

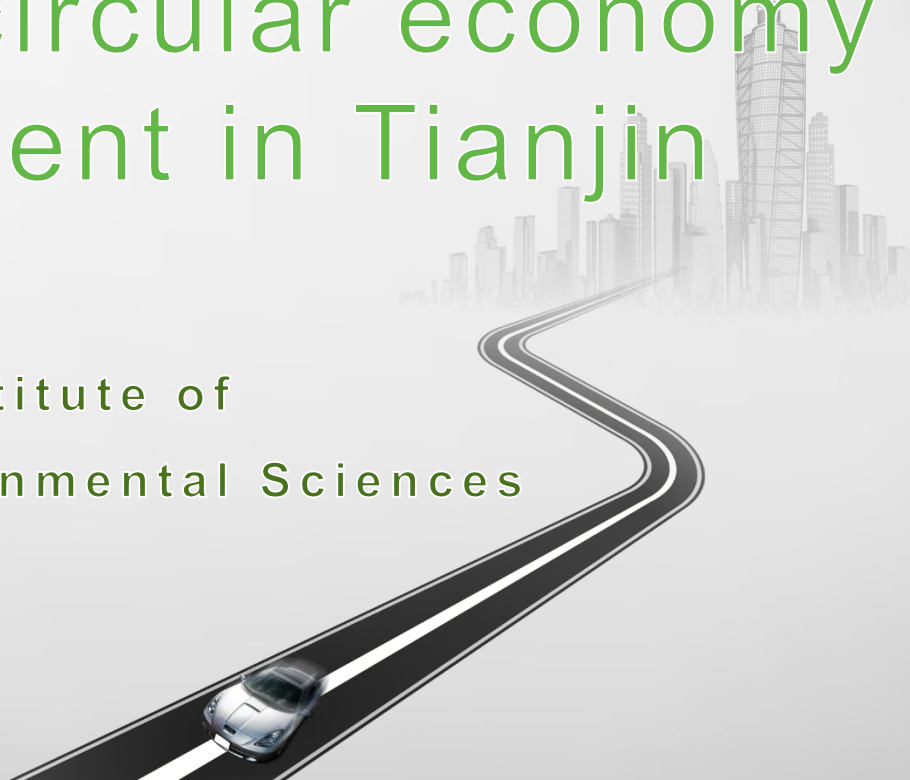


Achievements and main tasks of circular economy development in Tianjin

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Areas covered by the circular economy in the new development phase

industry

agriculture

services

sectors



levels

enterprises

industrial parks

city

region

There is potential for the circular economy across all aspects of society.

As society develops, new things and new industries emerge, and the field of circular economy expands.

Achievements of circular economy in Tianjin

5 Demonstration pilots in operation

circular transformation implementation rate in the city's national industrial parks at 100%;

experiences of the construction of the National Green Development Demonstration Zone in the Sino-Singapore (Tianjin) Eco-city and the Jinghai Circular Economy Demonstration City shared and promoted nationwide.

4 Significant increase in municipal waste utilization capacity

1,546 construction waste transport vehicles and 3 construction waste resource utilization plants available; daily processing capacity of 7,000t.



Integrating circular development across industry, agriculture and services; across cities, parks and enterprises, and across production, distribution & consumption, focusing on more efficient resource use, reducing pollution & emissions and supporting sustainable economic and social development.

1 Gradual refinement of regulations and policies

issuing of “Interim Management Measures for the Recycling and Disposal of Pesticide Packaging Waste in Tianjin”

2 Steady improvement in efficient resource use

Energy output rate increased by a cumulative 23%; water conservation efforts comprehensively promoted

3 continuous increase in levels of industrial waste recycling

comprehensive utilization capacity of scrap steel and scrap plastic at 4 million tons and 170,000 tons respectively

Circular Economy: main directions and tasks

creating an urban recycling system

01

further developing recycling across the 3 key sectors

03

creating new special system of special circular development

05

building recycling system in industrial parks further

02

promoting circular development in the Beijing-Tianjin-Hebei region

04

Building an urban resource recycling system

Recycling Network

building a three-tier recycling system;
integrating two networks
implementing "Internet + Recycling"
improving the rural recycling network

Recycled Resources

accelerating base construction;
promoting development of integrated use clusters;
efficient recycling of new waste types;
strengthening monitoring of dismantling and utilization enterprises

Construction waste

promoting "on-site recycling + off-site treatment" of construction waste;
resource utilization;
utilization of bulk solid waste;
Transaction Information Service

Domestic sewage

sensible layout of reclaimed water use;
recommending cross-sector applications;
water reuse "close to home"

Promoting synergistic circular development

in Beijing, Tianjin and Hebei

- construction of a public trading platform for recycling resources in Beijing, Tianjin and Hebei to enhance the collaborative processing of radiation
- promotion of the construction of waste power battery resource utilisation projects & large regional wastepaper sorting and processing centres and wastepaper storage and logistics trading centres; building regional recycling systems for new categories and enhance regional recycling and processing capacity. (Collaborative Transformation and Upgrading Plan for the Comprehensive Utilisation of Industrial Resources)
- establishing cross-regional and cross-sectoral links and coordination mechanism to promote collaborative disposal and utilization of bulk solid waste across Beijing, Tianjin and Hebei, and joint treatment and disposal of solid waste & sharing of resource utilization facilities.



Expansion of the Industrial Circular Development System

🚧 green design for key products

1. full product lifecycle management
2. selective use of raw materials

🚧 circular production model

1. strengthening inter-company cycles
2. strengthening inter-industry cycles

🚧 reinforcing cleaner production in key industries

1. continuing mandatory cleaner production audits
2. strengthening cleaner production regulations and enforcement inspection

🚧 comprehensive use of industrial bulk solid waste

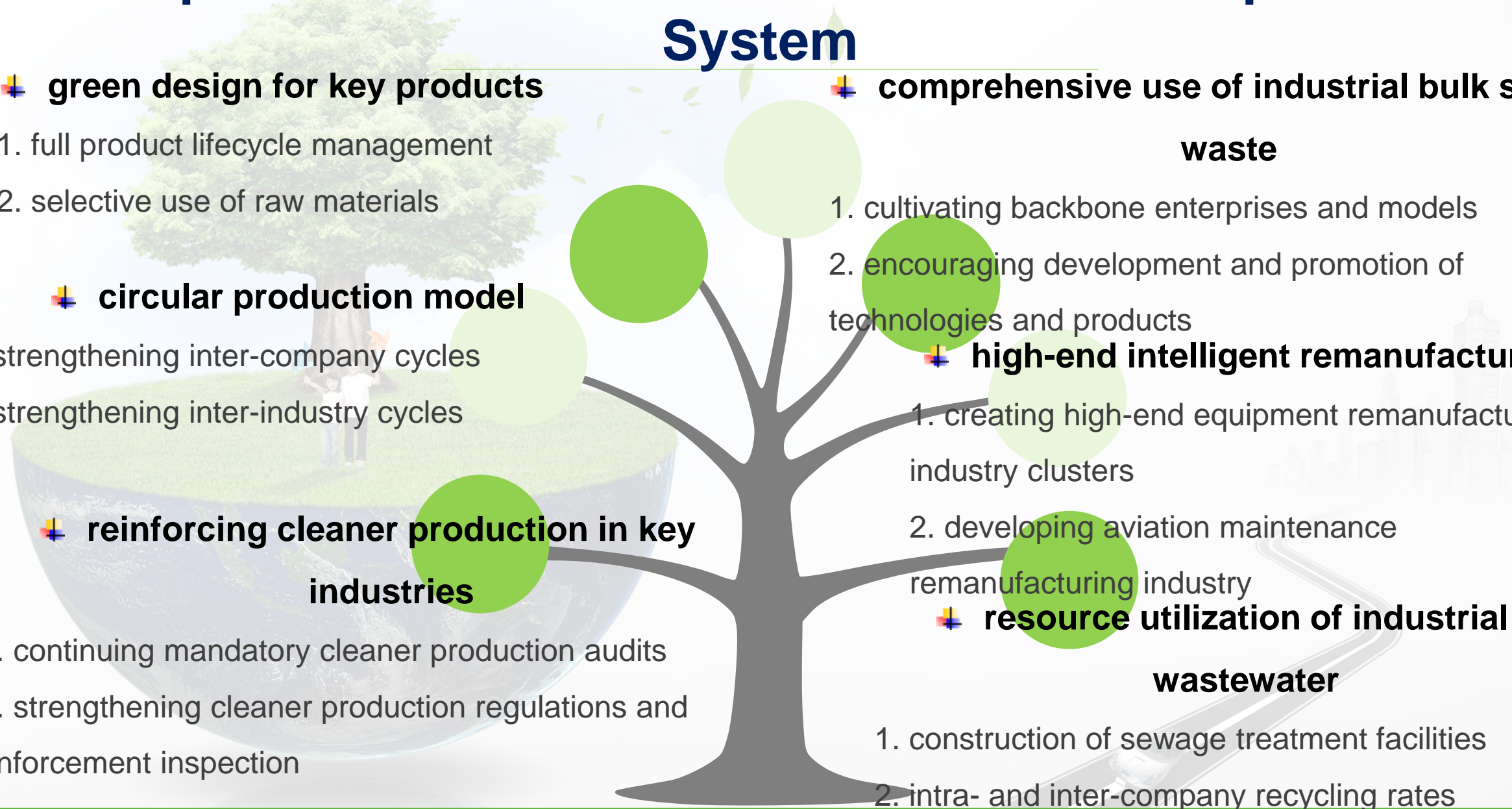
1. cultivating backbone enterprises and models
2. encouraging development and promotion of technologies and products

🚧 high-end intelligent remanufacturing

1. creating high-end equipment remanufacturing industry clusters
2. developing aviation maintenance remanufacturing industry

🚧 resource utilization of industrial wastewater

1. construction of sewage treatment facilities
2. intra- and inter-company recycling rates



Expansion of the Agricultural Circular Development System

✚ promoting integration of rural industries

1. linking industry and agriculture, and integration of the primary, secondary and tertiary sectors
2. Promote the construction of agricultural green development pioneer areas such as Wuqing District and Xiqing Districts

✚ expansion of integrated rice farming & fishery

1. promoting development of integrated rice farming and fishery industry
2. establishing technical service system for integrated rice farming and fishery

✚ expanding water and fertilizer conservation and pesticide control

1. reducing use of chemical fertilizers and improving their efficiency.
2. pesticide reduction and pest control

✚ resource utilization of livestock manure

1. recycle model and measures for livestock and poultry manure
2. recycling of agricultural and rural wastewater

✚ comprehensive promotion of agricultural waste recycling

1. comprehensive utilization of crop straw
2. reduction and recycling of agricultural film residues

Expansion of the Service Sector Circular Development System

postal delivery

1. accelerate use of new energy vehicles
2. green cycle development of express delivery packaging

B

A

transport and logistics

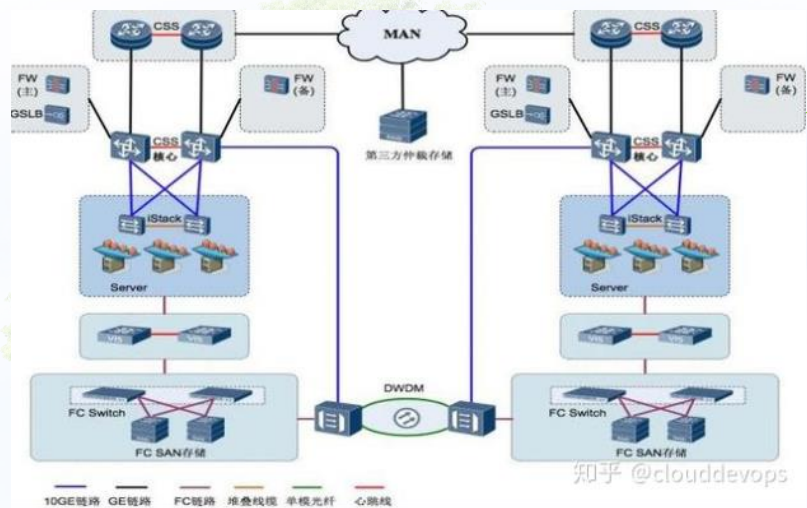
1. upgrading green transport infrastructure
2. strengthening logistics transport organisation and management
3. reverse logistics recycling system

C

consumer lifestyle

1. green mall
2. service-oriented business cycle model
3. plastic products ban & restrictions
4. optimizing the secondhand market

green circular development in the industrial park



Industrial Park Circular Reform

- promoting the park's recycling transformation, improving the degree of industrial recycling in the park; building a public platform for resource sharing, waste disposal and efficient services; strengthening material flow management; enhancing the park's industrial recycling links, actively utilising waste heat and pressure resources; promoting uptake of heat/power cogeneration, distributed energy and integrated photovoltaic energy storage systems; promoting the graded use of energy and promoting energy efficiency
- building centralised sewage treatment and reuse facilities in the park and strengthening sewage treatment and recycling;

National Green Industry Demonstration Base

- selecting industrial parks with good basic conditions to focus on concentration of green industries, improving R&D and production capacity of clean production; enlarging and strengthening leading green industries; building a green industrial system with clean energy, NEVs, energy-saving and environmental protection equipment manufacturing as its core;
- encourage park to promote construction of green factories for plant intensification, making raw materials environmental harmless, clean production, waste utilization and low-carbon energy.



Creating a new system of special circular development

1. strengthening seawater desalination and full-utilization industry
 - comprehensive set-up of national technology innovation centre for seawater resources utilisation integrating R&D, incubation, production, integration, inspection and engineering services, and build into model project as global industry leader.
 - promotion of large-scale application of desalinated water, implementing policies according to the regional situation; adopting the “Production for Water” and “Water for Production” approaches; desalinated water coordination & allocation, effectively promoting full application of desalinated water.
 - Tianjin Desalination Industry (Talent) Union to play role in integrating quality resources from enterprises in planning and design, equipment manufacturing, process integration, scientific research and end-users to further strengthen up- and downstream industrial chains and accelerate concentration of desalination industries.



Creating a new system of special circular development

2. developing recycling of energy resources among special industries



- industrial symbiotic networks and green supply chains, focusing on "intelligent technology industries + three emerging industries of biomedicine, new energy and new materials + aerospace, high-end equipment, automotive & petroleum/ petrochemical" products and enterprises as drivers of industrial chain cluster development; improving overall material utilization rate of the industrial park.

- hydrogen energy production base, support technological research and application of hydrogen energy e.g. hydrogen production, storage and transportation, refuelling and fuel cells; promote projects to further improve the quality of hydrogen to hydrogen fuel cell application standards.
- construction of hydrogen energy demonstration industrial parks
- hydrogen energy industry chain and demonstration operations of hydrogen fuel-cell logistics vehicles, forklifts and port machinery.



- demonstration project for industrial clusters and industry-city integration
- accelerated formation of innovation-led, multi-element, space-intensified and liveable industrial-ecological complexes
- digital transformation of infrastructure e.g. transportation, logistics, ecological and environmental protection, and water conservancy; construction of facilities for shared use of resources and environmental facilities, intelligent use of energy resources, and centralized treatment of pollutants in industrial clusters.



Thank you
for your
attention!

