CLEANCONNECT

CONGRESS 2014


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Clean Connect The World

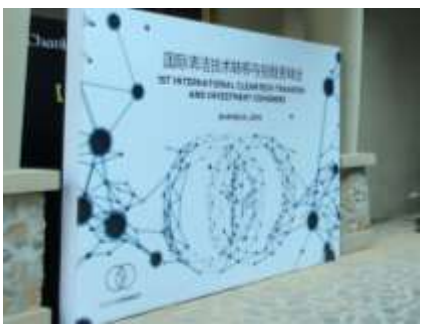
The 1st International CleanTech Transfer and Investment Congress (CleanConnect 2014) was successfully held at Sofitel Hotel in Shanghai on Nov. 4th and 5th, 2014.

The world is facing unprecedented environmental and energy challenges. Meanwhile, the urgent need to reduce dependence on fossil fuels and protect the environment has given rise to a large number of investment opportunities. Cleantech is driving the global economy to another boom, while cleantech innovation is promoting green economy growth and sustainable development.

The 1st International CleanTech Transfer and Investment Congress established connection between oversea clean technology and the Chinese market. At the congress, International cleantech entrepreneurs from different countries were able to communicate thoroughly with Chinese entrepreneurs, investors, governments, research institutes, and technology transfer agencies, exploring the best way to build partnership. The congress is aiming to build a sustainable ecosystem so that more and more international clean technology can be utilized in China.


ONNECT

CONTENT 目录



Welcom to CleanConnect

CleanConnect Chair | Dr. Xurong

Today is the first day of the year. It has been threescore days since the last time we met. May the sun shine warm upon your face.

Just as the newborn starts to develop memories at the age of two months, this time I wish the New Year present from China could refresh your memory of the newly born CleanConnect in 2014 and raise your expectations of the CleanConnect in 2015.

The cleantech industry in China was still going gangbusters in the past months. The government introduced policies intensively for PPP(Public-Private Partnership). The release of The Action Plan for Water Pollution Prevention and Control gave a strong impetus to the domestic water industry, and today, the new Environmental Protection Law officially comes into effect. In a time of increasingly matured business, policies and legislations in the industry, what we need to think about is what can CleanConnect expect in 2015?

Simplicity. When you're looking for a partner for technology, market and investment, CleanConnect could help you easily find the right persons and get to them right away.

Professionalism. CleanConnect is ready to help you out with any queries about whether it's possible to find a market or investors in China and map out a set of local strategies for you.

Crowdsourcing. The dedicated think tank of CleanConnect would be at your service all the time to meet your requirements.

Trust. The elaborate assessments from CleanConnect enable you to avoid risks and pitfalls in the Chinese market.

To get the most valuable information through the easiest way in the volatile business environment of today's China is the trump card CleanConnect hold. The upcoming CleanConnect Summit in 2015 would definitely be the best opportunity to examine the value creation.

I'm looking forward to seeing you again at the CleanConnect Summit in 2015. The rendezvous two months ago is just the first step on journey. We'll carry on creating value and sharing value to support you all the way.

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Magazine

Editor
曹燕华 Nancy Cao
Designer
陈永海 Yonghai Chen
刘毓琪 Summer Liu
Translator
田敏辉 Minhui Tian
张珅 Shen Zhang
胡瀛 Ying Hu
洪晓丹 Dores Hong
Proofreading
Dr. Tommy Jacobson
Markus Kitunen

umore CLEANCONNECT

A1203 Watts Gallop Tower
2816 Yixian Road
Shanghai 200441, China

+86 21 36380310
hey@umoregroup.com
www.cleanconnect.cn
www.umoregroup.com

Wechat：Umoregroup

Innovation System in Finland

Innovation is in the national DNA of Finland, and it is the engine of Finnish economic development. Tekes plays an important role to engineer the power of innovation. The development of cleantech in China is in huge demand of innovation, and China wants to learn how the innovation system works in Finland. With the dynamic change of the market and technology development, business development is not only tightly connected to innovation but also to who you will partner with.

Head of Tekes Shanghai, Consul of Science and Technology | Jarmo Heinonen

Finland, a Nordic country with a population of 5.4 million, has 70% forest coverage rate and 80℃ temperature difference between seasons. This small Nordic country has created a miracle: it has transformed from agricultural country to industrial country by all efforts, furthermore, an economy based on knowledge. Less than a century. In 2013 and 2014, Finland ranked globally No. 1 in the following fields: healthcare and basic education, higher education and training, new technology availability, innovation, scientific research institution, intellectual property protection.

Innovation System in Finland

With more than 6 billion euros research budget per year, Finnish companies, universities, research institutions and government build a comprehensive innovation network. In this network, Finland' s several government organizations (such as Tekes, Academy of Finland, Sitra and VTT) will guide and influence innovation at country level by funding specific innovation programs.

Finnish research and innovation committee chaired by prime minister is the innovation organization. It discusses major issues of technology innovation regularly.

The second level of innovation organizations are the Academy of Finland under ministry of education and culture, Tekes and VTT under Ministry of employment and economy.

Among them, the Academy of Finland offers support for basic research; Tekes mainly supports companies' high-risk technology innovation and brings basic innovations more rapidly into the market; while VTT provides competencies and scientific knowledge for companies that need high-end technology. With the help of Tekes, the innovation of enterprise will pass the round of test in the market. Afterwards Finnvera will support their globalization.

The Advantage of Innovation System in Finland

The national consensus of innovation policy contributes to the success of Finnish National Innovation System: innovation is the basis of all industrial revolutions and the most important link of national development strategy. Finland believes that innovation cannot work without cooperation, which>>

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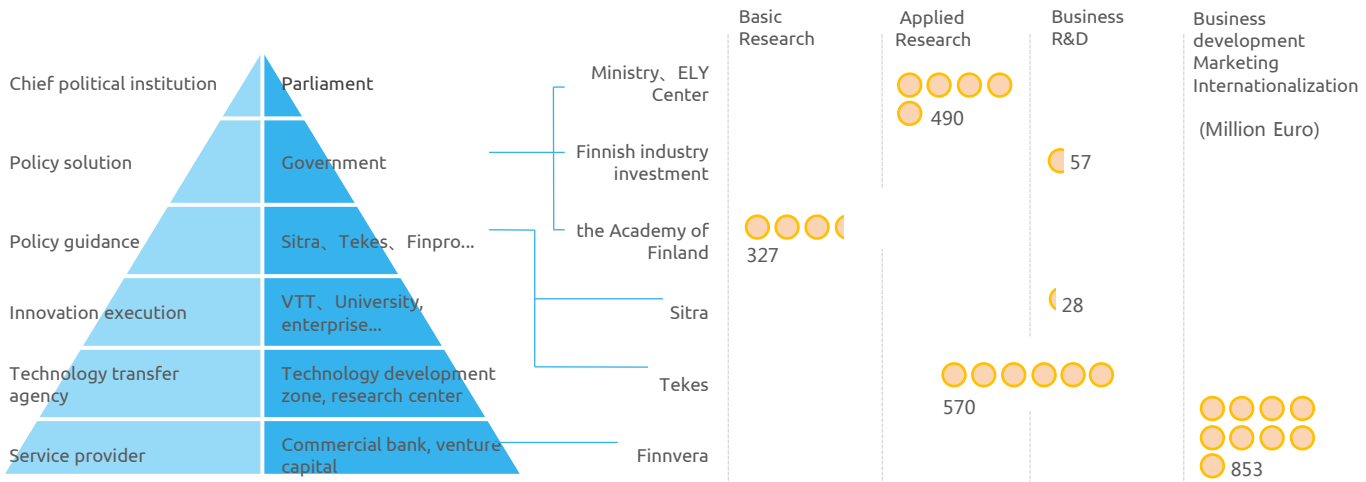

Finnish national innovation system

includes cooperation between scientific research institution and company, innovation and investment, big companies and SMEs, and cooperation between various regions and the entire world.

Finland has made a good balance in innovation measures. In regard to funding targets, Finland achieved a good balance between economy, environment and general wellbeing. As for funding projects, Finland invests in basic research, application, industrial research and project development, and makes a perfect combination between R&D investments and Venture Capital investments

Finland focuses on cooperation and network construction. They put a lot of effort on the cooperation between different public innovation organizations, and cooperation between science, technology and innovation. The international network is closely combined with foresight commercial activities.

The Achievements of Finnish Innovation System

As the main investment institutions of Finland technology innovation system, Tekes budgets 550 million euros per year for the investment of technical research and business innovation. Among them, small- and medium-sized companies of Finland are the beneficiaries of 67% investment fund, and the key industries of the investment are clean technologies, biological economy and digitization. The aim of Tekes is driving innovative enterprise internationalization, realizing sustainable growth. The efforts of Tekes have been confirmed by realistic data as attached. ∞

Tekes has partly funded **65%** of well-know Finnish innovations

Projects that were completed in 2013 generated **1,270** products, services or processes

9/10 fastest-growing technology companies in Finland are Tekes customers

In SMEs funded by Tekes, the annual growth of exports was **20%** In 2009-2012

SMEs ecpect projects in 2013 to produce **7.7** billion euros in turnover during the target year

over **80%** of Tekes customers state that the Tekes funding was a significant factor in their success

Projects that were completed in 2012 produced **840** academic theses

For every euro invested by Tekes, companies increase their own R&D expenditure by **2** euros

The annual growth of turnover in young innovative companies funded by Tekes was **150%**

In SMEs funded by Tekes, the increase of job was **17%** units faster than in other SMEs in 2009-2012

In SMEs funded by Tekes, the increase of turnover was **20%** units faster than in other SMEs in 2009-2012

Projects that were completed in 2013 resulted in **1,030** patents or patent applications

Bay Valley：Shanghai Technology Transfer and Innovation Center

Bay Valley Technology Park has exciting news recently, it has been appointed as the Eastern National Technology Transfer Center by the Ministry of Science. Zhongguancun in Beijing, is northern national technology transfer center and Shenzhen, southern Center. Bay Valley will play an positive role in building Shanghai as" Science and technology innovation center with global impact".

Bay Valley innovation center, Managing director | Mingfeng Yan

The enterprises must better themselves in terms of innovation, and Technology transfer is the key.

About Bay Valley

Bay Valley Technology Park is located in new Jiangwan Town, Shanghai, where preserved intact Natural ecological wetland for 70 years. A total construction area of more than 500k m2, by individual offices, R&D headquarters, business centers, and commercial leisure facilities. With neighbors like Fudan university and other universities nearby, Bay Valley has natural advantage to promote technology innovation.

Bay Valley Tech Park operates three main sectors: Technological real estate, technological finance and entrepreneur services. Under technological real estate, there are ten tech-parks with more than 5000 companies. The parks are: Shanghai Lingang Marine Technology Enterprise and Innovation Center, National University Science Park of SHUFE, Fudan University Science Park, etc.

Bay Valley wishes that more than 5000 companies could be getting together according to their different stages by the desire of technology transfer. Therefore, there is Bay Valley Model so called "technology park and technology transfer center". Bay Valley believes the technology transfer would be the trend, and it is an important measure in China's economic transformation. And this can be seen from the following three aspects:

Firstly, there is a major adjustment in global economy and China ushered in a major opportunity to integrate global technical resources;

Secondly, it's important that a national innovation-driven strategy to accelerate technology transfer and conversion;

Thirdly, build a platform for technology transfer is an important measure to seize the high ground of technological innovation.

Facing the new situation, relying on the unique advantages, Shanghai is making its efforts to build a global impact innovation center. Bay Valley is particularly rich in opportunities in this advantage.

This economic zone has the regional advantage called "One body with Two Wings", including Jiangsu and Zhejiang, led by Shanghai. It has the highest rate of economic development, the largest scale of economic aggregate and the biggest economic potential. Shanghai united both Jiangsu and Zhejiang Science and Technology department had started several works on the "United research programs" in Yangtze River Delta region. Yangtze River Delta region has a strong industrial base, it has only 2.1% national territorial area but centralized 1/4 economic aggregate and over 1/4 industrial aggregate of the whole country, and the tendency of centralizing is still getting stronger. It is becoming the "hot spot" among both domestic and foreign investors because of its good infrastructure, >>

advanced science & technology education and gradually completed policy environment. Some transnational capitals carry out their capital on a large scale toward Yangtze River Delta Region. This area has rich research resources, 66 academicians in Shanghai, which can provide continued support for the research. Shanghai is also generally accepted as having the advantage of mature financial environment, unique institution and open city culture.

What Bay Valley Do

Bay Valley on the strategic positioning of intent to create "Bay Valley + BVIC (Bay Valley Innovation Center)", with the connotation of "Shanghai Science and Technology innovation engine", "international merger and acquisition platform", "International technology transfer hub". This position is gradually formed on the basic of the above factors in order to link the circulation pattern to create a sustainable vitality for the industry.

Bay Valley ‘s strategic goal is to build Science and Technology Innovation Engine in Shanghai, which requires a group of integrated service institutions who possess the capability of technology transfer. They can create a full-functional and a sound-environmental technology transfer ecosystem. Bay Valley is promoting technology transfer with a series of related industrial upgrading of enterprises, and cultivating a professional team of technology transfer and international mergers and acquisitions.

By determining the strategic positioning and goals, It extends a number of specific tasks including the establishment of technical trading market, financial and technological innovation and service platform, technology redesign service, technology transfer services platform, technology transfer data service platform, intellectual property services platform.

In order to be able to complete these specific tasks, Bay Valley needs to capture the existing resources.

Firstly, the eastern National Technology Transfer Center. National Science and Technology Awarded, the City Commission authorized the technology transfer center. Its international influence is to secure shanghai as innovation center in the globe, by making the top-level design, and ultimately by establishing online technology trade platform. >>

Secondly, Shanghai university technology market. Ministry of Education awarded City Board of Education authorized Shanghai university technology market, based on market-oriented approach to accelerate the industrialization of research innovations. It will connect university research resources directly to enterprises. Bay Valley will also establish and train the new generation of technology brokers in shanghai, build and operate search and communicate platform of university technology transfer.

Thirdly, MIT-CBA China Innovation Program. Bay Valley is now signed with the MIT school, by means of technical superiority and global influence of the international top universities, academic research resources to build an international technology transfer platform.

Fourth, the European Clare Crawford international investment bank. Clare Crawford European international investment bank in Europe to focus on mid-sized international mergers and acquisitions investment bank, with its 35 offices in 25 countries to serve on cross-border transactions, direct docking of European local small businesses and medium-sized innovative family business. The cooperation of Bay Valley and Europe Clare Crawford international investment bank will facilitate a faster pace of mergers and acquisitions to build an international platform for innovation capacity.

Contact with Bay Valley

Bay Valley aims to build a cooperative network. Various companies will be able to work with each other through Bay Valley, including technological companies, innovative product and service companies, structural innovative companies and so on. Companies can take advantage of the Yangtze River Delta region to cooperate with MNCs, restructuring manufacturers and innovative SMCs. Bay Valley will also provide financial and professional services. Besides, Bay Valley seeks to invest, cooperate with funds, provide services to innovations, support technological restructuring companies with R&D, work with technology transferring organizations and look forward to merger and acquisitions. Companies landing Bay Valley will be able to share resources and cooperate at the origin of innovation. ∞

image：Justin, Survival Mode

Investment in China Cleantech

Qiming Ventures, Partner | Yong Zhang

Cleantech under the drive of macro-control

Now is the time to invest in energy conservation within the traditional industries. The government emphasises environmental solutions everyday. There won‘t be a harmonious society if we don’t carry out air pollution control and water treatment. There is no doubt that the whole of society is supporting the development of clean technology. But there is a key issue that a lot of Chinese laws lacking of implementation, even though Chinese laws covers a wide range of the industry. We see that there is a lot missing focusses during the so-called legislative impel. However, with economic development, not only the Chinese economic system, but also the government system has been continuously improved.

From an investment point of view, the Chinese government has taken many measures in clean technology and there is a fairly solid foundation. Firstly, the legal system in China is gradually improving. Secondly, it is getting more and more strict in terms of the legislative implementation. I would like to see two >>

things happening in amending of the new environmental Law:
1) The sanctions towards perpetrators of environmental issues should continue, because it creates a strong deterrence.
2) There should be not only financial penalties, but also administrative penalties.

Thirdly, now money talks. Same as PPP (Public Private Partnership) model, it needs a very fine provision in terms of money. It is not only the PPP business model, but also questions of "how to make an orderly division to the central and local finance in terms of funds"; "how to form a complete set of private and government funds"? Moreover, how shall the Chinese funds interact with foreign funds and to boost the entire industry in a advantageous order?

Investment in clean technologies

Cleantech industry meets the policy demands and is also welcomed by the public. However cleantech industry has been receiving little attention in the primary market and has been difficult to finance in the equity market for cleantech companies. This is not a business issue, but the entire industry format decides that cleantech is popular in the secondary market and only praised in the primary market, especially when there is massive investment and a high bid price on the TMT (Technology, Media, Telecom) sector, and the total amount of VC in the entire primary market has been declining. The main reason is that there are investments from people without expertise and with high expectations. The irrationality from the whole industry creates an unreasonable set for the entire capitals. You can say that the global investment in clean technology is almost collapsing. For investment in clean technology, it requires a constant put-in, and needs a lot of money to get things done, but the return is not very high, generally around 10 times. Therefore, the expectation to cleantech investment can only be a fine subject with good development. In a way, should cleantech not be a business to VC, but to PE. The problem is that the investment to cleantech will not wait until technology is mature. Therefore it is very important in the primary market that we can draw a standard for forerunners. Actually, there is an equation in the cleantech investment to explain how these VC/PE make money.

The return to VC/PE is the earning plus the enlargement to the company value. When the return to cleantech is relatively stable, the investor needs to understand the industry and nurture the company growth. Therefore, investors hope to find qualified companies that they share values with, and on this basis, magnify the company's core business.

M&A in China

It has been booming on the mergers and acquisitions in the Chinese capital market since 2013. However, on the secondary market, there are a lot of M&A, which are not for an industrial purpose, but for the purpose of capital requirements and operations. Although there are a lot M&A in the existing capital markets, but most of them are irrational and non-systemic behaviour. Within the next two to three years, the real rational M&A action should consider how to enlarge the unique value of the company. Therefore, no matter how many competitive acquisition actions happened in the capital market, we need to be cautious on the current ones, which can easily lead to losing your own company. Is the purpose of business really to make quick money? How to coordinate a listed company to make quick money? There are risks. We need to think about if we can push a company to a better platform through M&A.

M&A from an innovative perspective

In the field of research and development, China's advantage of innovation inclines more to development than to research. Chinese companies are doing better at developing and improving existing products. Furthermore, though the highly effective domestic capital market, with the strong ability of engineering development and a huge market advantage, Chinese companies can keep pace with foreign companies that hold know-how expertise.
It is clear that China has two advantages of innovation. First is the ability of industrial re-development, which is so-called developing faster and better products in a low-cost way. China is very good at this. The second is the massive market in China. China provides a lot of funds and massive market. However, it is not only important to sell products within China market after producing, but also having this best trial market concerning the process of product development. ∞

Creating a Sustainable Energy Future with Technology

Shell Techworks GM | Qun Deng

Human beings are going to face serious energy challenges. There are 3 facts: 1. Energy consumption will continue to grow; 2. Supply cannot keep up with the growth of demands; 3. Increasing pressure on the environment. Energy supply is already under pressure while global energy demand is expected to double in the current basis by 2050.Therefore, in addition to explore more oil and gas resources, energy suppliers should also improve their capability of handling carbon dioxide, enhance energy efficiency, and assume more obligations on environmental protection.

Shell is a global group of energy and petrochemical companies. The headquarters is located in Hague, the Netherlands. Innovation is the primary weapon for Shell to meet challenges brought by the new energy future.

Innovation at Shell

Shell believes that human ingenuity and technology innovation hold the key to deliver sustainable energy needed today and in the future. Shell has been a technology pioneer for over 100 years. Bright ideas from our people and partners have resulted in some groundbreaking innovations. These are not always immediately visible to the public: some are in wells underground for example, and others are in oceans. But they all contribute to improving our industry and helping to meet our customers' needs.

Shell has 45,000 technical and engineering staff worldwide. Our global network of technical centers located close to our main markets and our production sites drive forward the innovation needed to meet future energy challenges. Around 10% of our >>

technical staff conduct research and development at our technology centers in 11 countries. Their knowledge and creativity help us to meet the world's growing need for energy in a socially and environmentally responsible way.

Meanwhile, Shell has internationally recognized Chief Scientists who help to enhance the expertise of our staff and act as ambassadors for Shell technology, collaborating with academics and other industry experts to lead the way in their area of expertise. They work with our Chief Technology Officer to develop and deliver technologies that support our current business and to identify emerging technologies that will help shape the future of energy.

Techworks

In such a big company, Shell finds that the efficiency of innovation is still problematic. The signal has been transmitted to the R & D departments once the market has specific needs, and then into business units after forming a program. The chain is too long, and the efficiency of business growth is too low. Therefore, Shell has a solution - Techworks.

Techworks introduces novel ideas and professional knowledge by open innovation. Here, experts from different Industries, with different experiences gathered together offer a variety of solutions for Shell with mature technology.

This innovation model is not unique in the history. Dr. Martin Locke, from the United States, gathered 10 leading experts in various fields and designed the Mach 3 military aircraft with highest technology within six-month during World War II. That was a great step in the industry.

Three Characteristics on Techworks:

- Technology is cross-border. In order to become an innovator in the industry. Shell has been seeking a suitable source of technology in the field of health care industry, TMT and so on.
- The period of one project is short, about 12 to 18 months on average.
- Based on business demand, we commercialize mature technology and projects that can be applied in Shell.

Compared with semiconductors, TMT and other fields, energy and chemical fields are still a relatively conservative. Shell hopes to introduce advanced technology from other industries to Shell. For example, magnetic sensors used in 70-80% of smart phones which can be applied to Shell's deepwater drilling and oil extraction process. Furthermore, >>

China is the best market to develop 1 to 1000. With the good technology, company could realize demonstration rapidly.

the unmanned aerial ocean submarine for searching MH370, equipped with ultrasound systems will make contribution to exploring Shell's deepwater landforms.

There are four stages that Shell put a new technology from invention to application: Discovery, Development, Demonstration and Deployment.

The operating scope of Innovative Works focused on D3 and D4. We aim to search for low-risk and high-tech applications which could be used in the ecosystem at Shell. At the same time, Innovative Works has its own investment platform to provide funds for technology demonstration in China.

Shell in China

Over the past 120 years, Shell has been part of many historic moments of the Chinese society: the early modernization, the difficult years during World War II and the final triumph, the dawn of 'New China', the thawing tides of Reform and Opening-Up Policy, the torch of the Beijing Olympic Games and the unveiling of the well-known "Chinese Dream". We are proud of our long and rich heritage in China, which testifies to our long-term commitment to this grand country.

Shell in China by numbers
One of the largest foreign investors in China;
The foreign partner in Nanhai Petrochemicals Project, one of the largest foreign joint ventures and petrochemical investments in China;
The largest international supplier of LNG to China;
The largest international lubricants marketer in China;
The largest international bitumen supplier in China;
The leading international supplier of coal gasification technologies in China; The largest energy services / international facilities buyer in China;

In the next two years, Shell Techworks will have three goals: 1.To have more demonstration projects; 2.To change the rules of the game with more crazy ideas; 3.To solve actual demands. Shell believes that with huge market capacity and lower manufacturing costs Techworks will have a wider world in China.

Shell, Creating a Sustainable Energy Future with Technology! ∞

CleanConnect

dedicated to opening China market to Global Cleantech Innovators

accelerates market entry
provides access to customers/investors,
shares commercialization best practices
uses network-wide technology platforms
to deliver programming and funding in real time

programmatic components:

softlanding China Program [p27]
Global Cleantech Dreamlist Program [p57]
iCleanConnect - Online Platform [June 2015]

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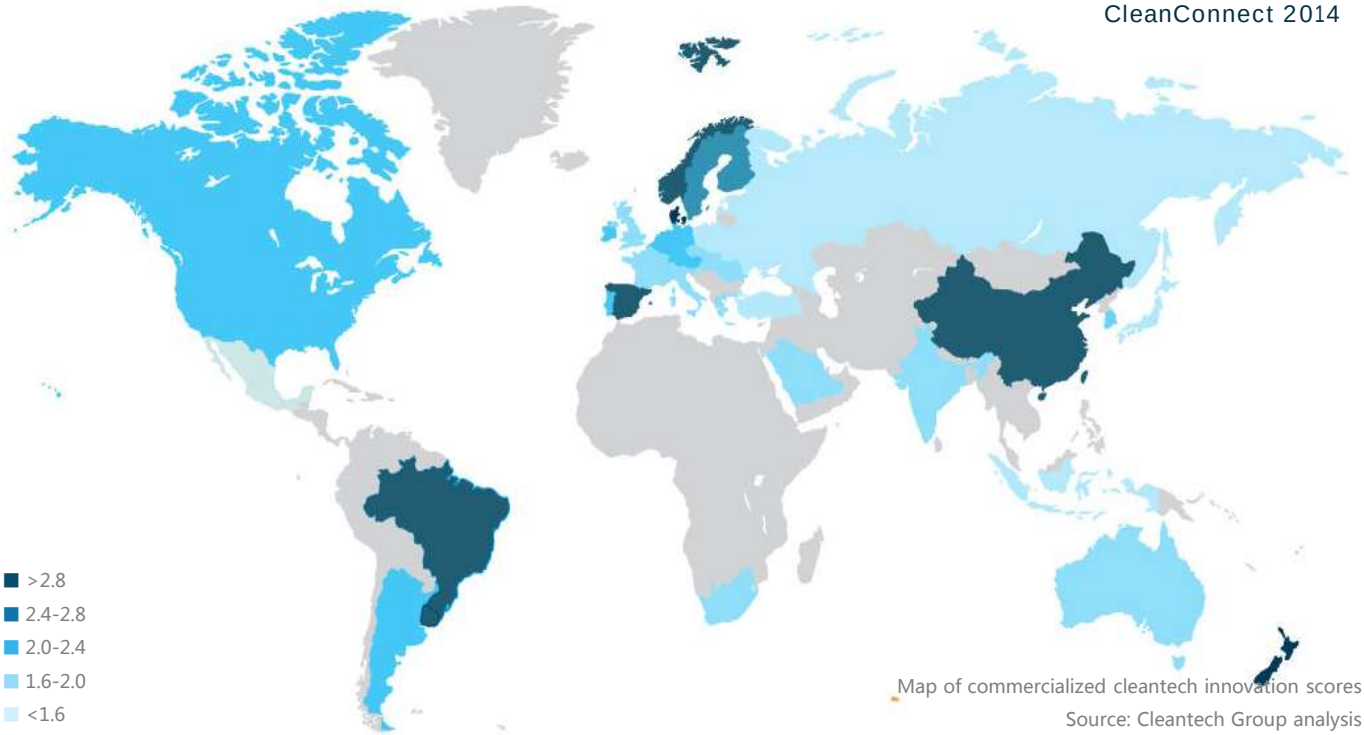


Map of commercialized cleantech innovation scores
Source: Cleantech Group analysis

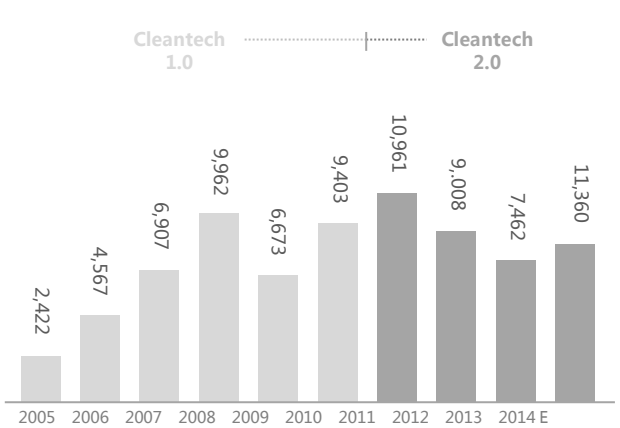
The Global Cleantech Story: Evolution

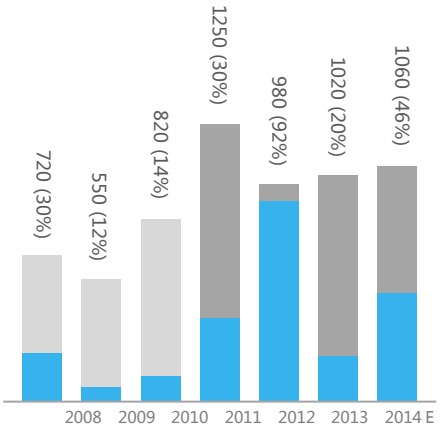
Adapted from Global Cleantech Innovation Index 2014

Originally thought of as a venture capital investment niche theme, cleantech is growing up – and now permeates all realms of the economy, impacting industries as diverse as ICT, Healthcare, Food, Electronics, Chemicals and Retail. The term has been used interchangeably with 'resource innovation', 'industrial efficiency', 'sustainable technology', but all essentially have the same meaning – doing more with less (e.g. fewer materials, less energy expenditure, reduced water availability), while making money doing so. For a time, it seemed like cleantech was associated almost exclusively with the energy realm (renewable energy, energy efficiency), but its true and wider meaning is now proliferating, increasingly linked to solving ever more prominent world challenges – such as clean water availability, sustainable food sourcing, land and air pollution, and low carbon transportation. Cleantech venture capital is still primarily made up of energy-related technologies (51 percent in 2013), though much less so compared to 77 percent in 2010, and much more of the energy element is around efficiencies, as opposed to renewables generation. This is partially explained by other cleantech sectors gaining favour as well as a 'post bubble' landscape for renewables (especially solar), in which many venture capital investors have pulled out since the hype and height of stimulus spending in 2008, in addition to some high-profile bankruptcies in the U.S. and Europe.

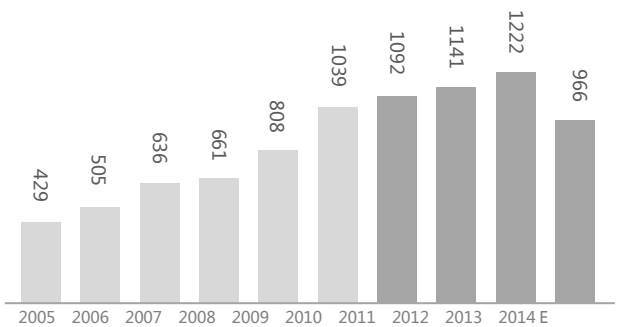
Cleantech Start-up Generators:
'Cleantech start-up generators' is a term we use to describe countries that are extremely good at developing the right set of innovation tools for their local startups, combined with a set of stimuli to make the cleantech theme attractive to entrepreneurs. These countries tend to agree on the long-term necessity of investing in clean technologies and are gearing up in various ways to ensure future wealth and prosperity for their economies.

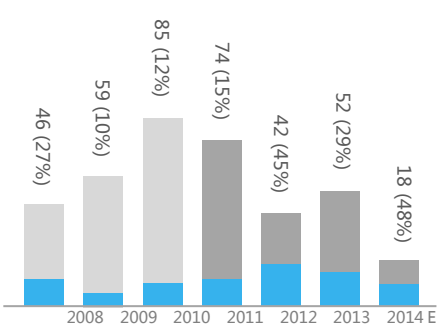
Israel is able to compensate for its small domestic market, sensitive geopolitical setting, and water constraint by drawing the attention of both local and foreign investors to bet on its pool of high-tech entrepreneurs. The country is the cleantech innovation archetype for both embedding entrepreneurial spirit into its educational system and into its society's everyday norms as well as for predisposing its start-ups to resource innovation >>





Global and China Cleantech investment (million USD), China cross border investment (%)





Global and China Cleantech investment cases China cross border investment (%)

* data source : i3

as a survival mechanism to overcome resource constraints and energy dependency. Relative to the size of its economy, Israel has had a disproportionate number of cleantech companies (19 in total) voted by the cleantech community into the shortlist of the Global Cleantech 100 index23 over the past 3 years. Examples of such innovators include Kaiima (the developer of proprietary non-GMO genomic based breeding technologies) and Emefcy (the developer of Electrogenic Bioreactors (EBR) that treat industrial wastewater).

Finland's harsh climate, lack of fossil fuel resources and recently-sagging ICT industry (with Nokia facing high competition from Apple products),24 has propelled the country towards creating new employment prospects in cleantech-related industrial activities. Finnish cleantech businesses currently employ around 50,000 people, with 40,000 new jobs expected to be created by 2020 (a significant amount given its population of only 5 million).25 Companies like MetGen are innovating around the country's well known pulp and paper industry, and many others (over 50 percent) are focused on Energy Efficiency solutions (leveraging their IT human capital).

Ireland enjoys strong institutions, a vibrant science, engineering and ICT workforce, and market sophistication – with a good inflow of Foreign Direct Investment (FDI). Ireland anticipates that cleantech jobs will grow to 80,000 by 2020.26 The country has the advantage of vast natural resources specifically in tidal/wave energy, wind energy and various feedstocks for the production of biofuels. Ireland is investing heavily in their renewables capacity, with pioneers like Mainstream Renewable Power planning to build a 138MW Jeffrey's Bay wind farm. Ireland has also held a number of initiatives through the Greenway (Dublin's Cleantech Cluster) over the past few years, to encourage the growth of its cleantech sector both locally and internationally.

Cleantech innovation cycle and death valley

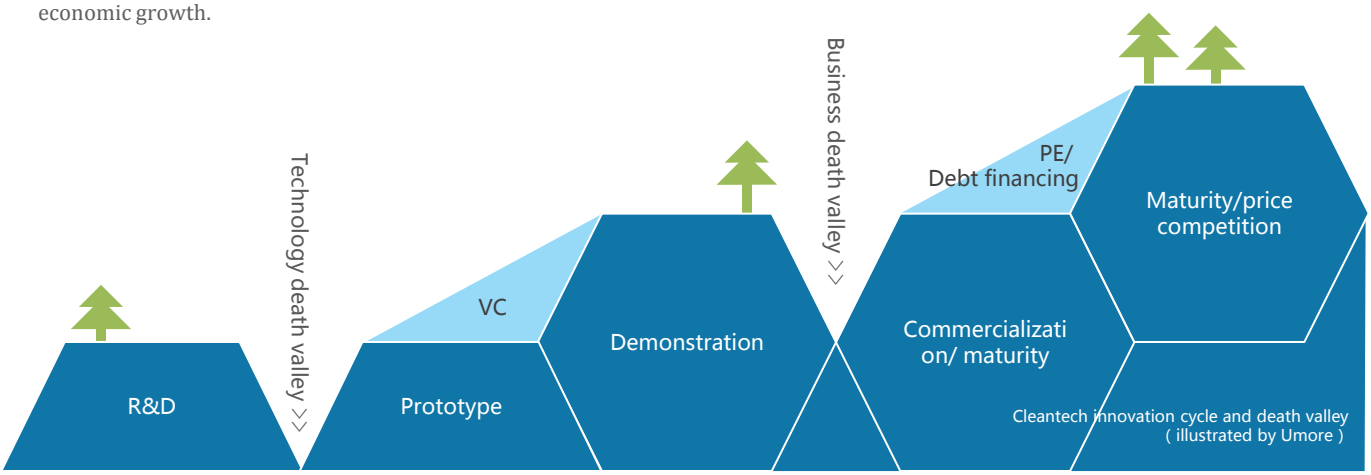
Like other innovation areas, cleantech seeks to disrupt status quo business models and leverage on-going global and local trends in order to better the lives of millions. However, the reality remains that a very small percentage of companies succeed with approximately 75 percent of start-ups failing. Success is hard to come by, given that there are many complex factors which must coalesce at the right time. >>

Today's entrepreneurs are often hindered by a lack of access to the resources essential to move beyond 'the valley of death' - the point just before a company's product or service reaches market commercialization and the company runs out of cash. Entrepreneurs are affected by the dynamics attributable to the country or region in which they reside, for example, 1) individuals' knowledge and credentials for starting a business - depending upon education and training available; 2) market openness, regulation, and available financial support and; 3) cultural norms and prestige of an entrepreneurial career (does the media pay attention to entrepreneurs? how does a society perceive failure?).

Moreover, start-ups cannot achieve their goals without the help of private and public actors, and the right mix of market forces, environmental and innovation policies, and access to key networks. Investors are attracted almost exclusively to opportunity sets in specific geographies, where start-ups have access to all the aforementioned resources as well as favourable market conditions - a self-fulfilling cycle. Cleantech start-ups that require large amounts of capital to scale will need to settle in geographies that are known to attract private and public capital and where they can access knowledge centers like universities, business accelerators, or open-innovation labs at an early stage of development, or channel partners and access to customers at a later stage. Countries that understand this reality and are able to act on it by facilitating systems that connect start-ups with multiple avenues for growth will likely increase the success rates of their local start-ups and spur economic growth.

Strong Cleantech Commercializes:
Countries that are strong commercializes of cleantech today , tend to have strong economic and social pressures to procure clean technology solutions and products as they face pressure to address more visible environmental and resource problems, compared to countries that have 100 percent of their population with access to electricity, water, food etc. These countries are not driven simply by moral commitments to address climate change but also by the urgency to deploy clean technologies to solve mounting public health and environmental issues.

China in particular has an impetus to speed up investment in cleantech so as to curb the effects of air pollution in the country. The Government's strategy to deploy cleantech across its economy has provided start-ups with a burgeoning market. Chinese cleantech companies enjoy preferential corporate tax rates and are offered easy access to loans at low interest rates through the country's state-owned development bank. The fact that there were over 55 Chinese publicly listed cleantech companies on major international stock exchanges in 2013 (more than any other country in the world) is a testament to the sector's momentum and success in the country. Start-ups across the globe are now seeking access to the Chinese market, although they face greater hurdles (cultural challenges and unfamiliar business climates) than their local competitors. ∞



Cleantech innovation cycle and death valley
(illustrated by Umore)

Green Mining in Jiangsu Province

Jiangsu Mining Association Secretary General | Fusheng Hu

The new concept of mining industry includes wisdom mining, green mining, the rule of law mining and global mining. These concepts are not a separate system. They have mutual connections with each other. The rule of law mining has the longest history. While with the development of the situation, there always has been new interpretation. In the late '90s and early' 00s, the concept of the global mining develops with the economic globalization. The concept of the green mining is in last few years appearing with development of environmental protection, but needs to be upgraded. The concept of the smart mining is recently proposed. It has not been formed maturely yet. But in the future, we can foresee it become popular concept for the mining worldwide.

Why mention the new concept of the mining but not of the mine? The mining includes all aspects of exploration, exploitation, separation, metallurgy, management and marketing. It includes not only internal operation, but also external environment. It needs both technique and management’ s requirements. With hard and soft power, the mining industry requires the capital-operation plan. Why mention four concepts of the mining? The four concepts are very indispensible and unique in the development of the mining industry. They lay particular emphasis on different aspects of the mining. They require the mining-structure adjustment, transformation mechanism and the innovation. When we adhere to these new concepts of the mining, the breakthrough will come true.

Today we focus on the new concept of the Green mining. The Green mining means in the process of the planning, exploration, exploitation and restoration, the mineral resources can be scientific and orderly controlled to protect maximum natural environment. During this period, the mineral resources can be most utilized and restored to obtain the maximum social and economic benefits. The whole process is in harmony with the surrounding environment and show respect for the natural-original ecology. The Green mining focuses on three aspects of the ecological benefit, the economic benefit and the social benefit to promote sustainable development. The traditional concept of the mineral resources means consumption of mineral resources and destruction of the ecological environment. With the new concept of the Green mining, we can use the mineral resources more effectively.

Behind the financial crisis stands the environmental crisis. We can have the recovery from the financial >>

crisis. Once the environmental crisis appears, it will lead to irreparable damage. The Green mining is a new growth point of the development in the mining industry. With the requirement of national sustainable development strategies and Chinese non-renewable-resources policy, Jiangsu Province first advocates the Green mining. The Green mining plays a tremendous role on the development of the mining science in our province.

The new concept of the Green mining from the department of land-resources and mining association in Jiangsu Province is different from the concept of National green mines. The Green mining is a comprehensive concept. It includes the subjective aspect and the objective aspect. It involves government guidance, the integration of resources, environmental management and mining’s plan. The content includes not only the recovery and utilization in the accompanying deposit, tailings, ’three wastes’, advanced technology, energy saving and emission, but also the measures about the mining-reclamation, the planning-mining and greening-development. "The development of the Green mining is the implementation of scientific development concept. It is the inevitable choice for promoting the transformation of economic development mode. It is a practical way to speed up the transformation of mining-development’s direction. It is an important method for strengthening corporate responsibility to protect the good development of the mining industry." writes in the report of Yang Weixin, chairman of the Mining Association in Jiangsu Province.

In order to enable Jiangsu to create a national green mine at the forefront of the country, the Mining Association and the Planning department in Jiangsu Province work together to promote the green-mine construction project. On the basis of Zhongyan Jintan Salt Co., Ltd as the first pilot unit of the national green mine, there are other 8 companies to apply for the pilot unit of the national green mine. They are Nanjing Yinmao Lead-zinc Mining Co., Ltd, China kaolin company, Suzhou Xiaomaoshan copper-lead-zinc company, Zhenjiang Weigang Iron ore, Jurong taini Cements Co., Ltd, Nanjing iron Group Mining Co., Ltd, Shanghai Meishan Mining Co., Ltd and Xuzhou Iron Mine Group Co., Ltd. After the fieldwork and first trial, these companies have been recommended by the Provincial Mining Association and the Provincial Department of land and resources. Now they have passed the examination by the Ministry of Land and Resources.

Nanjing Iron and Steel Mining (Group) Co., Ltd adheres to the principle of "environmental protection first, balance development between the resources and environmental protection" and improved the geological-environment treatment. Currently, the projects of the mine-geological environment treatment have been implemented for 4 stages. The total area of the environment treatment is nearly 300,000 square meters, fund 19 million RMB. Meanwhile, on the basis of the "the general plan for Nanjing Yeshan State-Mine Park", they invested a total of nearly 60 million to complete the construction of the core area of the landscape, functional areas, museums and related facilities. Nanjing Yeshan State-Mine Park has passed inspection by the Ministry of land-resources and Provincial Department of land-resources. It inaugurated on Jun 29th, 2013 and is rated as one of 48 sceneries in new Jinlin. We can take Nanjing Line 11 easily to reach this park. The company also implements actively green projects. Until now, mine green coverage rate reaches 84%. At the same time, it also purchased a road sweeper and sprinkler, set up a professional cleaning team, which greatly improved the mining environment. Green-business situation has gradually appeared.

Jiangsu Province preliminary shows some good characteristics of green mining. It is worth seriously to sum up, in order to improve our service levels and promote green-mining industry in the country. But from the perspective of national development strategies, the progress of Jiangsu green mining is still inadequate. It needs upgrading. Firstly, from the development of standards to specific implementation is still trapped in the green mine. We consider more for the internal condition and less for the external condition. We focus more on the change of hard power and less on the promotion of soft power. We should consider the entire mining industry as a whole to promote the green-mining work. Secondly, the Green Mining should make contacts with the Smart Mining to improve electronization, informatization, visualization, intelligentiation level and the establishment of intelligent system of green mining. ∞

CleanConnect
Snapshot

3Nov

11:02 / all staff arriving Sofitel hotel

14:36 / first guest at reception desk

21:45 / all guests reluctant to leave welcome cocktail networking party

4Nov

09:30 / Welcome speech by Dr. Xurong

10:25 / a lively discussion at tea break

13:35 / afternoon session at wine museum

14:02 / representatives from various countries and enterprises make speeches

15:26 / live demo of Cleantech equipment

19:12 / Nightfall no hindering the enthusiasm of the enterprise

19:58 / outdoor buffet dinner

5Nov

9:30 / Government layout for the future of green mining

9:47 / guests discuss actively all topics of Cleantech

10:52 / discussion on tea break

11:38 / memorable lunchon

13:18 / gift from foreign delegates

15:27 / enterpreneurs experience sharing

16:05 / cheers for the success

16:28 / meet in CleanConnect 2014

"The introduction of Cleantech to China has been going on, but it has been strengthened greatly even to a urgent level."。 （Hezi/drawing）

Best time to Get into China?

China environmental management style changing from "show type" to "result type"---- Only assessing environmental results such as "bluer sky, clearer water", which completely changes the business guidance of domestic enterprises, and stimulate needs of environmental technology upgrading at country level.

Oversea entrepreneurs are full of doubts of " going to China" : dress up, bring the samples, take whole day flight and sign the contract, get dunk in foreign place, but still the problem of "intellectual property rights".

Southern Weekend | Sophia Xie （reprint from Southern Weekend）

"Have you seen the air purifier made of real wood?"

"Please, close your eyes, take deep breath, then image you are in an ancient forest and enjoy the fresh air …." On 4th November 2014, the 1st International Cleantech Transfer and Investment congress, The CEO of AIR0, the Finnish manufacturer of air purifier, Mr. Valle Kulmala said to experts around: Have you seen an air purifier made of real wood?

Ten months ago, Mr. vallle Kulmala found Air0 with his technical teams and used Finland forest as selling point. The target market is China. "Air0 was founded to solve China air pollution. The purifying efficiency to PM2.5 of traditional low quality purifying machine is less than 90% (although claimed as >99%). This kind of machine cannot really be good to the human health. Combining Finland technology with China market, it is the very reason that Air0 decided to jump into the ‘red sea’ of China air purifying market. >>

Mr. Kulmala together with more than a dozen Finland CleanTech companies joined a “road show” as a group in China. Some of them brought a smart garbage can to support credit card and password, in order to prevent some other people throwing waste into the system in Europe; Some of them specially sell ‘carbon dioxide’ which will clean electronic devices such as hard drives or chip instead of water, In the future, this technology can be used to wash solar power plant in drier western China. Those companies have taken some training program about how to communicate with Chinese businessmen and /or investors before departure.

Recently, "road show" groups of Cleantech from all over the world are in an endless steam. An expert engaged in Cleantech transfer even declares: "the company either in China or on the way to China". "The introduction of Cleantech to China has been going on, but it has been strengthened greatly even to an urgent level." Director Qinglian Liu from Beijing international technology transfer center of Chinese academy of sciences told southern weekend journalist.

After arriving in the Netherlands, Mr. Xinming Zhang who is technology counsellor of Chinese embassy, has realized that the strongest cooperation intention between China and the Netherlands is Cleantech cooperation beside traditional dairy industry. "Not only the government, associations and enterprises, aim at Sino-Netherlands technology transfer, but also a lot of individual entrepreneurs." Mr. Xinming Zhang told southern weekend journalist.

"In the past, most of our project partners are from fortune 500 companies. Now more and more small and medium-sized enterprises from the United States have joined in technology transfer. The rate is increasing to nearly 50%. The reason why small enterprises are more active on transferring technology is that the competitive advantage of the small and medium enterprises is the technology. Seeking Chinese cooperation will help them transform technology into profit." Mr. Haihong Xu, the director of Sino-US energy cooperation project committee, which is the official cooperation project among energy collaboration between two countries, said that the technologies of Smart power grid, green buildings, green mining and hale gas are the strengths of the United States. American and European companies also have many advantages in other areas such as solid waste treatment, water treatment, and renewable energy technologies.

Stagnant Non-commercial technology transfer

In fact, for a long time, the international Cleantech transfer in China is not promising.

Generally, international technology transfer refers to cross borders activities of technology transfer through ways of commercial or non-commercial. Technology transfer is still the main channel to update existing technologies in developing countries.

The ways of technology transfer can be mainly divided into commercial and non-commercial. Non-commercial way can be achieved through technical cooperation and technical aid across borders, academic conferences, etc. At present, the mainstream of technology transfer is commercial ways.

On the perspective of Mr. Changmin Wu who is consultant from Stockholm convention Asia-pacific region technology transfer promotion center said "although Stockholm convention mentions that committed developed countries have obligation to assist developing country with technical supports but this convention isn’t strong enough to make a guarantee." "Government commits itself to fulfill the obligation of technology transfer but the core technologies are hard to obtain because those core technologies are hold by private companies." Mr. Changmin Wu told southern weekend journalist.

On the view of Mr. Zhifang Wang, member from the Foreign Economic Cooperation Office (FECO) Ministry of China Environmental Protection, the current non-commercial environmental technology transfer is facing some embarrassment such as the successful cases are very rare. The reason is lacking specialized assistant projects. It is a very long process to develop competence in developing countries in terms of policy and technology. Therefore, non-commercial international Cleantech transfer is almost stagnant. >>

On the one hand, developed countries usually transfers technologies with a lot of conditions. Transferred technologies are sometimes not applicable or outdated. Ms. Zhifang Wang said, taking Germany as an example, technical aid basically includes free experts, equipment providing, staff training, etc. Practical technologies transfer is not on the list.

Despite regional Cleantech transfer widespread across China and under cooperation agreements with foreign regions, but political significance speaks much louder than technology itself. "in 1980, China and the Europe had cooperated and exchanged in the field of Cleantech. But so far, substansive technology cooperation is still very little." Ms. Zhi-fang Wang said, market failure has become the biggest issue to carry out efficient international Cleantech transfer.

Technology upgrading is right after national standard

As for China, the situation is improving. Chairman of China environment investment union Mr. Shiwen Wang pointed out, the reason why commercial technology market became active is that the needs of upgrading clean technology is starting to release.

The most obvious change is the government's environmental standards become strict. Researcher Mr. Haixu Wang, Citic securities utilities and the environmental protection industry, declared in a special report, "Because of improvement of environmental standards, the direct influence on enterprises is higher requirement of environmental protection technology."

Take Atmosphere for instance, environmental ministry announced in 2013 that they would implement emission limits to key areas including 47 cities' thermal power plant and other six industries as well as coal-fired boiler. For Water, the sewage water quality still can't meet the national standards. Improvement of water quality standards is still the inevitable trend. For instance, Beijing local wastewater discharge standard has been greatly increased already.

Ms Qinglian Liu has huge impression of company reacting to policy stimulus. "For example, after nation increase the standards of heavy metal discharge in the field of electroplating industry, we already received a lot of technology transfer requests form enterprises in a week. The need of technology upgrading is right after national standards." Qinglian Liu states that the national policy do have direct effects on enterprises' need.

If we want to cultivate advanced environment manage ability based on basic existing environment technology, international technology cooperation will be the optimal path to solve China environmental problems.

The continuous prosperity of environmental industry leads to more capital injection. For example, Chinese environmental enterprises actively acquire oversea enterprises. "Obtaining technologies by M&A, is now affordable." Mr. Shiwen Wang said, whether buyer or seller, economics is basic gauge.

More importantly, macro environment management style is changing. Citic securities researcher Mr. Haixu Wang believes that PM2.5 control in Beijing will be taken into government restrictive inspection system. This indicates that China environmental treatment will upgrade from pollution control to improvement of environment quality. At same time, it also profoundly changes the government's demand orientation.

"In the past, the indicator of performance appraisal of a government on environment management is how many desulfurization denitration devices installed, what is sewage treatment rate. Now, no more consideration about how many factories are built. Once inspection system changed from processing control to results management, the key will be technology. " Mr. Shiwen Wang explained that management style change had caused fundamental transform of domestic business layout, which promoted demand explosion for Cleantech upgrading.

Intellectual property rights, the biggest obstacle Hindering China to eventually get the core Cleantech is intellectual property rights, which have been criticized a lot these years. >>

The international Cleantech summit was held in San Francisco, March 2014. A breakfast meeting called "go China" from 6:30am was crowded with people from all over the country. More than 40 American entrepreneurs were discussing a hot topic: when you dress up, bring samples, take whole day flight, sign the contract, get drunk in foreign place, still the problem of "intellectual property rights".

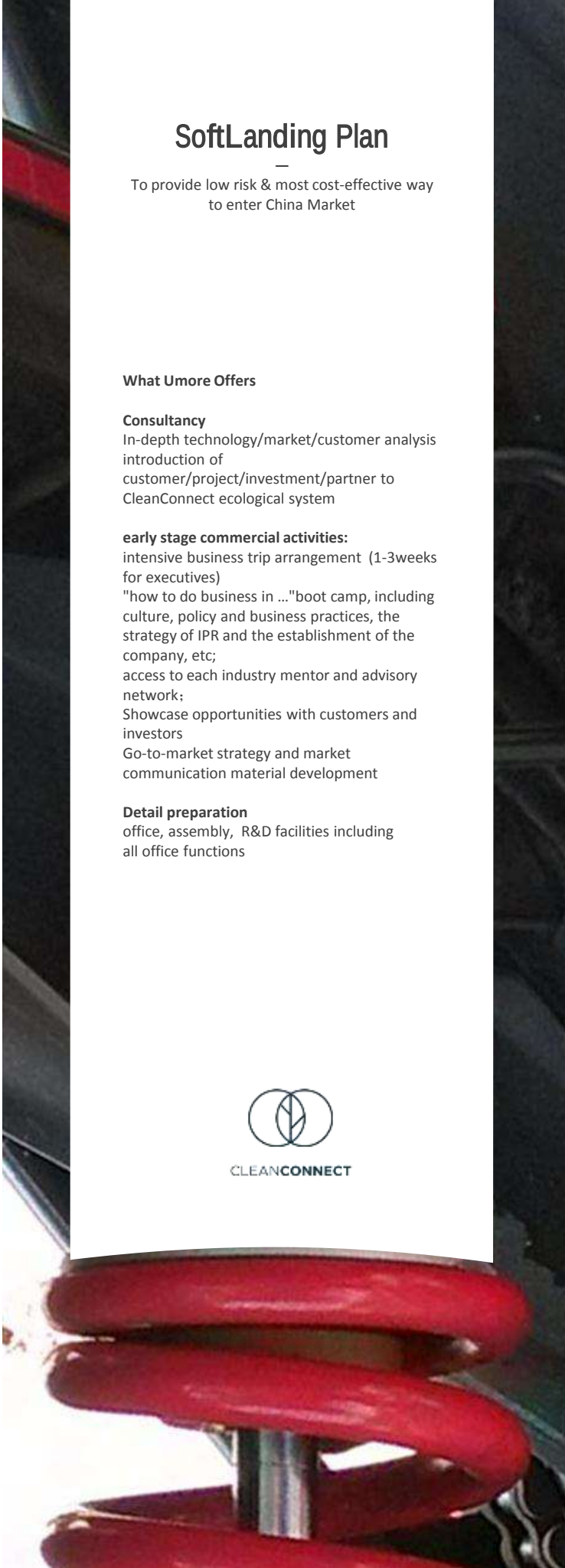
Due to the core of technology transfer is the transfer of intellectual property rights. How to solve the issue of IPR has become a significant factor to influence Cleantech transfer process.

Professor Shuqian Zheng from research institute of environment and civil law, Henan university, found out that the reason for inefficient Cleantech transfer is unique legislation problems which haven’t been solved yet

"Everyone has right to enjoy comfortable environment, environmental right is sort of human right. but intellectual property right is kind of private right. Then IPR of Cleantech is facing deep value conflicts between environmental right and intellectual property right." Professor Zheng consider that the complex conflict of benefits is the main reason for Cleantech transfer.

Mr. Haihong Xu, director of the U.S-china energy cooperation project committee, believes that no panacea to solve the problem of intellectual property rights. In the field of technology transfer, the key to implement technology transfer smoothly is choosing right partners, avoiding potential conflicts by strict and clear commercial terms.

It is urgent to define Cleantech transfer to facilitate non-commercial technology transfer between governments. There is no unified definition of Cleantech transfer in the field of International environmental conventions. The basic definition is the environment friendly technology. The broad definition brings a lot of uncertainties to inter-governments cooperation. It also creates a statistic problem for each environmental institute. ∞



SoftLanding Plan

To provide low risk & most cost-effective way to enter China Market

What Umore Offers

Consultancy
In-depth technology/market/customer analysis
introduction of customer/project/investment/partner to CleanConnect ecological system

early stage commercial activities:
intensive business trip arrangement (1-3weeks for executives)
"how to do business in …"boot camp, including culture, policy and business practices, the strategy of IPR and the establishment of the company, etc;
access to each industry mentor and advisory network;
Showcase opportunities with customers and investors
Go-to-market strategy and market communication material development

Detail preparation
office, assembly, R&D facilities including all office functions

CLEANCONNECT

protect our beautiful homeland , anonymous

Be Simple, Be Happy

JWCE regional manager | Olive Liu

When I got a call from Umore, I have tried to think about how to write this essay. AS a new member in the environmental protection for just a few years, I do not know what I can say for it. At last, I have made the decision to share my experience in the environmental protection to all of you.

When I look back at my experience from my school to the work, it seems to be a tremendous cycle for myself. My major is chemical engineering. And I have studied how to design and build different kinds of chemical plants. But my graduation thesis was about the sewage treatment. After entering the workplace, I worked for the marketing management and was engaged in different kinds of the construction-projects in the chemical, electronic and medical field with many large enterprises. Now I devote myself to the environmental protection. The domestic people have built the construction with great enthusiasm in all sorts of industries. For example, the massive electronic factories, the massive Ethylene-projects, the PTA- projects, the Polyester projects, the coal-chemical projects, etc. I am deeply astonished when I saw so many factories >>

appear in our country. All standards in our domestic industry-projects are world-class. Every industry-technique, whether is mature or not, is developing in China. In the past ten years, our land has become the large test-field for various techniques. When we have made China the world’s manufacturing factory, we also let our air, our water and our soil more and more polluted. When I participate in a variety of industry-projects, our blue sky, rivers, grasslands and deserts become more and more dirty. In these processes, I feel deeply sorrow and worried about our motherland’s environment. At that time I was engaged in the world’s top industry products. I consoled myself by these industry products. At least in some dangerous places we can protect the staff employed there and protect the environment there. And also I think about my career-plan. Finally I make a decision to devote myself to the environmental protection. Many friends and colleagues of mine cannot understand why I give up a good job of a famous foreign-capital company. And the environment protection is a new career for me. When I work for the environment protection, it is more difficult than expected. It is still a long way for me to go.

In China, the environmental protection is a sunrise industry. It seems to be a nice industry. When I take part in the projects for the environmental protection, my beautiful dream of the environmental protection never come true. I admire the predecessor in the environmental protection most. I am deeply astonished by our environment-base. Compare with the former industry-base, we only think about the employee’s health and the environment there. When we are in the analysis of the investment-market, the environmental-protection sector is bullish and got a high valuation. But it is not a colossal-profit business. Because it’s tight for the funds in every environmental-protection project. It concerns about the labor-cost, the fixed-asset -cost, the security and health problem, treatment, personnel training and retention problems for the employee. The environmental-protection industry depends greatly on the policy to be stable growth. We are pleased with some good policies. In the 12th five-year plan total environmental investment will exceed 4 trillion. In the Chinese communist party‘s 18th congress "beautiful China" strategy will come true. On the other hand, our environment becomes more and more deteriorating with the increasing economy developing. The massive pollution for water, gas and solid area is still lack of funds to solve. We need to take responsibility to make the environment protection industry develop faster and better.

According to local media reports, China surpassed Japan to become the world’s second largest economy on 15 February 2011. When we think about our environmental pollution, can we still be so happy? Few people know that Japan has one Eight-level system for sorting rubbish. In China only large cities such as Shanghai have one Two-level system for sorting-rubbish. It involves many kinds of problems, such as person’s idea and habits, high cost of this system, capital investment, education investment, government legislation, etc. This Japanese concept’ Cost for Exceeding Rubbish’ may be unable to imagine and accept for most domestic residents in China. In China we hold the hearing only for upgrading for old water-supply pipes, the problem of wastewater and sewage’s treatment, raising a few cents for one-ton water, etc.

Considering the domestic environmental problem from the foreign-capital company’s view, I also say to my foreign colleagues, that the environmental-protection market in China need time to promote and develop. It needs great effort not only from our colleagues in the environmental-protection industry, but also from the every person lived in our beautiful motherland.

The German philosopher Goethe once said, the greatest of human’s sin is not happy.

When I was a child, I played with the fishes in the clean river, ate fresh vegetables and Fruits. How happy I was at that time. The happiness means simple mind. And simple mind is a great wisdom in my life.

I hope every day I enjoy the simple life and devote myself to the environmental protection. At this time, I encourage all of my colleagues to make great effort for our beautiful motherland. ∞


CLEANCONNECT


Ciao, Friends!

Tianyun Environmental GM
| Zhou Yunzheng
|1950'

Driving Power of Technology

General Manager Yunzheng Zhou is almost sixty years old, however he has remained highly enthusiastic towards entrepreneurship. Mr. Zhou, passionate about technology and having nearly 30 years experience in the field of plasma. On top of this he possesses 18 core-patents, 19 new patents and 2 exterior patents and can give a whole day speech when speaking of air purifier technology. According to data from the Shanghai Science and Technology Inquiry Center, his patents have reached an advanced level worldwide. With the technologic advantage, the plasma air purifier sterilizer from Tianyun has emerged as a strong force on the market and the company is therefor looking for further investment and strategic partners.

Enterpreneurship is a tough game. However when Mr. Zhou was talking about those stories of bicycling to purchase raw materials to improve the design; researching; seeking quality industrial packaging design and running among universities and research institutions; experiencing financial uncertainty and difficulties in the promotion of products, we couldn't detect even the slightest grievances, instead, we were very touched by his enthusiasm and dedication. His passion comes from an entrepreners' dedication to the enremitting pursuit of self-worth, and comes from the pride and the sense of responsibility towards the changes that business generates to the community.

Xinqi Environmental CEO
| Tang Shuijiang
|1970'

Breakthrough with Knowledge

Mr. Tang, who has experienced the plan economy system, has always been a high academic achiever. Five years after graduation, Mr. Tang joined in Xinqi and started his own entrepreneurial journey. At the same time, Xinqi's annual sales have grown from 3 million to between 100 million to 200 million. Xinqi, now, is a nation-wide leading company within the field of leachate treatment industry.

Same as other new start-ups, Xinqi was also more conservative in the beginning, and only expanding their business in familiar territory. However, while it meets a bottleneck and while the competition intensifies, the company urges to come to a breakthrough. In order to inhance innovation, Xinqi has strenghthened the cooperation with research institutions nationally and internationally, with its young team. It has also expanded the cooperation with other companies worldwide. Xinqi has and continues to be on on the path of innovation.

Now Xinqi, benefitting from innovation, eagerly pursuits new technological accomplishments of kitchen waste pretreatment, anaerobic digestion technology and equipment, waste gas treatment technology and equipment, high-oxidation technology, cludge processing technology. The company is looking forward to communicating with different coorperators and research institutions, and also deepening the cooperation.

Ecowater CEO
| Shao Kunkun
|1980'

Transformation from Innovation

Strictly speaking, Eric Shao cannot be regarded as a true entrepreneur as he is the third generation of a rich family. He is more of an innovator. Mr. Shao took over the family business when he was 21 years old. He has a strong sense of responsibility to his company and to society. Yong Eric abandoned the traditional family business model and is activily carrying out international cooperation: starting from the search of OEM agencies, and now looking for technology transfer, cooperation, joint-ventures and other international cooperation. Now EcoWater is the leading company not only in the water treatment aerator field, but also in the international techonical cooperation and in research areas. The the international collabortion with Japan Itouch Group and Matsue Doken Corporation to protect water sources has recieved a positive affirmation from the local government and the market.

Mr. Shao shared two of his insights of innovation with all participants:
1. Choice is equally important to efforts. For start-ups, time and energy are limited, therefor start-ups need to put the limited energy into a 'right' patner.
2. The effective communication is the key to solve problems and create opportunities.

WE DESIGNED
THE LOGO OF
UMORE
WE DESIGNED
THE LOGO OF
CLEANCONNECT
WE DESIGNED
THE RECPICTION
PACKAGE
WE DESIGNED
THE VIS OF
CLEANCONNECT
2014

WE DESIGNED
THIS MAGZINE

WE ARE SMORE
A BRANDING
TEAM OF UMORE

INDUSTRY CONNECT

CapitalConnect

AirConnect

SolidwasteConnect

WastewaterConnect

MiningConnect

CapitalConnect

Numerous market-experiences tell the investors and eentrepreneurs of the clean technology that clean technology market in China needs cooperation. Trust is the basis of cooperation. That is to say the reliable and suitable Chinese partners are crucial.

Umore consulting, Founder & CEO | Rong Xu
Sequoia Capital, VP | Min Pan
Qiming venture | Yong Zhang
Tsing Capital, VP | Feiqu Qiu

The Investment Opportunities of China’s Clean Technology

The clean technology includes the environmental governance, clean energies, solar energy, wind energy, hydroenergy and biomass energy. On the basis of the development in the traditional energy, the clean technology also includes energy saving and emission reduction. Based on some data, the global finance of China’s clean energy technology is very active. Today, the Chinese government and the Chinese market are undergoing a tremendous transition. So great is demand for the clean technology in the Chinese market that global investors have witnessed a powerful force between the global clean technologies and China's huge market.

How to decide investment?

The Chinese market is unique and the investments in the Chinese market are very special. In China, when the investment institutions make the project-decisions, the factor of technology is not paramount for them. It takes perhaps only 20% the proportion of the whole project-decisions. The reason is that the Chinese market is complex. With good technology doesn‘t mean that you will stand out fatefully. Therefore, in the eyes of the Chinese investment institutions, an excellent management team and the reliable partners are the important foundation for the success of any foreign clean technology company in China.

Challenges and Opportunities of Technology Investments

The huge market has an intense attraction for the foreign clean-tech companies. Domestic professionals are also looking forward to the international integration of innovative clean technologies. It is both an opportunity and a challenge for both sides. The biggest challenge of foreign clean technology into China is the trust. Each foreign company needs to think seriously about how to avoid the technology to be replicated and how to cooperate with Chinese partners to share the breadth and depth of the market from the technology innovation.

The investment institutions that are in the Chinese market of the clean technology for many years give the solution to us. That is to look for the Chinese partners that appreciate the innovation and unique technology. The suggestion is to start from small projects with Chinese partner in the first 2~3 years. It will verify the compatibility of the technology and the partner.

AirConnect

Southern Weekend | Sophia Xie

Tianyun Environmental GM | Yunzheng Zhou

LanzaTech VP | Ken Lai

Airquality CEO | Jianfeng Chen

Pegasor VP | Markku Rajala

The status of the air purification industry
Due to the deterioration of the environment and the growing awareness of the PM 2.5, the air purification industry is definitely on the rise and has tremendous potential. It is estimated that there will be 30% acceleration in air purification industries.

However, the competition is rather fierce. Besides the well-known enterprises overseas, there are approximately 500 SMEs in the air purification industry, not to mention the companies, often small ones, who are trying to enter the industry. It is believed that there will be reasonable price and amount of employees as the competition gets fiercer, which results in several leading enterprises in the market.

The demand of air purification, detecting instrument and data management
Advertisements such as that the removal rate of PM 2.5 reaches 99.9%, decomposition rate reaches 99.92% and removal rate of smell reaches 99% are not rare in the market. In fact, there exist no standard criteria in monitoring and detection and it is hard to define the operation condition of equipment. Thus equipment with good exterior and low costs is welcomed by consumers.

Policy suggestions
The enterprises in the air purification, with different levels of techniques and employees, come from different industries. There is potential heavy competition due to the lack of compulsory standards which are executable. Thus explicit policy for sustainable rules are needed.

The relevant enterprises remain the focus of the public because people are concerned about air purification. Those who stand out will contribute to enhancing the technical entry level in the industry as well as guiding the clients. The state is gathering opinions from the public regarding the new standard of air purifiers, which helps to sort out the good enterprises from the rest. ∞

SolidwasteConnect

Turning " waste " into wealth is appicable. Solid waste after right process could be turned into resource, with lesser disturbance to the environment.

Qiming Venture, associate | Yiqing Zhu

JWC, Regional manager | Olive Liu

U-eco, CEO | Mingyuan Ma

ENOVO, CEO | Fredrik Kekäläinen

Operation status for foreign companies

Solid waste management in china is a huge market, which generates high-interests from foreign clean technology companies to enter. As the development of this market, importance of China market has been proved. However, cost and pricing come to be the biggest challenges for them. The competition leads their customers unable to handle higher service and equipment operation cost. In order to win the market share, most of foreign companies has to face even or loss revenue.

Challenges for Chinese solid waste management companies

Solid waste management is adaptable for the Chinese market because of the encouragement of waste resourceful utilization proposed by Chinese government. However, execution difficulties and inconsistency cause higher operation costs for all the market players.

Policy suggestions

A consistent, feasible policy will be urgently required for this industry. Meanwhile, government grant could help to increase the cost advantage for related companies to win the market share.

WastewaterConnect

The "ten rules about water treatment" is an industrial policy, which will increase the market valuing by trillion RMB. This is undoubtedly good news for all players.

Tongji University, Environmental science and engineering school, Deputy director | Prof. Dianhai Yang
Newepoch Environmental, CEO | Nanhua Ding
Ecowater, CEO | Kunkun Shao
In-pipe, CEO | John Williams
Xinqi Environmental, CEO | Shuijiang Tang

China's current sewage treatment situation
China produces a huge amount of sewage each year. More-than 80% of urban sewage is directly discharged into nearby water bodies without effective collection and treatment

Sewage treatment products in China and international orientation
The production of national sewage treatment equipment has started from the middle and later periods of 1970s. Since 1990s, relevant national departments have made technical transformation to main enterprises of manufacturing sewage treatment equipment. This has enhanced the manufacturing level and capability as well as the production level of special sewage treatment equipment for cities the general purpose equipment has also been greatly improved.

At present, the production of all or main equipment of urban sewage treatment plants with daily handling amount of 5t, 10t, 25t and 50t has been localized. Among which, home-made fine bubble aerators, high-strength aerators, belt pressure filter, various bar screens, mud scrapers, sand scrapers, aeration brushes, aeration blowers, large-size sewage pumps and submersible electric pumps etc. have basically satisfied the demand of the domestic market, and some homemade products are even exported.

The policy demand of sewage treatment in China
For long, the constantly increasing weight of serial policies was the reason for the market to hold expectations for the sector of environmental protection. Throughout last year, the central government sent out strong voices for the treatment of the haze, leading to the repetitive scenarios in the stock market that the sector of atmospheric contamination prevention could "go up when haze arose". The "ten rules about water treatment" (formal name Action Plan for Water Pollution Prevention), which has been prepared for a long time, is now very close to its issuance.

Mining Connect

Green mining in China, is not and will not ever be easy.

Green mining China group, Director | Charles Tsao

Jiangsu mining association, Scretary general | Fusheng Hu

Finland green mining program, representative | Yang Liu

Tekes Shanghai, consul | Jarmo Heinonen

Tianyu garden, President | Yaodong Huo

Based on the first session of the International Clean-Tech Transfer and Investment Summit, the set-up meeting for the Joint Working Group of Green Mining China held on November 5, 2014, turned out to be a success. The meeting undoubtedly took its first step in the field of international green mining, though no tremendous achievements have been scored. Just like the title of this news in brief, the expression that this is never an easy path becomes increasingly understandable as the work of the Group deepens. What the next step should be brings a great challenge to the Working Group. First of all, let' s look back at the course of this set-up meeting so as to see if there is any valuable information.

The meeting started with a keynote address by Hu Fusheng, Secretary-General of Jiangsu Mining Association. Re-interpretation of the concept of green mining in his address brought up the theme of the meeting from the start, introducing four systems including intellectual mining, green mining, legit mining and global mining, closely followed by a comprehensive explanation involving the reasons that he proposed these new concepts and detailed connotation for each of these concepts.

Secretary Hu gave an underlined concept of green mining by saying that: "The green mining concept brought up by Jiangsu Land and Resources Office and Jiangsu Mining Association differs from the concept of green mine that is currently under national discussion. Green mining is an organic and comprehensive concept that concerns both subjective and objective meanings. It encompasses government guidance, resource integration, environmental management, as well as planning and remediation of mines. Its content is not only associated with the recycling of mineral deposits and tailings, management and utilization of the three kinds of waste, reuse of abandoned mines, development of deep edges, adoption of advanced technology, energy conservation, etc., but also linked to the implementation of countermeasures including mining with reclamation, planning before mining, and mining after environmental protection.

President of Jiangsu Mining Association Yang Weixing pointed out in the report that: the development of green mining is an inevitable choice to implement the scientific concept of development and to promote the transformation of economic development; it is the realistic route to accelerate the transformation of mining development, and also the important means to implement corporate responsibilities and strengthen healthy mining development.“ The finishing touch of Secretary Hu' s concept lies in its initiative to put the clean-tech upgrading and transformation in green mining to an unprecedented high level of importance. Located in the most developed area in China, Jiangsu possesses a small amount of land area but a large population, and its mineral resources is also presented with the characteristics of low quantity and quality. However, economic development cannot be stopped by some limited conditions, which makes >>

enterprises in Jiangsu Province continuously create miracles in thesector of comprehensive utilization of mineral resources: Nanjing Yinmao Lead-Zinc Industry Co., Ltd., China Gaolingtu Company, Suzhou Xiaomaoshan Copper, Lead & Zinc Mining, Zhenjiang Weigang Iron Mining, Jurong Taiwan Cement Co., Ltd., Nanjing Iron and Steel Group Yeshan Mineral Co., Ltd., Shanghai Meishan Mining Co., Ltd., Xuzhou Iron Mining Group Co., Ltd, and etc, all these companies have their own remarkable achievements in the sector of green mining, while they are also constantly looking for new growth and transformation at the same time. The information is worth further summarizing and sorting.

Director of the Finnish National Innovation Agency and the Finnish Technology Consul Mr. He Yameng (Mr. Jarmo Heinonen) is a serious-minded and very wise Finn. It can be concluded from the Chinese transliteration of his name that he is an old friend of China. Mr. Yameng gave a comprehensive introduction to Finland’s 2011-2016 National Green Mining Program in the set-up meeting of Joint Working Group of Green Mining China. His introduction was like a refreshing stream flowing through the systematic development and overall strategies of mining congeries in Finland as well as the green mining concept interpreted by Finland, bringing distinct voices to the meeting. The author has concluded that the concept of green mining in Finland concerns five perspectives as follows: 1) efficiency of raw material utilization; 2) expected demand for raw materials; 3) the impact of mine development; 4) work ability enhancement; 5)is sustainable utilization. All these five perspectives are at different stages of the mining development chain. Finland has made a tremendous acknowledgement of the sustainability of the overall mining process.

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As the practitioner of sustainable eco-restoration of waters and soils, as well as the professional supplier of comprehensive solutions for urban ecological system, Tianyu Landscape enjoys a renowned word-of-mouth reputation. It has accumulated abundant experience in multiple large and medium projects in designing, construction, investment and operation concerning ecological restoration of urban rivers, lakes and reservoirs, and other large water landscapes; construction of waterfront landscape ecosystem; ecological wetland protection and wetland park construction; remediation of contaminated land and groundwater; restoration and reclamation of contaminated farmland; improvement and reclamation of saline-alkali soil; ecological restoration of mines and road slope, and etc. Tianyu Landscape already has many cases in the field of ecological restoration of mines and over 50 technology patents. Ecological restoration of mine has an immeasurable market space in the green mining sector, and China's green mining industry is also facing a critical moment of integrate upgrading. Tianyu Landscape made a comprehensive introduction to its of research corporate business content and extensive exchanges with Mr. Yameng from Finland in this meeting, especially on groundwater remediation technology with some cooperation opportunities discovered and later discussed after the meeting.

Finally, the Joint Working Group of Green Mining China made a conclusion on its previous work in China. The Group have conducted multiple exchanges in the mining industry and developed discussions on in-depth cooperation with Canada and America respectively since July, 2014. During this time, domestic and international mining policies, as well as the industry chain were sorted, and the workflow design was made for feasible mining services. We also demonstrated the connotation for the plan of green mine establishment from 2013 to 2020 in visualized graphics, as well as the route map of industrial technology innovation for the comprehensive utilization of tailings, and etc. These preliminary results of research and summary are materials from extensive data retrieval by the Working Group. We have also made a very clear plan for our own work, to excavate advanced overseas green mining technology, to pay special attention to the fields of comprehensive utilization and rehabilitation of mines; to exhibit high-quality overseas mining programs so as to provide Chinese mining institutions with alternatives; to build a platform for communication of the mining industry, so that the capital feature of the area of Jiangsu, Zhejiang, and Shanghai can be paid enough attention to in correspondingly searching for opportunities of project cooperation. ∞

Polluted river water
kills as many people
as a nuclear explosion.

A Pencil's Story

| Chris Chen

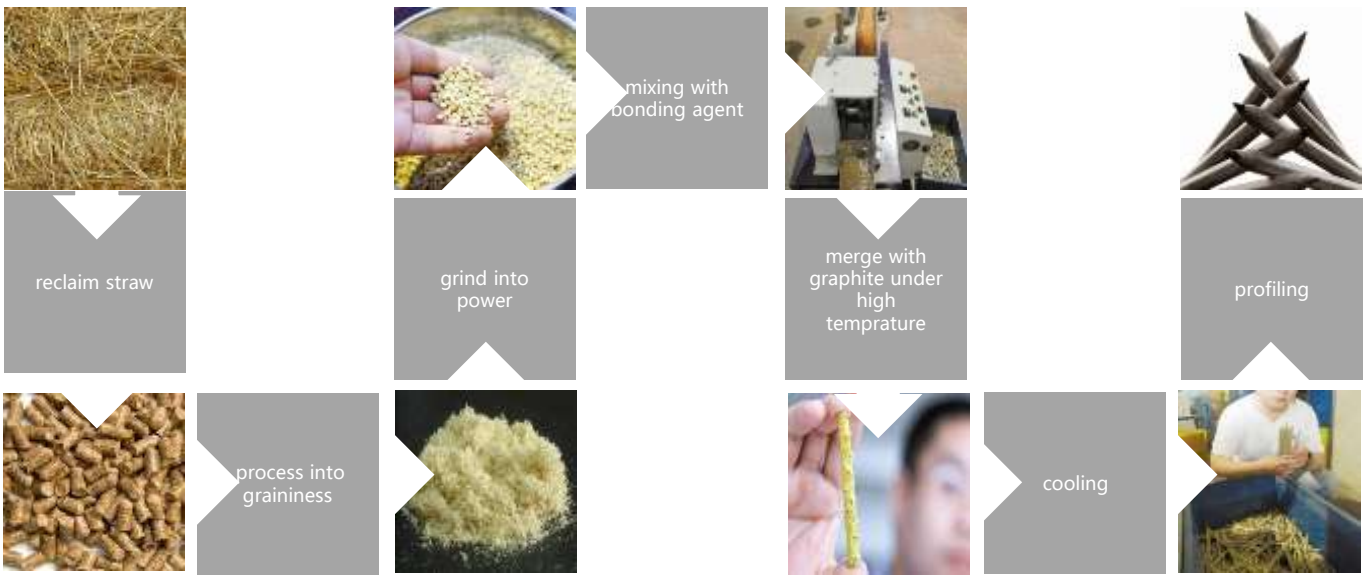
Hello everyone! My name is CC, a pencil. I'm not an ordinary pencil, but an eco-friendly one made from straw.

I was born in Xuzhou, and Ma Mingyuan is the man who made me. First, let me introduce my master Ma Mingyuan: he founded Xuzhou Youyike environmental Science and Technology Co., Ltd, where I was produced. The company joined the pencil manufacturing industry in 2002, and finally successfully made straw pencil (that's me) after five years with more than 10 million yuan investment. Now the company can produce more than a hundred million straw pencils per year. In addition of straw pencils, my master makes all kinds of floors and cabinets from straw. Besides, my master also uses coffee grounds and coconut shell as raw material for the manufacture of various eco-friendly floors and cabinets. So the company is the true advocate of ecological materials.

Then let me show you the differences between me and the ordinary pencil.

Manufacturing Technique

Usually, pencils are made from woods, and there are more than one hundred technological processes in order to make pencils from woods. First, workers cut trees down and straw them into parts, and then the woods are transport to wood-working factory for cutting, drying, coloring, waxing, re-drying…And finally, the woods are sent to pencil manufacturing factory. In the factory, the woods must go through a very complicate process to conglutinate with pencil lead, and then paint 7~8 times to end the process. To make an ordinary pencil, it has to cost raw materials that are ten times of its own volume. Besides, the painting process will release formaldehyde constantly, so the pencil manufacture process is not friendly to the environment, which contains tree felling and logging, sewage discharging and air pollution. There are about 1.2 million stere of high quality woods used for pencil production per year in China, which cause nearly 63 thousand hectare green fields disappearing. My manufacturing process is much simpler. Firstly, my master processes the reclaimed straw into graininess, and then grinds into powders. Secondly, after >>



straw pencil manufacture process

mixing the powders with bonding agent, the mixture merges with graphite from another production line with high temperature. Then the straw pencils are cooled by water, and finally they are cut and gathered after cooling and molding. So my entire manufacturing process is coherent and clean, without producing wastes. Even the defective pencils can be melted for reproduction.

Although the manufacturing process seemed to be simple and effective, my master had to adjust and test numerous times to invent me. My master’s first idea was: grind the straw into powders and then make pencils with various shapes by molding. Obviously, it was too simple. The straw powder’s shape appeared to be like snowflake and crystal, and its physical property differs a lot from the wood though it has the similar color and texture. Besides, the straw is rich in oxalic acid, which has powerful separation effect and repels ordinary additives and eco-friendly fillers. So additives, which are applicable for materials like wood and peanut shell, have no effect on straw for molding. Therefore, my master spent 3 months researching how to extract acid and sugar from straw.

After solving the molding problem, my master found that pencil lead could not be fixed and it slid inside the pencil while writing. Then there came a new round of test: increase the dosage f straw; adjust the density and the temperature…And the straw pencil becomes more perfect while overcoming these challenges one by one. With stumbling along the way, it took 3 years to invent the straw pencil that has the similar hand feeling and practical performance with wood pencil, while the product costs decrease more than 30%.

During one test, the straw was chopped into fibriform particles rather than grinded into powders directly, and produced pencils with coarse appearance that my maser considered as a failure. However, the coarse-appearance pencil is more distinctive and has more market than smooth ones. It was highly regarded as "pure nature" "smell of nature" "quality" by the American client who ordered 80 thousand for souvenir immediately.

Manufacturing Process of Straw Pencil
Raw Material- Straw
I also want to say something about my raw material, the straw. According to the relevant data, the total straw produced in China is about 650 million tons to 700 million tons. About 70% of them are directly burned, made for paper and fodder, and returned >>

to fertile field. The rest of them (30%), about 200 milliontons straw did not get better use, and straw can be made into various products. As shown in the following figure, straw can be used to create sources, building materials and other renewable eco-friendly products.

Lately, my master and I came to Shanghai to attend the 1st International Cleantech Transfer and Investment Congress. My master gave a speech at the meeting, letting more domestic and foreign friends to know me and my little friends. However, my master also has some trouble in using straw for making products like pencil. Let's see what he said at the meeting.some trouble in using straw for making products like pencil. Let's see what he said at the meeting.

Need for Government Support

If the government has not paid high attention to the environmental protection industry, its development can't be achieved only by the companies' efforts. And it always takes a long time to put a policy into practice. In our manufacturing process, the raw material straw is mostly abandoned along the road or in the field, and it's free of charge. However, the collection of the straw becomes a problem since it takes a lot of financial and human cost to solve the problem. Then we need the support of the government to help us reducing production cost. For example, if a company is confirmed to be an environmental protection enterprise through strict scrutiny, there is no need for long time application, which means a decrease of production cost to companies. For now, it is incapable for us to calculate the cost of our manufacturing process during the current period.

Youyike has got the government support with 10 million subsidies and entered the project library of National Development and Reform Commission. However, getting the subsidy always needs many efforts, financial and material costs during the application process, since you have to prepare the application materials for a long time. Besides, will the customers approve our pricing for the environment-friendly products? Customers will think environmental protection products as good stuff, but the price also needs to be lower than traditional products. Our company has advantages on the entire procedure of solid waste processing, but it is still verydifficult for us to price our products lower than traditional products when first entering the market. So we hope for getting government support in order to counteract our disadvantages on market competition.

Need for National Legislation

Hope there is an exact national quality standard for environment-friendly products. During the research and development process, we need to decrease our production costs, which usually lower the quality of products in the meantime. If there is no quality standard for products, companies may produce pseudo-green products in order to decrease costs and sell them to the customers. Thus the products enter the market as eco-friendly, but products customers actually bought are not. However, China is lack legislation and has no quality standard. If the companies could compete in a standardized and orderly market, it will lead to a win-win situation.

The above points are the difficulties that my mater has encountered in production and management, and we wonder if there are companies that have the same confusions like we do. Even though there are so many difficulties, my mater still sticks to his environmental protection enterprise. We also hope that the government could give more support to companies like us for their further development, and pay more attention to environmental protection enterprise.

Besides, you may not know that more than 25 billion pencils are consumed worldwide per year at present, and China has the largest pencil production around the world. Because the high cost and pollution of pencil manufacturing process, developed countries mostly import pencils from our country. The good news is that we eco-friendly pencils also have been exported abroad. For example, you can find my fellows and me on the shelf of Wal-Mart in America. And I believe that we will come into more countries and places. Hope that everyone's environmental awareness can be aroused while using us.

Do you remember me now? I'm CC, an eco-friendly pencil made from straw. ∞

Dictionary of CleanConnect 2014 Participants

Whatever the Environment Becomes, AirQuality Allow You Take a Deep Breath

Airquality Shanghai

industry	Air purification
since	2011
location	Shanghai
business	Air purifier Kitchen fume purifier Industrial oil mist purifier Electrostatic filter

AirQuality is a world-renowned brand of air purifier and focuses on providing comprehensive solutions for air treatment. The air-treatment system of AirQuality includes the fresh-air purification, air-conditioning purification, fume purification, the treatment of other harmful gases, etc. The products of AirQuality are widely used in high-end, municipal facilities, etc.

China is now facing serious problems of air quality. It becomes a hot topic of PM2.5. The outdoor smog is a great threat to people's health. People begin to focus on air pollution and the importance of indoor air quality. AirQuality is optimistic about the Chinese market. And AirQuality is willing to put professional products and advanced treatment technology into China, in order to bring high-quality of fresh air to the Chinese people.

The Beauty of Philip, the Rain in March

Jiangsu new philip

industry	Water treatment
since	1999
location	Yixing
business	type rubber mold microporous aerator WEP ecological restoration of water environment system

Philip Group is located in the National Environmental Science and Technology Industrial Park of Yixing, which is a famous green town around the beautiful Taihu Lake. The Group established a comprehensive approach to development of “Government, Industry, Academia, Research, banking and Intermediary". "Government" means that the group will follow the government policy. ”industry” means the group will devote itself into environment protection industry. “Academia and Research” means that R&D, innovation will always be the advantage of the group. "Intermediary "means to focus on the media and create a brand-name company of the environmental protection. "Banking" means the thanksgiving to the society. After a decade of hard work and development, Philip Group has achieved remarkable result.

Guangyang, to benefit all of the World

Guangyang Dynamic

industry	Water treatment
since	1987
location	Yixing
business	Steam / air / flue exhaust muffler water purifier bypass filter Air flotation equipment

Jiangsu Guangyang Power Environmental Protection Equipment Co., Ltd. was founded in 1987. It is located in the birthplace of Chinese water environmental protection industry, Gao Cheng town, which enjoys a reputation of "green town". It is engaged in water treatment equipment design, manufacturing, construction and commissioning of integrated engineering company. Through 20 years of efforts, it has technical connect with more than 30 universities and research institutes such as Tsinghua University, Tongji University China Textile Institute, the Ninth Ship Design Institute, etc. It has formed different kinds of products in water treatment, condensation-water treatment, filter treatment, sewage treatment and recycling, auxiliary boilers and the environmental protection equipment of the boiler power. These products are used in over 1000 Chinese and foreign projects. it has developed more than 70 new products and gets more than 50 patents in China.

Specialty To Be Trusted

Jianghua water

industry	Water treatment
since	1992
location	Yixing
business	Wastewater (sewage) treatment system

Jiangsu Jianghua Group is located in the famous industrial park in Gaocheng town of Yixing. The core company of Jianghua Group is Jiangsu Jianghua Water Treatment Equipment Co., Ltd., which is engaged in water treatment equipment design, development, manufacturing, and other services.
Since 1999, the company has passed the international quality system iso 9002:2000 and iso14001. It obtains the environmental engineering qualification, environmental engineering design qualification and water environmental treatment engineering grade-B qualification. The company has been awarded as the enterprise in good quality-management standards, the important enterprise of China's environmental protection industry, high-tech enterprise in Jiangsu Province, the quality-trusted company in Jiangsu Province, AAA-credit enterprise, one of hundred companies in Jiangsu Environmental Protection Industry Association, contract and trustworthy enterprise, sentinel production units of National Water -pressure industry Association.

Water, Soft Yet Strong

Jiangsu new epoch

industry	Water treatment
since	1994
location	Yixing
business	mud scraping and sucking machine products

To contribute upon environmental protection on the Earth is the inescapable responsibility of every citizen. How to further improve this work needs the talented persons, who have modern awareness and skill. Jiangsu new epoch will become an enterprise with modern ideas and high efficiency operation.
New epoch will forever absorb the eastern and western advanced management ideas. As the water in Jiangnan, it is soft, yet strong. The spirits and energy of this company will keep continuously improving and developing. The spirit of Jiangnan water is elegant, peaceful and comprehensive. People in Jiangnan grow up and live with the water. We have our culture and custom related to Jiangnan water. “Water” is our homeland in a way. “Water” in Jiangnan is a also the symbol of Jiangsu new epoch.

Building A Time-Honored Brand

Jiangsu Xinqi

industry	Water treatment
since	2002
location	Yixing
business	Landfill leachate treatment High concentration organic wastewater treatment device

Xinqi Environmental Protection Company was founded in 2002. The company has become a modern enterprise with R&D, design, production, installation and commissioning, operation, investment and finance services. It is a pioneer in the field of water treatment and is a well-known company in landfill-leachate treatment. The company occupies 30,010 square meters and has a registered capital of 50.18 million RMB. Its annual output is over 100 million RMB.

Over the years, the company has obtained hundreds of projects in leachate treatment, municipal sewage, waterworks, water production, water reuse, industrial wastewater treatment and landfill projects. With the BOT and BT modes in China, the landfill and sewage treatment plants have been invested, built and good operated.

Water, Critical Resource For Human Being

Kunming Kingem

industry	Water treatment
since	1998
location	KunMing
business	Water recovery equipment Oily water separating equipment Treatment of high concentration organic wastewater (anaerobic) equipment treatment of Landfill Leachate

Kunming Jinze Industrial Co., Ltd. was founded in 1998 and is the restructuring from Yunnan Dyeing Company, a former state-owned enterprise.

Kunming Jinze Industrial Co., Ltd is the first industrial wastewater treatment company in Yunnan Province. The first industrial wastewater treatment plant was built in 1974. For over thirty years, the company has accumulated a lot of operation and maintenance experience for the construction and environmental protection system and forms a complete set of rules in operation, testing and chemical analysis.

Jinze Company has of Jinze accumulated much practical experience on the bacteria of activated sludge and Study of domestication. It forms a solid theoretical foundation. It has its own chemical laboratories and corresponding monitoring instruments. It has a professional mid-testing supporting base to play the effective role of environmental products, new materials, new technology research and production.

博士星
BOSSTAR

Shanghai Tianyun

industry	Air purification
since	2010
location	Shanghai
business	Plasma air sterilizing purifier

Pioneer of Plasma Air Sterilizing Purifier

Shanghai Tianyun is a professional domestic enterprise for the research and production of the plasma air sterilizing purifier.

Tianyun Company has a number of patented technologies in the plasma air sterilizing purifier with independent intellectual property. It also has two international patents of PCT. Its patented products strictly refer to the "Indoor Air Quality Standards" of the National Ministry of Health. Corporate standards of "plasma air sterilizing purifier" have been recorded in the Shanghai Municipal Bureau of Standards and Metrology.

The plasma air sterilizing purifier of "Dr. Star Brand" is valid for the bacteria and viruses, particulate pollutants PM0.1 (including PM2.5) and volatile organic gases VOCS. It is anti-virus in high temperature and makes a degradation of viruses and organic matter. It does not need any efficient filter. And the plasma air sterilizing purifier has low energy consumption and low maintenance costs to avoid secondary pollution. It is widely used in hospital operating rooms, the ventilation system of central air conditioning in industrial clean rooms, office buildings, transport facilities, as well as family rooms.

Tongji Plant Biomass Energy

industry	sludge treatment
since	2011
location	Shanghai
business	Sludge water pretreatment system High solid anaerobic digestion system Sludge heat exchange system

Organic Waste comprehensive Solution Provider

Tongji plant is a high-tech/green bio-energy enterprise and engaged in urban organic waste utilization. It is a subsidiary company of Shanghai Tongji Science and Technology Industrial Co., Ltd.

With the help of resources in discipline, talent, technology of Tongji University, Tongji plant Company works closely with Environmental Science and Engineering college of TongjiUniversity, Urban Pollution Control and National Engineering Research Center, Tongji University Architectural Design Institute (Group) Co., Ltd. and other units.

It has formed a set of new technology development, technical consulting, engineering and operations management into full industrial chain.

In the future, Tongji plant will uphold the fine tradition, firmly grasp the chance and follow the tide of market economy, in order to build good city-construction technology industry chain and to promote Tongji Technology Company to a new peak.

to Create high-quality and low-carbon Energy Environment

Tianyu Garden

industry	Landscaping
since	2000
location	Shanghai
business	Engineer design

Tianyu Garden Company is an urban grade-A landscape enterprise in the city-landscape, city parks, plaza, the environmental landscape of residential area, wetlands, forest design and construction. The company was founded in the garden industry earlier. In more than ten years of market economy, it constantly explores and improves the management. As an important force in the urban landscape, the company strives to promote the innovation-management mechanism, fine management and a good corporate image.

It participates actively the construction of urban landscape environment and takes advantage of its technology, human resources, management and other aspects, in order to increase the technology content, comply with the direction of low-carbon energy and create high-quality environment. The brand of Tianyu Garden Company means high-quality and high-starting point to the country.

The Advocate of ecological Materials

Xuzhou U-ECO

industry	New material
since	2000
location	Xuzhou
business	floor, ambry, pencil, etc

Xuzhou U-eco Company is the advocate of ecological materials. The company was founded in 2002. The core technologies of this company are straw fiber formation from dewaxing straw and Environmental protection board made by specific additives. Currently environmental-friendly materials in this company are mainly straw fiber and board. The environmental-friendly products are floorings, cabinets and straw pencils.

Straw burning is now regarded as a worldwide problem. The reasons are that it is difficult to control and the comprehensive utilization of technology needs to be improved. As a private enterprise, U-eco has a continuous attention and participation in the environmental charity over the years. In 2008, the company solved the problem of slide cores and then successfully developed the straw pencil, which has a huge market sale.

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Air0 Oy

industry	Atmospheric treatment
since	2013
location	Finland
business	smAIRt™ purifiers

Air0 was found in 2013. It is a manufacturer specialized in air purification solutions in Finland. The products have been used to several sites such as private apartments, public spaces, offices, kindergartens, schools, hotel and even hospitals. Air0´s air purifiers are the best solution in environments where the best possible air quality is required.

Air0’ s air purification technology combines the best electrical performance with the fiber filtering technology. It embraces significant advantages compared with the traditional air purifier such as consuming less energy, requiring less space and creating less noise.

Airia Oy

industry	atmospheric treatment
since	1992
location	Finland
business	Bio-HAT Power Plant

Airia is a Finland's environmental protection enterprise engaged in equipment manufacture, sales and installation business for purifying exhaust gas from coal-fired power plant.

Airia has rich experiences in the industry. In Finland, for example, it joined in the projects about commercializing equipment of the timber heat treatment, researching drying equipment for thermal power plant and producing and installing gas purification and heat recovery equipment for venturi scrubber and massive customizing heat recovery equipment, etc.
Company's patent technology "flue gas purification heat recovery technology" is widely used in small thermal plant, small biomass plant

ANP Technologies, Inc.

industry	Environment monitoring
since	2002
location	US
business	Pesticide residues detector

US technology company and the global leader in nano biotechnology.

The company independently develops detectors of pesticide, heavy metal residues in drinking water and food for fast detector has been supply the US military for long time.

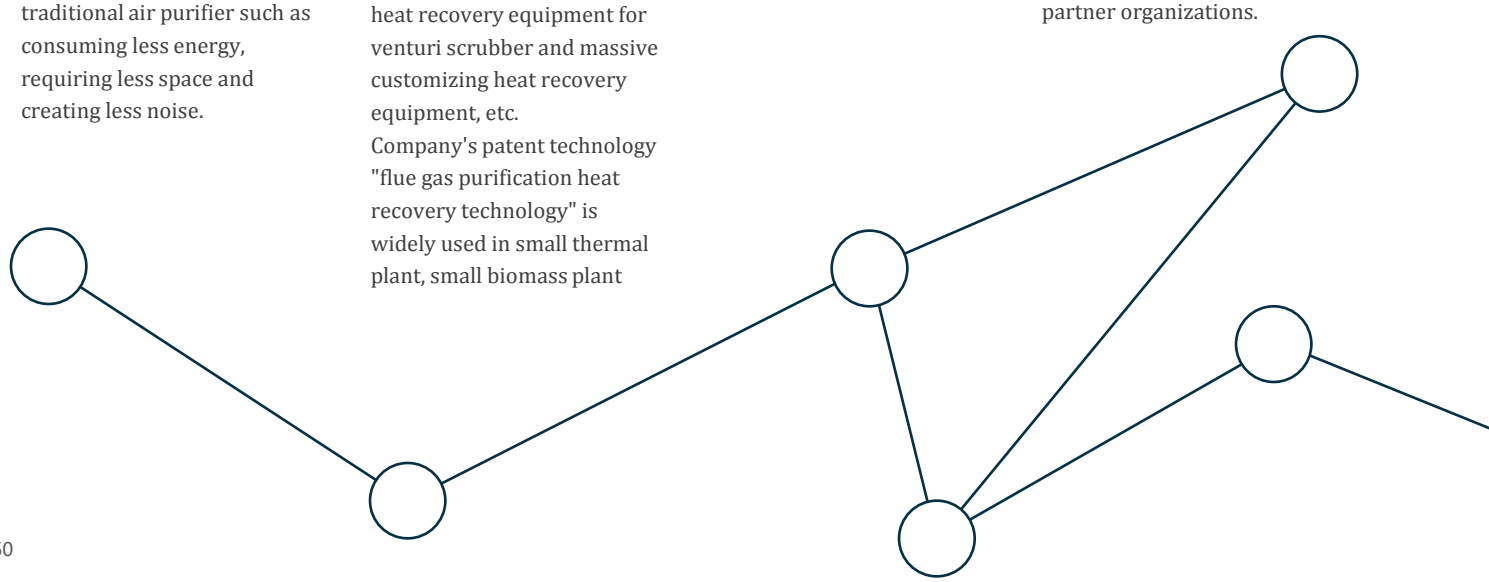
The technology was revealed by US commerce department in 2012 then became into a civil products. Company is seeking China's agents, distributors or project cooperation.

Cleantech Finland

industry	Cleantech service
since	2007
location	Finland
business	service

Cleantech Finland is a network of top cleantech companies and experts. It brings the world’ s best cleantech solutions and expertise to companies and public-sector organizations that have environmental or energy-efficiency problems that need solving. They also connect potential investors and partners with the best cleantech experts in the market.

Cleantech Finland is the hub for all cleantech activity in Finland and work closely with an extensive network of partner organizations.



Cleanlogix LLC

industry	Clean manufacturing
since	1984
location	Singapore
business	Supercritical carbon dioxide clean technology

Company continuously researches and develops cleantech products and applications based on the technology of carbon dioxide.

Supercritical carbon dioxide clean technology is a kind of environmentally friendly technology. This technology is well known because its clean ability (removing micron and submicron particles) and also moving hydrocarbon pollutants.

Carbon dioxide clean technology is different from the other clean technology which requires additional system to deal with the residues after cleaning because carbon dioxide will be evaporated after using without any residues.

ECP Group Oy

industry	atmospheric treatment
since	2002
location	Finland
business	electrostatic precipitator

Leading manufacturer of electrostatic precipitator in Finland, more than 12 years in atmospheric treatment industry. Its products are widely used in European regional power plants, paper industry, cement, lime kiln, and waste incineration, etc. With its excellent quality and service it has won the high market recognition.

Enevo Oy

industry	Solid waste treatment
since	2010
location	Finland
business	smart waste collect system

Enevo is a private enterprise focusing on trash management and recycling. Its headquarters is in Espoo, Finland and it also has sales & support offices in Munich (Germany), Tokyo (Japan) and Boston & San Francisco (USA).

Enevo is an enterprise combining of hardware and software technology. Its first product called Enevo ONe Collect aims at improving processing of trash management and logistic. Staffs can use web tools to inspect status of all trash can in real time then use system to plan optimal path for recycling.

Fiac Invest Ltd.

industry	green building
since	1955
location	Finland
business	Development and consulting services; Construction design services; Engineering services; Environmental services; Design management services

Company was originally founded in 1955. Business range has been expanding from engineering to architecture. Now the parent company and its associated enterprises have become the industry leader in the aspect of managing sustainable green value and green design.

Finn8group Oy

industry	consulting
since	2012
location	Finland
business	consulting

The company's main business is business consulting. It helps enterprises how to use existing resources to achieve the goal, how to promote establish joint think-tank and how to improve business processes and sales plan. It also builds connections between persons with different needs, help company search partner with correct persons.

Company has broad and active global business networks covering for example clean technology, mobile communication, outsourcing and engineering consulting.

Fin pro

industry	technology transfer
since	1919
location	Finland
business	consulting

The agency is based in Helsinki, Finland and has 400 employees. The Fin pro is a Finnish company association composed of more than 500 Finnish companies. Service targets are Finland enterprises developing at different stages of internationalization. The goal is to help Finnish enterprises step to internationalization under the minimum risk, especially small and medium-sized enterprises. It Mainly provides consultation, the global market information, project proposal, search for business partners, publications and seminars, etc.

Gurux Oy

industry	smart power grid
since	1998
location	Finland
business	Products for meter reading; Energy meter; Clean tech; GuruxAMI DLMS/COSEM component

Gurux is committed to open Source software solutions for smart metering. The company is engaged in developing software for electricity meter, water meter, heat meter, meter reading equipment for many years. Due to adopting open source system and integration of various sources of data sources, the company's software products can be very good at saving energy。For example GuruxAMI software can be used for reading and remote control energy consumption.

In-pipe

industry	Water treatment
since	1991
location	US
business	water treatment technology

In - Pipe Technology Company referred as "IPTC" is a one of the world technology company providing engineering solutions for industrial and municipal wastewater treatment. A series of patented technologies improve the economics and effectiveness of processing wastewater. In-pipe can delivers some exclusive products suited for all kind of waste water condition by installing a compact automatic device. This processing can directly transform sewage collection pipe into a waste water treatment plant. Sustainable green technology of In-pipe can effectively improve the water quality, reduce the energy consumption and reduce the sludge production, enhance effect of biological denitrification.

JWC Environmental

industry	Solid waste treatment
since	1973
location	US
business	solid waste treatment system

JWC environmental is a famous American environmental equipment company. Company is specially engaged in the solid waste reduction equipment (including crusher and grinding machine, etc.) and separation equipment (grille, big break, etc.) design, research and development and manufacturing. These devices can be used in destruction, waste reduction, crushing small particles in order to protect sewage pumping station equipment. The advantage of products is that even in the relatively humid environment, equipment can still keep efficiency of crushing and grinding.

Midtnet

industry	Consulting
since	2003
location	Danmark
business	IT, Energy , Environment/Health , life science

Project is located in the Danish central district (CDR). Midtnet is establishing a Danish-Chinese networks within the themes of IT, energy/environment and health/life science.
The aim is to increase networking, cross-cultural knowledge exchange and matchmaking through the reunification of a broad range of the region's private and public companies and institutions in individual and joint development work with similar partners in Shanghai.

Newentures Oy

industry	investment
since	2008
location	Finland
business	Clean technology; Energy; ICT application

Newentures brings sustainable development for sciences and businesses. Newentures has carefully selected more than 2000 qualified inventions, consulted 50 innovative enterprises and Co-invested 8 developing companies since 2009. Company possesses a large number of business and technology resources.

Okawara

industry	Engineering
since	1927
location	Japan
business	Rotary dryer; Conduction heat dryer; horizontal fluid bed dryer

Okawara production was engineering company founded in 1927 professional committed to the producing dryer, Sterilizing System for Powder, enrichment equipment and related equipment. The company main products in the field of environmental protection are the super rotary dryer, conduction heat dryer and horizontal fluid bed dryer which can use steam heat to transfer waste liquid directly into a solid powder.

Okawara’ s headquarter, factory and r&d center are located in shizuoka. It also has offices in Tokyo and Osaka respectively. Subsidiaries were set in Shanghai China and Seoul, South Korea and work actively to look for partners worldwide.

Oilon Oy

industry	Energy development and utilization
since	1961
location	Finland
business	Oil/gas burner; Industrial heat pumps/cooling; Ground source heat pump; Solar collector

Oilon is one of the world's largest solutions provider of garbage incineration. It has become one of the biggest suppliers of burner in China market since 1993. Annual sales are more than 100units. The company tried to transit company into clean technology company and applied company's existing technology to the develop new energy and seeking cooperation projects in China。

Ostara Nutrient Recovery Technologies Inc.

industry	water treatment
since	2005
location	Canada
business	nutrients recycling technology

Vancouver-based Ostara helps protect precious water resources by changing the way cities around the world manage excess nutrients both in wastewater streams and due to fertilizer runoff. The company's proprietary technology, the Pearl® Process, recovers otherwise polluting nutrients, phosphorus and nitrogen, from municipal and industrial water streams, and transforms them into a slow release, eco-friendly fertilizer marketed as Crystal Green®. The process helps wastewater treatment plants reduce nutrient management costs and meet increasingly stringent discharge limits, while Crystal Green’ s innovative Plant-Activated™ mode-of-action improves crop yield and performance, while reducing the risk of nutrient leaching and runoff.

Pegasor Oy

industry	environmental monitoring
since	2008
location	Finland
business	Engine emission monitoring; Air quality monitoring; Stack emission monitoring

Pegasor Oy was founded in 2008 to commercialize a breakthrough innovation in fine- and nanoparticle sensor technologies.
Key technology developers are leading aerosol scientists having long experience and expertise from the development and commercialization of particle measurement technologies. Pegasor also has extremely good contact network of partners from the industry, academia and authorities.

Today Pegasor PM sensors are the best choice for continuous real-time monitoring in applications like engine emissions, stack emissions, indoor air quality and ambient air quality.

Picosun Oy

industry	New material
since	2003
location	Finland
business	atomic layer deposition (ALD) equipment

Picosun is the leading manufacturer of Atomic Layer Deposition (ALD) reactors for micro- and nanotechnology applications. Picosun provides the customers with versatile, reliable, and user-friendly ALD process tools, which offer world leading process quality and unique scalability from basic research to fully automated high throughput industrial production. Picosun is based in Espoo, Finland, its production facilities are located in Masala (Kirkkonummi), Finland, its US headquarters in Detroit, Michigan.

Techbridge

industry	technology transfer
since	2013
location	Singapore
business	SMEs technology development and commercialization

Techbridge Ventures is a joint venture between Nanyang Technological University (NTU) and 360ip Pte Ltd, a subsidiary of Battelle, the world’s largest non-profit R&D organization. The goal of Techbridge is to support Singapore SMEs in technology development and commercialization. By combining the strengths of two world leading organizations with deep technical and commercialization expertise, the joint venture aims to help companies create a sustainable competitive advantage by identifying, developing and commercializing technologies from its extensive Intellectual Property ("IP") portfolio.

Tekes

industry	consulting and finance service
since	1983
location	Finland
business	funding for innovation; network finnish and global companies and institutes

Tekes is the most important publicly funded expert organization for financing research, development and innovation in Finland. It boosts wide-ranging innovation activities in research communities, industry and service sectors. Tekes promotes a broad-based view on innovation: besides funding technological breakthroughs, Tekes emphasises the significance of service-related, design, business, and social innovations.

Transpacific IP

industry	technolgoy transfer
since	2004
location	Singapore
business	Strategic planning; Transaction services; Special analysis; Investment service

Transpacific IP is professionally engaged in international (intellectual property) research, development of patent and outsourcing services, international investment and international technology transfer, intellectual property management and operation of enterprises. At present, the company has become the second largest international technology transfer company. The largest intellectual property management company in Asian region and successfully processed thousands of patents and trade businesses each year.

Denmark

Central Denmark Region	China Chief Representative | Katja Larsen
Central Denmark Representative office, Shanghai	Chief Representative Assistant | Ting Wang
Danish Technology Institute, Midnet Program Lead	Senior Consultant | Karen Steen Søndergaard Kramp

Finland

Air0	CEO | Valle Kulmala
Airia	CEO | Reijo Alander
Airia Group / Jarotek	| Jarmo Alamäki
Cleantech Finland,Finpro	PM | Ying Hu
DigiEcocity Ltd.	VP | Rissanen Juho
	Project Co-ordinator | Yiming Hu
ECP Group	MD | Pekka Vähäkuopus
Enevo	CEO | Fredrik Kekäläinen
	Key Account Manager | Simon Prosser
Fiac Invest Ltd./Ruituo Int.	| Vainikka Nikke
Finland Jyvaksyla Regional Development Company, Shanghai Rep Office	Chief Representative | Amy Qian
Finn8Group	CEO | Peter Jahn
Finpro	Senior Consultant | Mika Finska
Golden Bridge	Chinese Chief Representative | Bin Zhu
Gurux	CEO | Mikko Kurunsaari
Natural resources and the sustainable economy, Tekes	Executive Director | Teija Lahti-Nuuttila
Newentures Oy	PM | Jolene Hu

Finland

Oilon China	GM | Sami Pekkola
Pegasor	VP | Markku Rajala
	Chinese Project Director | Yanan Mi
Picosun China Limited	GM | Stephen Liu
	Application Director | Wei-Min Li
Pöyry	Analyst | Leena-Kaisa Piekkari
Spinverse Consulting	Regional Manager | Yang Liu
Tekes Shanghai, Consulate General of Finland	Director | Jarmo Heinonen
	Senior Consultant | Elisa Yu
	Project Assistant | Frances Jiang
Tekes, Consulate General of Finland	Chief Technology Adviser | Pia Salokoski

Canada

Canadian Embassy , Government of Alberta	Senior Commerical Officer | Sophia Sun
International Trade and Investment Office, Representing the Government of British Columbia	Director,East China | Ellen Xin

United States

Cleantech Group LLC	Managing Director | Fred Chang
	Analyst | Christy Lee
Conerstone China Advisors	Senior Consultant | Shuyang Jiang
Eason International Co., Ltd.	Chief Technology Officer | Seong Jeon
In-Pipe Technology Company	President & CEO | John Williams
JWC Environmental Protection Technology (Hangzhou) Ltd. Co.	Regional Manager | Olive Liu

United States

RGP Shanghai	Chief Representative | Wenqin Lin
U.S. Consulate General Shanghai	Senior Commerical Officer | Sophia Chen
VTT Technical Research Center of Finland	Research Scientist | Sen Bao

Japan

Okawara Mfg.Co., Ltd.	Manager | Lin Tong

Singapore

Cleanlogix Asia Pte. Ltd	Executive Director | Patrick Pang
International Enterprise Singapore, East China Region, China Group	Senior Marketing Specialist | Amanda Wang
TechBridge Ventures Pte Ltd	Derictor | Voon Yee Ho
Transpacific IP Group Ltd.	Executive VP | Jasmine Kway

Chinese Government

Investment Promotion Agency (CIPA) of the Ministry of Commerce	Deputy Director | Kai Wang
Bay Valley Innovation Center	Principal of Preparatory Office | Yanyan Li
Bay Valley Science and Technology Park	Executive Director | Mingfeng Yan
China Yixing Industial Park For Environmental Science & Technology	North American Chief Representative | Joe Shen
China-Us Clean Energy Cooperation Area	Pesident | Hongyu Dong
	Deputy Director | Haian Wang
	Deputy Director of Department of Primary Industries | Jian Liu
	Director Assistant | Xueting Ren

Chinese Government

Changzhou Yucheng Innovative Enterprises Ltd.	CEO | Yibing Zhu
Jiangsu Province Mining Association	Secretary General | Fusheng Hu
Jiangsu Province Mining Association Legal Advisory Board	Director | Aimin Cao
Merchants of Changzhou	Party Secretary | Jianxin Chen

Chinese Ventures

Bank of China Suzhou Branch	Risk Mangager | Zhiqiang Lu
	Risk Manager | Kai Han
China Fortune Land Development Co., Ltd.	Director | Jet Chang
Qiming Venture	VP | Peter Yin
	Partner | Yong Zhang
	Investment Manager | Yiqing Zhu
	Venture Partner | Rachel Wang
Sequoia Capital China	VP | Kevin Pan
Tsing Capital	Associate Director | Vince Qiu

Chinese Environmental Companies

Airquality Ltd.	CEO | Golden Chen
Climate Bridge Ltd.	PM | Wenjie Zhuang
Jiangsu Guangyang Dynamic Environmental Equipment Co., Ltd.	President | Honghua Gu
	Executive Assistant | Zhuopin Gu
Jiangsu Jianghua Water Treatment Equipment Co., Ltd.	Director | Tianzuo Wang

Chinese Environmental Companies

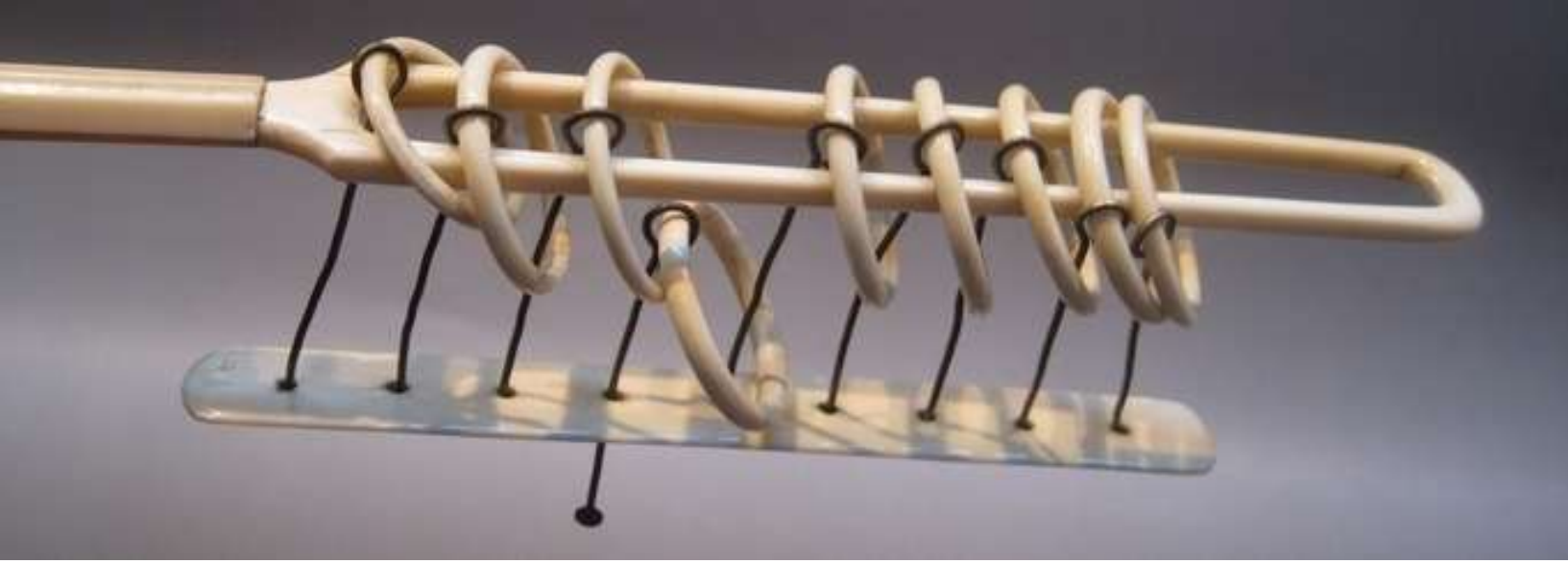
New Epoch E.P. Co., Ltd.	President ｜Nanhua Ding
Jiangsu Philip Environment Protection Engineering Co., Ltd.	Executive Vice President ｜Eric Shao
Jiangsu Xinqi Environmental Protection Co., Ltd.	GM ｜Shuijiang Tang
Kunming Kingem Industry Co., Ltd.	GM ｜Weichu Huang
LG Electronics China R&D Center	R&D Engineer ｜Yuechao Wang
Shanghai Dida Biology Technology Co., Ltd.	CEO ｜Jing Chen
Shanghai Tianyun Environmental Protection Technology Co., Ltd.	Chief Engineer ｜Yunzheng Zhou
Shanghai Tongji Plant Biomass Energy Co., Ltd.	Deputy General Manager ｜Alex Lu
Shell Techworks	CEO ｜Qun Deng
Tianyu Garden	Executive Assistant ｜Bo Shi
	Technical Supervisor ｜Yaodong Huo
Xuzhou U-ECO Crop Stalks Material	CEO ｜Mingyuan Ma

Chinese Institutions

Changsha Environmental Protectio n Vocational College	Director, Professor ｜Tonghua Wu
Tojing University, Schools of Environmental Science and Engineering	Assistant Dean, Professor ｜Dianhai Yang

Media

Iinfzm	Journalist ｜Dan Xie

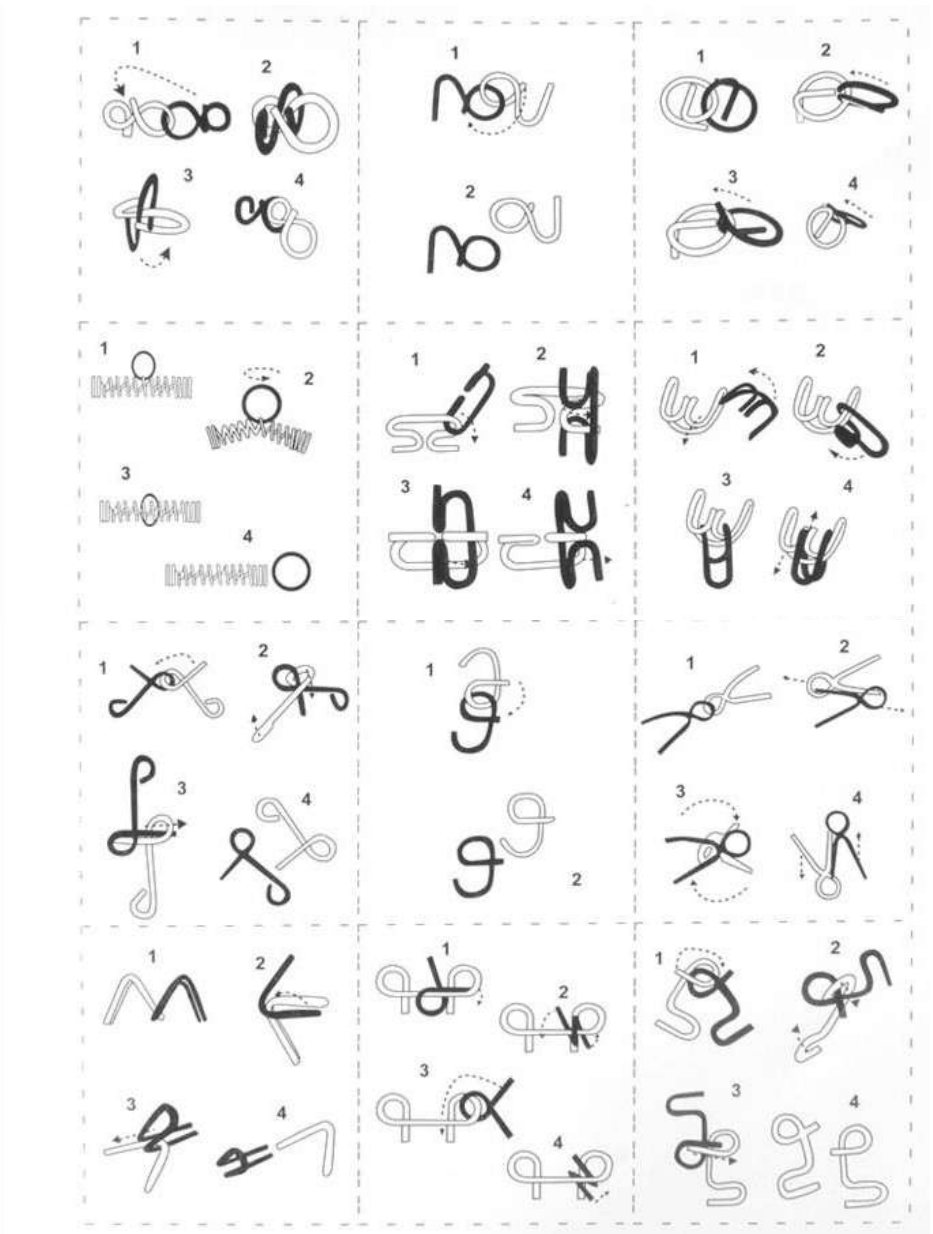


Not Easy But Interesting

Nine pillars puzzle is one of China's folk intelligence toys for almost two thousand years of history. Nine rings link together into a string. Winner must unlock it without any damage.

The iron puzzle evaluated from ancient nine pillars puzzle. Each puzzle composes of two small iron hoop. At the start, you feel either difficult or magic. Somehow you unlock it by accident. The next headache is how to put them together... , and so on. Eventually, with patience and effort, you will discover the inherent regularity.

CleanConnet will be there and help you find the best way to access most efficient and effective connecting platform, where you can find the right partner, investment and realize growth.

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