

ISO 59004:2024-05 (E)

Circular economy - Vocabulary, principles and guidance for implementation

| Contents | | Page |
|--------------------|---|-------------|
| Foreword | | v |
| Introduction | | vi |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 3.1 | Terms related to a circular economy | 1 |
| 3.2 | Terms related to solutions | 4 |
| 3.3 | Terms related to resources | 5 |
| 3.4 | Terms related to organizations and other interested parties | 8 |
| 3.5 | Terms related to value creation models and design and development | 9 |
| 3.6 | Terms related to measurement and assessment | 13 |
| 4 | Circular economy vision | 14 |
| 5 | Circular economy principles | 15 |
| 5.1 | General | 15 |
| 5.2 | Principles | 16 |
| 5.2.1 | Systems thinking | 16 |
| 5.2.2 | Value creation | 16 |
| 5.2.3 | Value sharing | 16 |
| 5.2.4 | Resource stewardship | 16 |
| 5.2.5 | Resource traceability | 16 |
| 5.2.6 | Ecosystem resilience | 16 |
| 5.3 | Considerations of adopting the principles | 16 |
| 5.3.1 | General | 16 |
| 5.3.2 | Design and development | 16 |
| 5.3.3 | Collaboration for management of information and resources | 17 |
| 5.3.4 | Risk and opportunity management | 17 |
| 5.3.5 | Relationship between value creation and resource use | 17 |
| 5.3.6 | Awareness of stocks and flows | 17 |
| 6 | Actions that contribute to a circular economy | 18 |
| 6.1 | General | 18 |
| 6.2 | Actions that create added value | 18 |
| 6.2.1 | General | 18 |
| 6.2.2 | Design for circularity | 18 |
| 6.2.3 | Circular sourcing | 19 |
| 6.2.4 | Circular procurement | 19 |
| 6.2.5 | Process optimization | 20 |
| 6.2.6 | Industrial, regional or urban symbiosis | 20 |
| 6.3 | Actions that contribute to value retention | 20 |
| 6.3.1 | General | 20 |
| 6.3.2 | Reduce, reuse and repurpose | 21 |
| 6.3.3 | Maintenance and repair | 21 |
| 6.3.4 | Performance-based approaches | 21 |
| 6.3.5 | Sharing to intensify use | 21 |
| 6.3.6 | Refurbishing | 22 |
| 6.3.7 | Remanufacturing | 22 |

| | | |
|-------|--|----|
| 6.4 | Actions that contribute to value recovery | 22 |
| 6.4.1 | General | 22 |
| 6.4.2 | Reverse logistics | 22 |
| 6.4.3 | Cascading of resources | 23 |
| 6.4.4 | Recycling | 24 |
| 6.4.5 | Waste management | 24 |
| 6.4.6 | Material recovery | 24 |
| 6.4.7 | Energy recovery | 24 |
| 6.5 | Actions to regenerate ecosystems | 25 |
| 6.6 | Actions to support a circular economy transition | 25 |
| 6.6.1 | General | 25 |
| 6.6.2 | Education and research | 25 |
| 6.6.3 | Innovation | 26 |
| 6.6.4 | Collaboration and networks | 26 |
| 6.6.5 | Helping users change their behaviour | 26 |
| 6.6.6 | Policy and legal system | 26 |
| 6.6.7 | Financial services | 26 |
| 6.6.8 | Digitalization | 27 |
| 6.7 | Guidance for resource management actions | 27 |
| 7 | Implementation guidance | 28 |
| 7.1 | Overview | 28 |
| 7.1.1 | Implementation process | 28 |
| 7.1.2 | Incorporating circular economy principles in the implementation process | 29 |
| 7.1.3 | Levels of implementation | 29 |
| 7.1.4 | Structure of the guidance for implementation | 29 |
| 7.2 | Context and reference situation assessment | 30 |
| 7.2.1 | Overview | 30 |
| 7.2.2 | Assess the reference situation | 30 |
| 7.2.3 | Assess the importance of a circular economy for the organization | 31 |
| 7.2.4 | Assess the system conditions for transitioning towards a circular economy | 31 |
| 7.2.5 | Identify the risks and opportunities of a circular economy for the organization | 32 |
| 7.3 | Circular economy purpose, mission, vision and goals definition | 32 |
| 7.3.1 | Create a purpose, mission and a vision that align with the circular economy principles ... | 32 |
| 7.3.2 | Establish circular economy goals aligned with the organization's purpose, mission and vision | 32 |
| 7.4 | Circular economy strategic priorities and action plan development | 33 |
| 7.4.1 | Overview | 33 |
| 7.4.2 | Generate ideas and prioritize actions | 33 |
| 7.4.3 | Establish a circular economy strategy | 33 |
| 7.4.4 | Explore a value creation model | 33 |
| 7.4.5 | Assess feasibility | 34 |
| 7.4.6 | Develop an action plan for the circular economy | 34 |
| 7.4.7 | Develop pilot projects | 35 |
| 7.5 | Circular economy implementation | 35 |
| 7.5.1 | Overview | 35 |
| 7.5.2 | Raise awareness and build capacity for action | 35 |
| 7.5.3 | Test and iterate value creation model(s) | 36 |
| 7.5.4 | Execute the action plan for a circular economy | 36 |
| 7.6 | Circular economy monitoring, reviewing and reporting | 36 |
| | Annex A (informative) List of drivers | 38 |
| | Annex B (informative) Non-exhaustive list of examples of actions | 40 |
| | Annex C (informative) Considering a sustainable development perspective in actions | 44 |
| | Bibliography | 50 |
| | Index | 52 |