

### **ANNEX I - SURVEY FORMAT**

Questions to help organizations consider how the principles of the circular economy are being implemented through their decisions and activities.

#### **1. SYSTEM-THINKING**

Systems thinking is about understanding the complex, non-linear and interconnected nature of a system in which an organization operates. Systems can be living (natural systems) and non-living and include markets and supply chains. Thinking about relationships within a system is crucial to understand how an organization creates value and how it might be able to intervene in the “system” to influence the sustainable management of resources in its portfolio of products and services.

**1.1 - My organization has determined a vision of the future for a more circular and sustainable mode of operation.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**1.2 - External factors always play a great role in the decision-making process within my organization.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**1.3 - Systemic thinking would be a better approach in gaining insights into present and future complex sustainability challenges of my organization (e.g. climate change, resource and waste management, energy and water use, impacts on the local community, knowing when to embrace change, future customer trends, etc.).**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**1.4 - My organization has the knowledge and skills to understand processes and outcomes of systemic thinking.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**1.5 – Please, complete the SWOT analysis by trying to identify at least one element for each section.**

**Strengths:** characteristics of the principle that give an advantage to the organization.

**Weaknesses:** characteristics of the principle that put the organization in a disadvantaged position.

**Opportunities:** elements in the external environment that the organization could exploit by using this principle.

**Threats:** elements in the external environment that could cause trouble for the organizations when using this principle.

**Strengths:**

**Weaknesses:**

**Opportunities:**

**Threats:**

## 2. INNOVATION

Organizations continually innovate to create value by enabling the sustainable management of resources through the design of processes, products/services and business models. Innovation is anything that results in something that is new or changed (e.g. product, service or process) which realizes or redistributes value. Innovation is critical to facilitating the transition to a more circular and sustainable mode of operation. Circularity requires a completely new perspective on consumption and production, which continually challenges current business practices and methods. For example, through their decisions and activities, organizations can extract value from what otherwise might be waste.

**2.1 - Top-level management demonstrate leadership and commitment to innovation and there is a culture of innovation fostered at all levels of my organization.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**2.2 - The circular economy has been considered as strategic for innovation and clear circular economy objectives been determined.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**2.3 - My organization has identified which stakeholders within the value chain are key to foster “circular innovation”.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**2.4 - My organization sees innovation as a collaborative, open and transparent process.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**2.5 – Please, complete the SWOT analysis by trying to identify at least one element for each section.**

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**Strengths:**

**Weaknesses:**

**Opportunities:**

**Threats:**

### 3. STEWARDSHIP

Organizations manage the direct and indirect impacts of their decisions and activities within the wider systems they are part of. Stewardship means an organization is responsible for the management of all facets of its decisions and activities, from inception through to fulfilment and end-of-life. These facets could include what is happening in product development and in its supply chain and customer base and should take account of economic, environmental and social issues both now and those projected into the future. Stewardship is about accountability that might be shared or wholly owned by an individual, organization or community. It has increasing importance for implementing the principles of the circular economy across the value chain.

**3.1 - Top-level management sufficiently demonstrate leadership and commitment with respect to taking responsibility for its decisions and activities on sustainability issues (people, planet, profit).**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**3.2 – My organization has determined current and future economic, environmental and social risks and opportunities associated with the use of resources (raw materials, both natural and technical) across the value chain and uses this knowledge to create, deliver and capture long-term business value.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**3.3 - My organization understands and has eliminated or mitigated, where possible, issues associated with chemical ingredients which represent a significant risk to human health and/or the environment.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**3.4 - Strategies and plans are in place for the management of products and materials at end of use/life.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

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**Strengths:**

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## 4. COLLABORATION

Organizations collaborate internally and externally through formal and/or informal arrangements to create mutual value. It is unlikely that any one organization can achieve substantial progress in transitioning to a more circular and sustainable mode of operation without collaboration. Progressive collaborations between businesses (e.g. in supply chains and cross-sector), governments, academia, civil society and consumers are essential to making this happen. Working with different organizations, each with varying motivations, cultures and requirements, can prove challenging. The success of any collaborative programme is built on the ability of two or more organizations to develop mutual trust, effective communication and a shared vision and purpose.

**4.1** - Top-level management understands and values collaboration as a tool to innovate and help the organization transition to a more circular and sustainable mode of operation.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**4.2** – The organization has identified potential collaborative organizations (e.g. for example, collaborations with academic bodies, civil society, competitors, research councils, stakeholders, trade associations, professional bodies, standards bodies) against its circular economy and sustainability objectives.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**4.3** - The organizational has a structure suitable and able to provide the flexibility required for collaborative working.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**4.4** - The organization has implemented processes for partner selection that follow clear circular economy and sustainability criteria.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

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## 5. VALUE OPTIMIZATION

Organizations keep all products, components and materials at their highest value and utility at all times. The circular economy is about creating and optimizing value by reconsidering what might be seen as waste or system losses and identifying opportunities to realize new potential from them. Design, technology, management and business model practices can all help maximize value creation at both production and use levels.

**5.1 - Products, components and materials designed to be kept at their highest value and utility at all times.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**5.2 – The organization is aware of the waste generated during manufacturing and distribution activities and has enabled strategies to eliminate or reduce it.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**5.3 - The organization wants to adopt or has already adopted strategies to prolong life of the products, components and materials (e.g. extended warranties, planning for standardization and compatibility, designed to be upgradable, parts and components can be separated and assembled easily).**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**5.4 - The organization is aware of what happens to the product at the end of use phase and has developed the necessary information and data to ensure products, components and materials can be appropriately managed at end-of-life.**

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

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## 6. TRANSPARENCY

Organizations are open about decisions and activities that affect their ability to transition to a more circular and sustainable mode of operation and are willing to communicate these in a clear, accurate, timely, honest and complete manner. In general, transparency should be favored, so that information is made accessible proactively or on request. Where appropriate, an organization should be prepared to disclose information and data relevant to its implementation of the principles of the circular economy. This might include the provenance and composition of materials and chemical ingredients in products. The principle of transparency does not necessarily mean that proprietary information is to be made public, nor does it involve providing information that is privileged or that would breach legal, commercial, security or personal privacy obligations. However, as with collaboration, building trust, both internally and/or externally, is key.

**6.1** – The organization has mapped resources within its value chain, including sourcing and production locations.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**6.2** – The organization has determined the full composition of materials and chemical ingredients in your products, materials and components and the manufacturing process(s) used to create them:

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**6.3** - The organization has developed the necessary knowledge and skills to map its relevant stakeholder and engage with them.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

**6.4** - Written or visual information provided with and on all packaging or products about known issues (e.g. environmental or human health related hazards) associated with the product of service of your organization are freely accessible in different forms (website, sustainability report, newsletter, etc.) by its stakeholders.

Response alternatives: Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Comments (optional):

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