

Digital Circular Economy Market Forecasts to 2032 – Global Analysis By Component (Solutions and Services), Deployment Mode (Cloud-Based and On-Premise), Organization Size (Large Enterprises and Small & Medium Enterprises (SMEs)), Business Model, Technology, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Digital Circular Economy Market is accounted for \$3.46 billion in 2025 and is expected to reach \$17.87 billion by 2032 growing at a CAGR of 26.42% during the forecast period. The term 'digital circular economy' describes an economic structure that makes use of digital technologies, including blockchain, IoT, big data, and artificial intelligence, to encourage the sustainable use of resources by facilitating recycling, reuse, and waste reduction. It combines digital innovation and the concepts of the circular economy to enable closed-loop systems, improve supply chain transparency, and optimise product lifecycles. By prolonging product lifespans and renewing natural systems, this paradigm reduces environmental impact while generating economic benefit. In order to create robust, low-waste economies, it also makes it easier to make better decisions, monitor in real time, and collaborate across industries.

Market Dynamics:

Driver:

Rising demand for resource optimization & waste reduction

Digital technologies are being used by businesses more and more to track resource

usage and reduce waste production. Real-time tracking and effective recycling procedures are made possible by cutting-edge technologies like blockchain, IoT, and AI. These developments lower operating expenses and the consumption of raw materials. In order to achieve sustainability goals, governments and organisations are encouraging circular behaviours. The need for digital circular solutions is therefore rising quickly across all industries.

Restraint:

Complexity of system debugging & maintenance

Multiple technologies are frequently used in integrated digital platforms, which make defect detection expensive and time-consuming. System diagnostics are made more difficult by inconsistent data flow and interoperability problems. Tracking, recycling, and remanufacturing are examples of smooth circular activities that are hampered by frequent technical disruptions. Furthermore, a lack of qualified experts postpones the prompt fixing of technological issues. These difficulties make operations less efficient and deter businesses from implementing circular digital solutions.

Opportunity:

Integration of advanced technologies like AI, IoT, and blockchain

AI makes predictive analytics for waste reduction and effective resource optimisation possible. Real-time tracking of items and materials throughout their lifecycle is made possible by IoT. In circular value chains, blockchain guarantees safe data sharing, traceability, and transparency. Together, these technologies promote patterns of recycling, consumption, and production that are sustainable. Businesses can thereby improve operational effectiveness, lessen their influence on the environment, and advance a closed-loop economy.

Threat:

Cybersecurity & data privacy concerns

Concerns about data breaches frequently make organisations hesitant to use digital platforms for resource tracking and sharing. Sensitive data, including supply chain information and proprietary designs, may be exposed due to insecure digital infrastructures. These hazards hinder cooperation throughout value chains and erode

stakeholder trust. Adhering to many foreign data protection regulations adds complexity and costs. As a result, digital circular projects are slower to develop and have limited scalability.

Covid-19 Impact

The COVID-19 pandemic significantly accelerated the adoption of digital circular economy practices as businesses faced disruptions in global supply chains and resource availability. Lockdowns and social distancing measures drove a shift toward digital platforms, remote operations, and virtual marketplaces, encouraging reuse, repair, and sharing models. Industries increasingly leveraged technologies such as blockchain, AI, and IoT to track materials and optimize resource efficiency. The crisis also heightened awareness about sustainability and resilience, prompting policymakers and organizations to integrate circular strategies into long-term digital transformation initiatives for more robust, adaptable economies.

The large enterprises segment is expected to be the largest during the forecast period

The large enterprises segment is expected to account for the largest market share during the forecast period by leveraging advanced technologies to optimize resource efficiency and reduce waste at scale. These organizations invest heavily in digital platforms for tracking, recycling, and repurposing materials across complex supply chains. Their global operations encourage the adoption of circular practices in multiple regions and industries. Strategic collaborations and ESG commitments further drive innovation and compliance with circular economy goals. Additionally, their influence accelerates market transformation by setting industry benchmarks and encouraging smaller players to adopt sustainable models.

The automotive segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the automotive segment is predicted to witness the highest growth rate by adopting smart manufacturing and sustainable design practices. Automakers increasingly use digital tools to track materials and enable recycling and reuse. Electric vehicle production encourages circularity through battery refurbishing and second-life applications. Digital platforms optimize vehicle lifecycle management, reducing waste and resource use. This shift supports sustainability goals while lowering costs and enhancing brand value.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to by adopting smart manufacturing and sustainable design practices. Automakers increasingly use digital tools to track materials and enable recycling and reuse. Electric vehicle production encourages circularity through battery refurbishing and second-life applications. Digital platforms optimize vehicle lifecycle management, reducing waste and resource use. This shift supports sustainability goals while lowering costs and enhancing brand value.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR by corporate sustainability commitments, digital innovation, and mature waste management infrastructures. The United States and Canada are at the forefront of integrating AI, IoT, and cloud-based solutions to extend product lifecycles and enable closed-loop systems. Consumer demand for eco-conscious products and transparency further propels digital circular strategies. While regulatory push is moderate compared to Asia Pacific, voluntary ESG initiatives and public-private partnerships are central to advancing circular models across industries, especially in electronics, automotive, and retail sectors.

Key players in the market

Some of the key players profiled in the Digital Circular Economy Market include SAP, IBM, Microsoft, Google, Oracle, Capgemini, Accenture, Cisco, Siemens Advanta, Software AG, Landbell Group, KPMG, Anthesis Group, Veolia, Rheaply, Recykal, GreenMantra Technologies and CircularIQ.

Key Developments:

In May 2025, IBM signed an agreement with DECA Technologies to implement DECA's M Series and Adaptive Patterning semiconductor packaging tech at IBM's advanced packaging facility in Bromont, Quebec—boosting digital packaging innovation within semiconductor supply chains.

In June 2024, SAP acquired WalkMe for approximately \$1.5 billion. The DAP enhances user adoption of purpose-built interfaces in complex environments such as circular economy use cases, improving user guidance and engagement in sustainability focused

ERP solutions.

In April 2024, SAP extended its partnership with SIRC (PIF subsidiary), deploying SAP S/4HANA, Ariba, SuccessFactors, and Analytics Cloud. Signed an MoU to co build a digital roadmap enhancing environmental reporting, CRM modernization, and sustainability driven services.

In April 2024, IBM agreed to acquire HashiCorp (US \$6.4 B), which provides infrastructure lifecycle automation. This supports circular economy digital platforms by enabling scalable infrastructure that adapts dynamically based on lifecycle and usage data.

Components Covered:

Solutions

Services

Deployment Modes Covered:

Cloud-Based

On-Premise

Organization Sizes Covered:

Large Enterprises

Small & Medium Enterprises (SMEs)

Business Models Covered:

Product-as-a-Service (PaaS)

Sharing Platforms

Resource Recovery

Circular Inputs

Product Life Extension

Other Business Models

Technologies Covered:

Blockchain

Artificial Intelligence (AI)

Internet of Things (IoT)

Big Data & Analytics

Cloud Computing

Digital Twin

3D Printing

Other Technologies

End Users Covered:

Manufacturing

Retail & Consumer Goods

Automotive

Electronics & IT

Construction & Real Estate

Agriculture

Healthcare

Energy & Utilities

Textile & Fashion

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants

- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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