ESG Solution for SINNET

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Understanding of ESG

Company Research

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Feasibility Analysis

Appendix

Executive Summary

Introduction — Understanding of ESG

- Environmental, Social and Governance
- Social conscious investors to use screen potential investments
- Comprehensive analysis
- ESG Value Chain

Company — SINNET

- Founded in 1999
- Professional data center and cloud computing service provider
- Main business: IDC and cloud computing service

Industry — IDC Industry

- Gaining greater market attention
- Two parts of Chinese IDC market
- Typical enterprises
- SINNET in IDC industry: on the way of energy conservation

E-Illuminator's ESG Solution

1 Site Selection

- ***Ulanqab***: best
- Great Environment
- Locates close to Beijing
- Low cost of energy…

2 Social Benefits

- Ease energy shortage problem
- Local employment
- Invest in green industries

3 Design

- LEED standard
- Large prefabricated flat floor
- Durable, recyclable materials…

4 Incentive Mechanism

- TUP & RSU for short-term behaviors
- Profit-sharing & retirement plans for long-term behaviors

5 Female Leadership

- More targeted programs for women' healthy career development & potential discovery

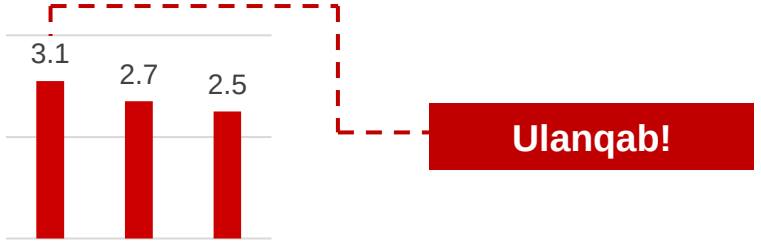
6 Risk Management

- Anti-corruption training & E-platform
- Bringing in & Going on
- Security technology

Feasibility Analysis

- Necessity of Investment
- Technical Feasibility
- Financial Feasibility
- Economic Feasibility
- Social Feasibility
- Risk Factors and Counter-Measures

Impact Multiple of Money



Ulanqab!

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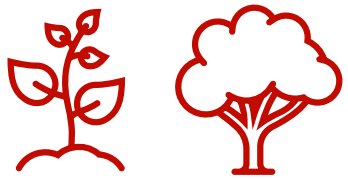
ESG stands for : Environmental · Social · Governance

1 E: Environmental

Impact on the Environment

- Environment Protection Policies
- Climate Change Vulnerability
- Usage of Natural Resources
- Pollution and Waste
- Employee's Awareness of Environment



2 S: Social

Impact on the Society

- Relationship with the Community
- Labor Management
- Human Capital Development
- Employee's Health Condition
- Responsible Investment

3 G: Governance

Impact on the Society

- Corporate Governance
- Tax Transparency
- Gender Equality in Workplace

ESG investment is driven from top to bottom. Companies will improve its ESG rating in order to respond to investors' expectations.

1 ESG Rating

Motivation

The motivation for companies to improve ESG comes from the positive incentives that high ESG ratings bring to them.

2 ESG Value Chain

How ESG Works?

ESG investment is driven from top to bottom.

Upstream investors

↓

Midstream financial intermediaries

↓

Downstream investees

1. Investors / institutional investors recognize and except the value of ESG
2. The recognition of investors encourages financial agencies to produce more ESG products
3. In order to respond to investors' expectations, companies will improve its ESG rating, looking forward to a higher company value and a smoother way when developing.

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SINNET's main business focuses on IDC and cloud computing services, with IDC business the future trend and main profit engine.

1999 Established in Beijing

2001 First data center at Dongzhimen carrying out IDC business

2010 Become a main third-party IDC service provider in BJ

2012 Partnership with Amazon

2014 IPO on SZSE

2015 Acquire MEGANEST & AnG, further expanding IDC scale

2017 New Base in Jiading, Shanghai

2018 Acquire Shengcai, having more than 30,000 cabinets

2020 IDC centers in Beijing-Tianjin-Hebei region, Yangtze River Delta, etc.

Phase1 Initial Growth

Phase2 Rapid Development

Phase3 Takeoff stage

Phase4 Continuous Growth

Core Business

IDC

Basic services like Complete network services, with other value-added services

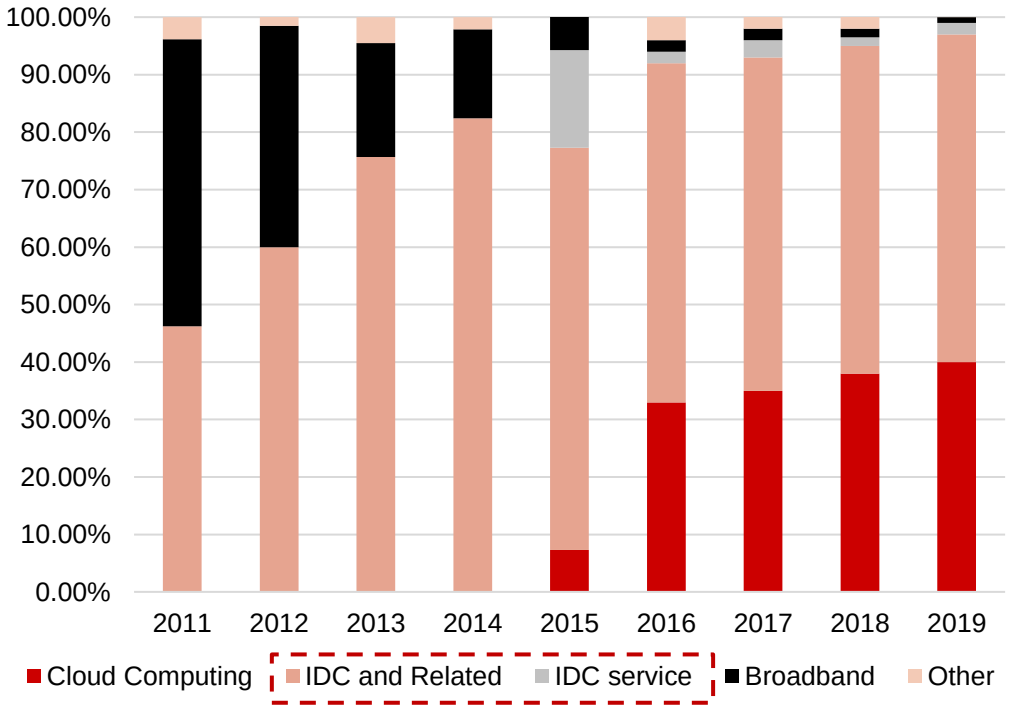
Cloud computing

cloud network services with operation services

Internet broadband access services

System integration services

IDC occupies major part in gross profit



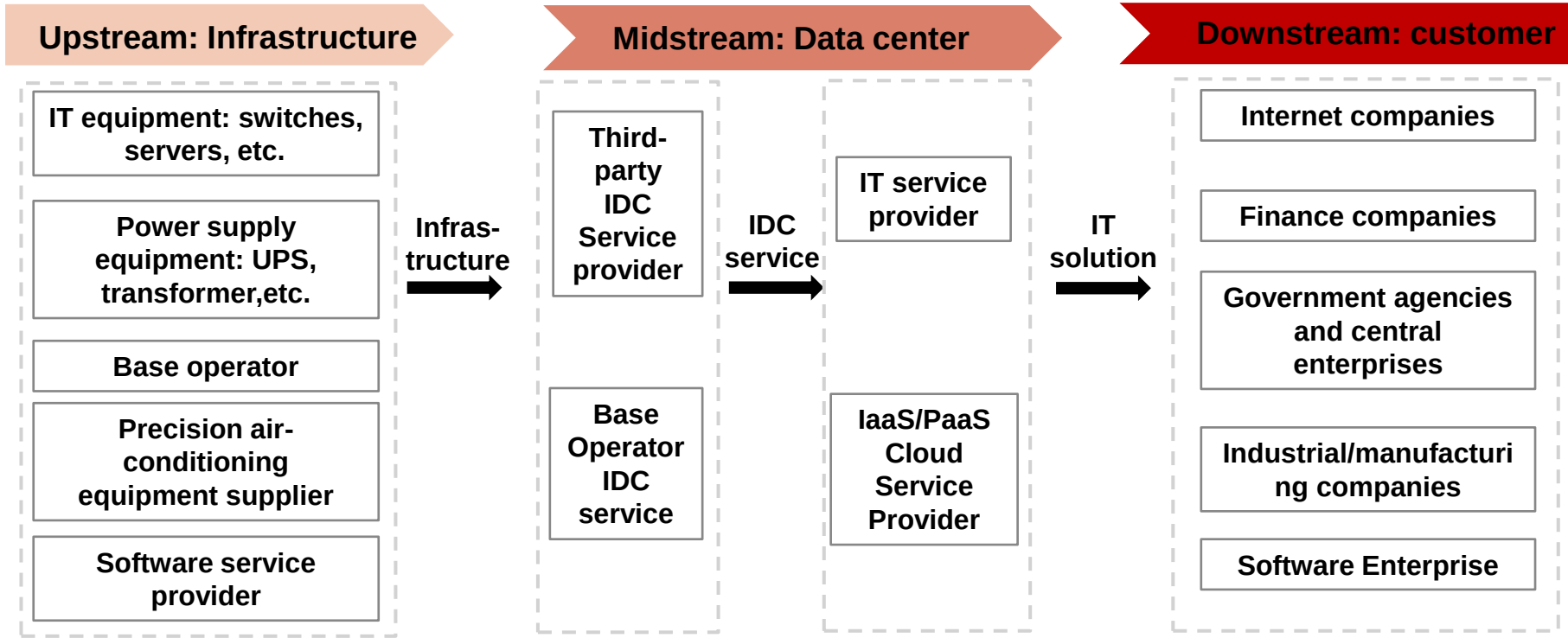
SINNET's move of ESG

1) Upgrade cooling system and power system. Application of new technology on heated pumps and distributed energy supply system;
2) Consideration of green power such as distributed photovoltaic;
3) Undersea data center which utilizes sea water as natural cooling source.

1) Green power is not the total answer IDCs;
2) Undersea data center is not within the foreseeable future;
3) The new projects still focus on central region.

Source : Company official website, SINNET's annual report (2020)

SINNET, located in the midstream of the IDC industry, is a leading third-party IDC player, while still have room for ESG improvement due to industry characteristic.



SINNET IDC projects	Service area
Beijing Dongzhimen	Beijing
Beijing Jiuxianqiao	
Fangshan base II	
Hebei Yanjiao	
Shanghai Jiading	Shanghai
Tianjin Baodi	Spillover demand from Beijing
Hunan Changsha	Changsha
Hangzhou free industrial park	Hangzhou
Xinjiang Urumqi	Comply with national strategies

Key takeaways:

- The scale of Chinese IDC market increased by 43.4%, which was fastest growth since 2012, and it is expected to reach 4,867.9 billion yuan
- Typical enterprises for retailing IDCs are SINNET and ofide, and typical enterprises for wholesaling IDCs are @hub and GDS.
- The high pollution emission characteristics of IDC industry have led to a certain degree of improvement in its ESG score in the environment.

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ESG Solutions: Site Selection and Design for New Green IDC and Governance Improvement

Strategy for SINNET's ESG Development

1 Site Selection

- ***Choose Ulanqab:***
  - Build the New IDC with 2000 cabinets
- ***Powered by Wind:***
  - Utilize **electricity generated by wind**
  - Conduct **Air Cooling** Economization

2 Green Design

- ***Follow* Leadership in Energy and Environmental Design *:***
  - Employ prefabricated flat floor structure
  - Use Eco building materials
  - Improve energy usage efficiency

3 Governance Improvement

- ***Multi-functional stock incentives and long- short- incentives***
- ***Career-centered programs for female leadership***
- ***Awareness straining and learn from research products***

Empower the New Green IDC

Environment	Society	Governance
• Reduce carbon emissions • Increase the regional utilization rate of the green power generated by wind	• Promote local employment and raise local tax revenue • Boost local green economy growth	• Improve the governance structure of company • Ensure the long-term development stability and vitality

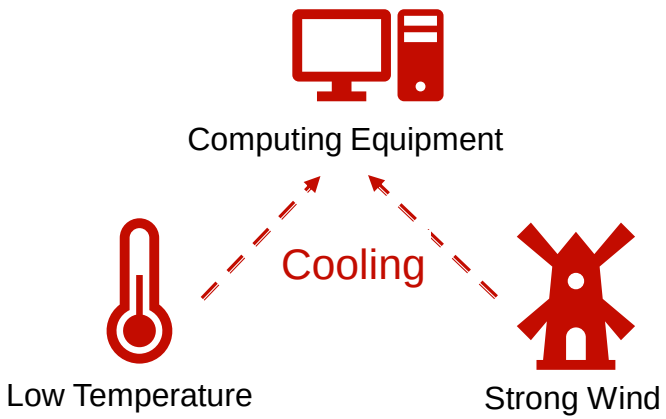
1

ESG Solutions: Ulanqab is the best site for building a new green IDC

1 Local Environment

Few Natural Disasters
Cooler Outdoor Environment

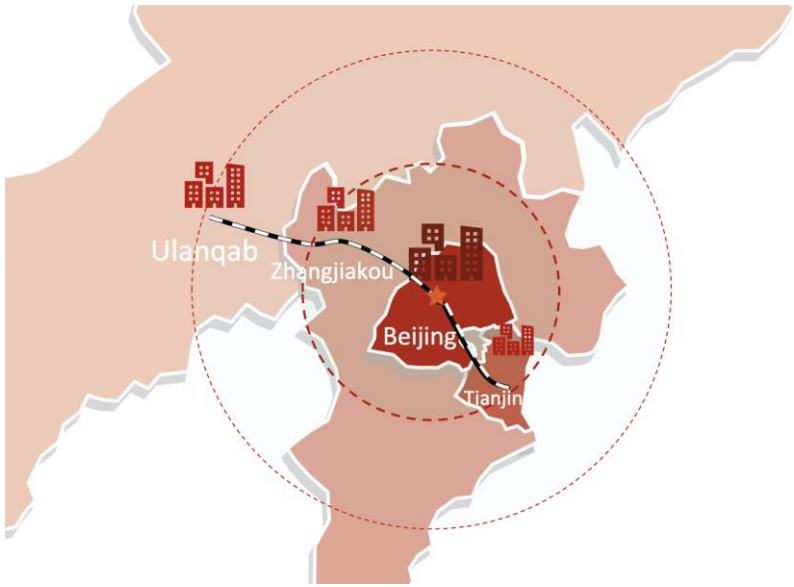
- Located on basalt layer, stable geologic structure
  - Risks like seismic vulnerability and extreme weather are excluded
- Constant wind and **low temperature**
  - Temperature between 0 ~ 14 ℃ all year around
  - Options for outdoor air cooling economization



2 Distance to Market

Location in the One-hour Economic Circle of Beijing

- Only **100 minutes** from Ulanqab to Beijing by high-speed railway
  - Beijing is one of the areas in China with the greatest commercial demands for computing power.
- Market from Internet companies and other industry customers in Beijing



3 Industry Ecosystem

Developed IT "Ecosystem"

- **Developed and completed** IDC industry agglomeration in Ulanqab
  - Peak performers in Internet

快手 阿里巴巴 Alibaba.com Tencent Cloud

  - Hardware Powerhouse

HUAWEI Schneider Electric

  - Critical data center support

鼎芯科技 YOUEDATA 优易数据 SAICHENG Cyber Service 赛铖网络 清华同方 TSINGHUA TONGFANG

Source: Inner Mongolia Autonomous Region Cloud Computing Industry Development Plan

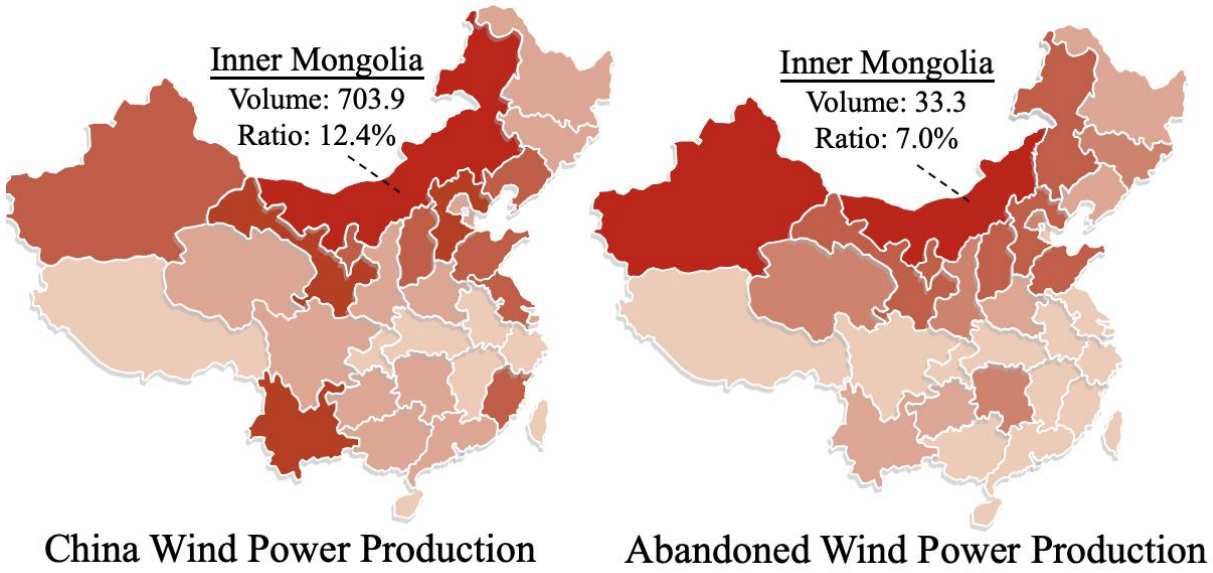
1

ESG Solutions: Ulanqab is the best site for building a new green IDC

4 Cost of Green Energy

Low Cost of Energy, Rich Electricity from Wind Power

- Most competitive energy rate – at 0.26 yuan per kilo watt, the nations **lowest power price**
- West Inner Mongolia, where Ulanqab locates, has the **largest** wind power production volume
- At the same time, it has the **second largest** volume of **abandoned** wind power production.



China Wind Power Production　　Abandoned Wind Power Production

5 Network

Specialized Fiber Network Cable

- Network connectivity determines the latency and transaction time
- "Information Highway" policy has been launched to smooth the connectivity
  - A point-to-point 144-core specialized optical fiber cable from Ulanqab to Beijing has been built
  - Network delay is less than 5 milliseconds

6 Tax and Land Incentives

Favorable Allowance and Exemption Policy

- Local authorities has laid down attracting tax allowance and fee exemption policy for IDC construction projects:
  - Financial support with reference to **40%** of the corporate paid tax
  - **Exemption** of the land use tax of construction land
  - Compensation of **7%** fixed asset investment of the project

as soon as the project has been completed and checked

Source: China New Energy Consumption Early Warning Center

2

Design for the New Green IDC Could Be Implemented under LEED

1 Introduction of LEED

Leadership in Energy and Environmental Design (LEED)
is a commonly used standard for green construction of IDC

LEED v4.0 (2013): introduced specific standards for different types of construction, including “Data centers”

***4** different LEED certification levels:*

Widely accepted by industry leaders: Microsoft, Facebook, Google, Apple, Digital Realty Trust, Global Switch, Vmware

Two Benefits for SINNET：

- **Detailed and tested standards:** As a widely accepted standard for years, LEED will greatly helps SINNET build its green IDC
- **Improve social influence:** Although it’s already an old story in China, initiatively building new IDCs under LEED standard can greatly helps SINNET improve its influence on environment related issues and build an environmental friendly brand image

2 Potential solutions

01 Prefabricated flat floor structure

- No construction pillars
- Unique thermal sandwich structure
- Optimize the airflow organization

02 Eco building materials

- *E.g.* Materials with good heat insulation are supposed to be selected for exterior walls
- Rock-wool sandwich panel, color steel laminboard……

02 Improve energy usage efficiency

- *E.g.* Solar panels on roof
- Already implemented by many data centers, including Baidu and Delta Electronics

Resource: U.S. Green Building Council, Delta Electronics, Web information

2 Social Benefits Include Energy Saving, Boost Local Green Industries, Economy and Overall Employment

1 The conflict of IDC industry in energy issues

Energy Resource

- Far from mega cities (especially green energy)
- Lot of green energy is wasted *(e.g. 17% of wind power generated in Zhangjiakou is wasted every year)*

IDC Location

- Near or in mega cities, especially Beijing and Shanghai, in which electricity is short of supply and expensive
- Require a lot of energy *(e.g. 2000 units of servers requires 7280kW)*

2 Invest in local green industries

Wind Power Industry

- Inner Mongolia ranks 1st in China in the amount of wind power produced per year

1	Inner Mongolia **787**	2	Xinjiang 468	*Billion kW*h (2021)*

Unique Agricultural Resource

- Some well known agricultural brands
- Experiment field for green agriculture techniques

蒙牛 伊利 小尾羊

3 Promote local employment and economy growth

IDC — Direct huge profit per year

- Technicians
- Operating engineers
- Commercial attache

Related — Indirect impact

- Electricity
- Property
- High tech

Boost employment
Attract talents

Promote economy
Diversify industries

"East-to-West data transmission" project

- Initiated in **2021** by **National Development and Reform Commission**
- Promote data centers to **locate in less developed regions,** including Guizhou**, Inner Mongolia**, Gansu and Ningxia Province

Source: National Development and Reform Commission, web information

3

1)Design multi-functional stock incentives and long- short- incentives

1 Principle-agent Theory

Incentive mechanism aligns 2 pursuits.

- **Principle-agent Theory:**

Maximization of **individual utility** ⟷ Executives ⟷ Maximization of **corporate interests**

2 SINNET Incentive Mechanism

SINNET's incentive mechanism is naïve.

Salary = Basic Wage
- Low risk
- Basic insurance

\+ Year-end Benefits
- Incentive function
- Prone to induce short-term behavior

\+ Stock Equity
- Motivate executives for long-term behavior

3 Huawei and Alibaba's Incentive Mechanism

Better designs in stock equity incentive section.

- **TUP for Huawei:**
  - Time unit plan - Motivate long-term struggle - Mobilize corporate cycle
- **RSU for Alibaba:**
  - Restricted stock unit - Motivate long-term struggle - Mobilize corporate cycle

Salary = Basic Wage + Year-end Benefits + TUP/RSU

4 Nike's Incentive Mechanism

Comprehensive design of incentive mechanism from a less related industry.

- **Diversified** and **mature** composition of incentive mechanism
- **Long-term** and **thorough care** for employees
- Motivating both **long-term** and **short-term** behaviors

Salary = Basic Wage + Year-end Benefits + Stock Equity, Term, and Cash Return + Profit-sharing and Retirement Plans

3 2)Promote systematic and career-centered programs for female leadership 3)Conduct awareness training and learn from research products for risk management

1 Female Leadership

Model from Chindata for targeted plans.

- **Current situation of SINNET:**

Score not low ← Proportion of women in core management is not low

Score not low → **- Lack of systematic and targeted plan**
- Formalistic

- **Parallel Comparison with Chindata:**
  - High proportion of women in the management
  - **Enhance gender equality** and **healthy development of women's occupations** through **"Better U" plan**
  - Series of other **leadership projects**:
    - **Support** the career development of women in the future
    - **Discover** more elite women

2 Risk Management

Lack of attention on risk from SINNET.

- **Risk in discussion:**

Intentional or unintentional corruption of employees → Leakage of information and data

- **Current situation of SINNET:**
  - Education level of the workforce + Work distribution
  - Relevant **post-employment training** is vital and necessary
  - Mostly **focused on vocational skills** and **not highlight** training for **safety awareness** or **professional ethics**

Fig. Education level of Sinnet workforce

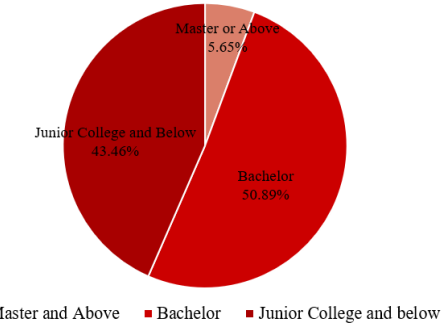
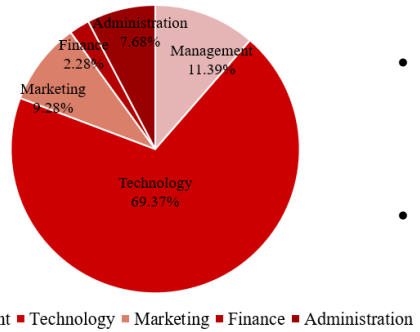


Fig. Labor distribution of Sinnet



2 Risk Management (Contd.)

Model from industry and research.

- **GDS's solution:**
  - **100%** of employees receive training on **compliance, anti-corruption, and network security**
  - Maintain **compliance and anti-corruption reviews** every **2 years**
- **Chindata's solution:**
  - **100% completion rate** of **compliance training** for NASDAQ-listed companies on the Foreign Corrupt Practices Act, the insider trading policy, and the Sarbanes-Oxley Act
  - **100% accessibility** to related provisions and materials through **E-platform**
- **The Edge of research**
  - **Separation** into inspection areas, maintenance areas, and other different partitions **+ Authentication** after barrier-free inspection
  - **"Bringing in" and "Going out"** on staff engaged IDC security management

Picture source: official website of Chindata. Figures' source: 2020 Sinnet Social Responsibility Report.

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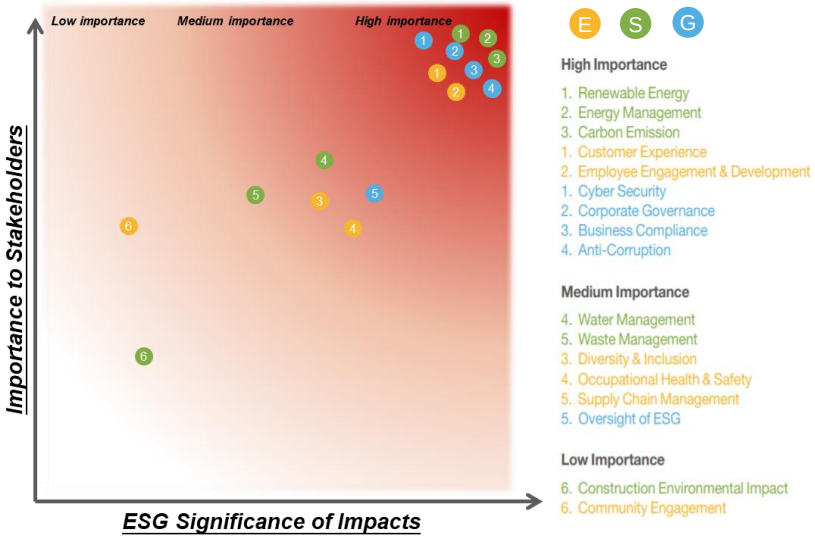
Feasibility Analysis

Investing | Technical | Financial | Economic | Social | Risk & Mitigation

1 Necessity of Investment

It is a must for SINNET to invest in ESG.

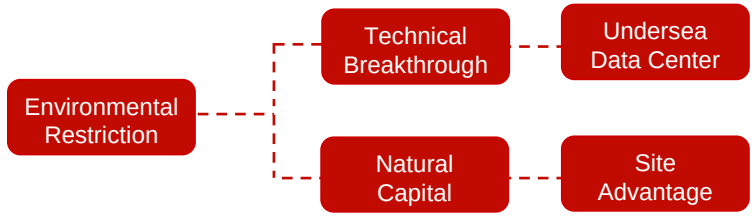
- **Market position**: leader of third-party IDC
- **Market trend**: replacement of traditional high energy consumption
- **Corporate development**: sustainable company growth
- **Industry rivals** such as Chinadata Group and GDS have great ESG performance.



2 Technical Feasibility

ESG solution is technically viable.

- **Restriction from first-tier cities:** the PUE standard for new IDC centers is less than 1.3
- **Green IDC in Ulanqab**: able to meet the construction standard with PUE under 1.2
- **Security guarantee**: partition management and relative access control systems



3 Financial Feasibility

Estimated payback period: 15 years

- **Key assumptions:**
  unit income of per cabinet is 75000 yuan;
  use rate of cabinet reaches 80%;
  access to 10kV utility power;
  2000 5kW cabinets put into production;
  PUE of 1.2
- **Key evaluation:**
  operating power: 2000 units *5kW/unit * 1.2 * 60% = 7200kW;
  basic capacity of UPS should be at least 12000 kVA (E≥1.2P) and 20000kVA UPS power (12000kVA/60%) needed.

Area	File name	Issue date	Enacting unit	Summary
Beijing	The implementation of Beijing Municipal Data Center Development Program(2021-2023)	2021.4.27	Beijing Municipal Bureau of Economic and Information Technology	Gradually close backward data centers whose average PUE beyond 2.0; Modified IDCs' PUE should not exceed 1.3.
Shanghai	The data center construction in Shanghai city guide(2021 edition)	2021.4.8	Shanghai Municipal Commission of Economy and Informatization	PUE of newly built IDCs should not exceed 1.3.
Guangdong	5G base stations in Guangdong Province and the overall layout of data center planning(2021-2025)	2020.6.30	Guangdong Provincial Department of Industry and Information Technology	Average PUE below 1.3 till 2022 and below 1.25 till 2025.
Nationwide	New data center development three-year action plan(2021-2023)	2021.7.4	Ministry of Industry and Information Technology	PUE of newly built IDCs should not exceed 1.35 till 2021 and 1.3 till 2023.

Source: GDS Environmental, Social and Governance Report 2020

Feasibility Analysis

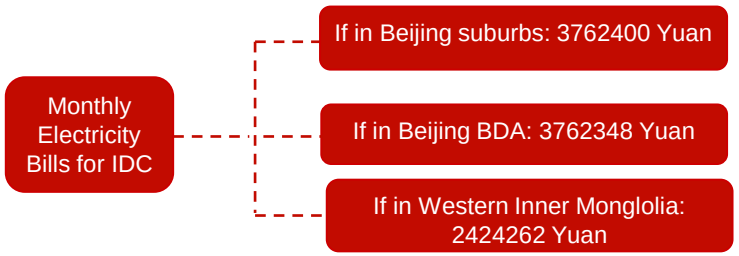
Investing | Technical | Financial | Economic | Social | Risk & Mitigation

4 Economic Feasibility

Electricity seen as a quasi-public good.

- **The importance of electricity**: key resource for IDC industry
- **Cost of electricity** differ greatly across China
- **Smart location** is where electricity is of lowest cost

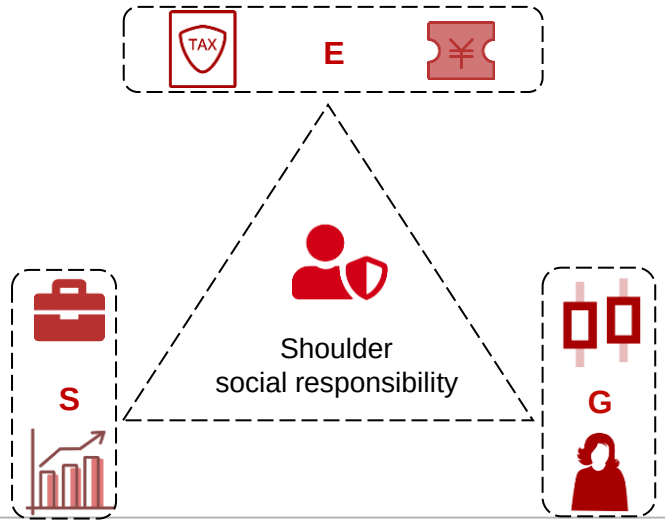
place	time-of-use electricity price (Yuan/kwhr)			Capacity of electricity prices (Yuan/kw·month)
	Peak hours	Regular hours	Low hours	
Beijing(suburbs)	0.859748	0.648420	0.445230	48
Beijing(BDA)	0.855684	0.648420	0.449284	48
Western area of Inner Mongolia	0.573129	0.423225	0.357642	28



5 Social Feasibility

ESG solution is society-friendly.

- **Preferential policies for big data industry:** subsidies, provision of infrastructure and financial rewards;
- **Economy vitalization in Ulanqab**: employment creation and industrial clusters are conducive to local economy;
- **Social identification:** Corporate governance enhancement stressing incentive mechanism and female leadership caters to society consensus.



6 Risk & Mitigation

Certain risks and counter-measures made.

Risks

- **Demand weaker than expected**: Ulanqab is already home to lots of data centers, leading to supply over demand;
- **Cost more than estimated**: investment in a new IDC can be of huge cost;
- **Actual ESG performance worse than presumed**: it will be of little use for the company to build an IDC faraway if ESG performance is not prominently improved**.**

Mitigations

- **On demand side**: Ulanqab IDC will mainly focus on demand spillover from Beijing;
- **On cost side:** positive financing channels shall be taken (e.g. REITs).
- **On ESG performance side:** high emphasis should be placed on environmental management and company's all-round development.

Source: 2022.1 State Grid electricity prices of 24 zones, Inner Mongolia Big Data Center

IMM (Impact Multiple of Money)

1 Assess Relevance and Scale

Relevance and Scale of a Product / Service / Project

- How many people will the product or service reach?
- How deep will its impact be?

2 Identify Outcomes

Identify Target Social or Environmental Outcomes

- Identify the desired social or environmental outcomes.
- Determine whether existing research verifies that they are achievable and measurable.

Identified Outcome + **Anchor Study** = **Salary**

3 Estimate Economic Value

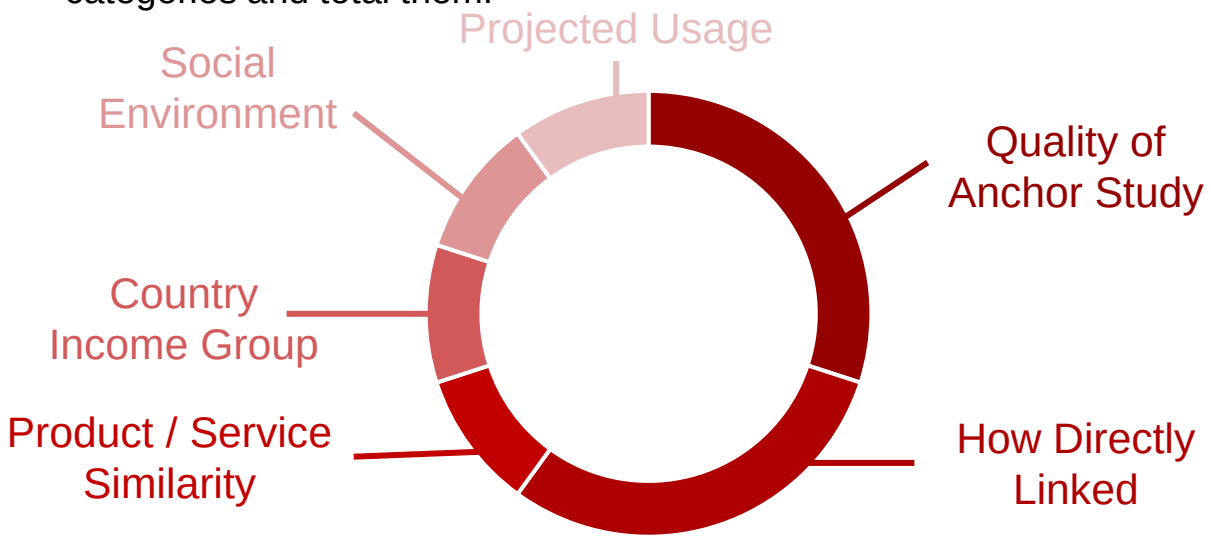
Economic Value of the Identified Outcomes to Society

- Find an “anchor study” that robustly translates those outcomes into economic terms.
- If a proper anchor study does not exist, find an expert in that field.

4 Adjust for Risks

Impact Realization Index

- Use the impact realization index to assign values to six risk categories and total them.



5 Terminal Value

Estimate the Terminal Value

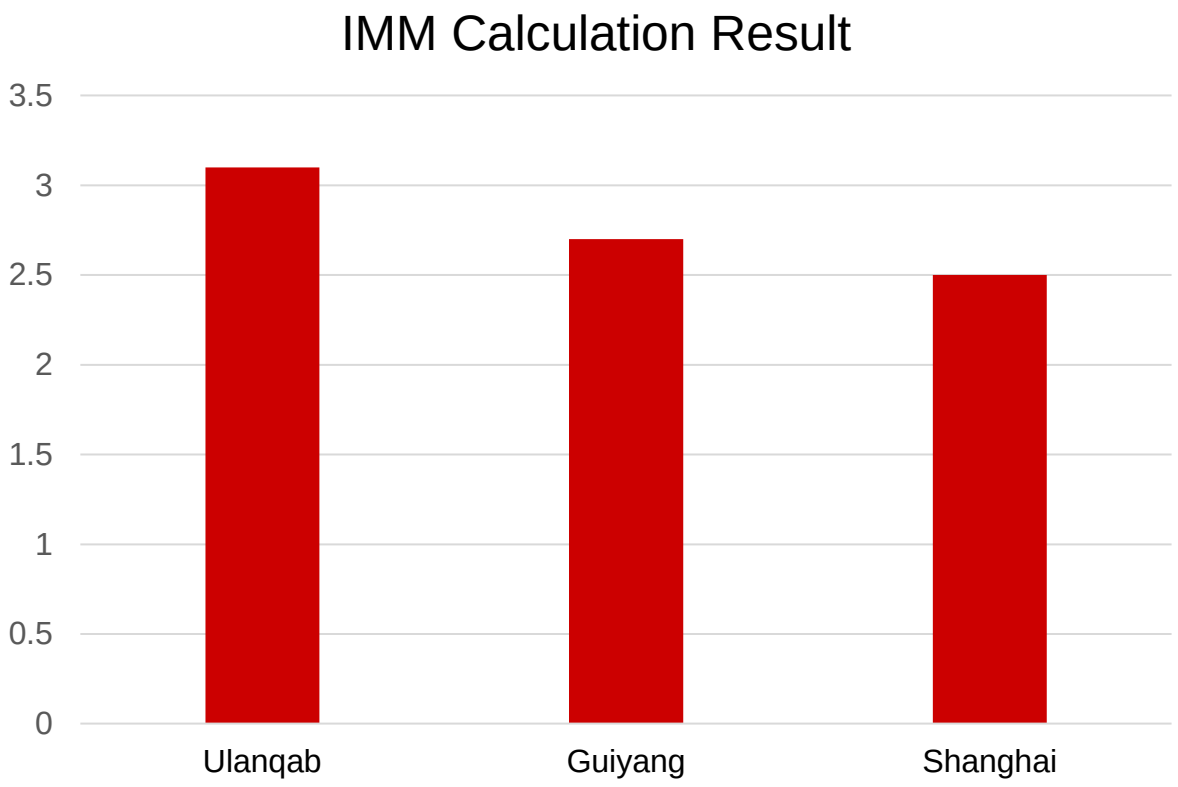
- Asses the probability that both output and social value will continue undiminished for five more years.
- Probability: High – discount rate 5%; Low – discount rate 25%.

IMM (Impact Multiple of Money)

6 Calculate Social Return on Every Dollar Spent

Impact Multiple of Money

- Calculate IMM based on estimated investment.



- Is the calculation result close to reality?
- How can we learn from the calculation result?

Question 1 Calculation result

- Our calculation result can roughly show the comparison between different solutions.
- The factors selected in our estimation is far less than that in real life – it may vary from the real value; hard to estimate!

Question 2 Learn from it!

- Our goal is to use the IMM to show that the solution (Ulanqab) is *best* rather than calculate the real value.
- Anyway, those factors is roughly enough to show the *comparison* between different solutions. We use it to *compare*.

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Appendix 1-1: References

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Appendix 1-2: Estimated Gross Profit Margin for a Single Cabinet in the New IDC

Major Assumptions:

Number of cabinets	PUE	Voltage	Power per cabinet	Load ratio
2000	1.2	10kV	5kW	60%

Thus, power per day needed: 2000 x 1.2 x 5kW x 60% = 7,200kW

Electricity power cost per month:

	hours	Yuan/kw·h	Yuan/kw·month
peak	4	0.26(green electricity price used)	28
regular	11	0.423225	
low	9	0.357642	

Thus, electricity power per month equals 7200 x (28 + 30 x 8.91) = 2127,000yuan,

which is approximately 1.27('000) for one cabinet per year.

UPS (Uninterruptible power supply)

Total power consumption	UPS capacity	Load ratio	Number of IDC rooms	Redundancy standards
1000kW	12000kW	60%	50	2N
(5kWx2000units)	(E≥1.2x10 000kW)	Adjusted UPS=20,000kW	(2000/40)	2 units of 400kW UPS needed

Thus, cost of UPS = 50rooms x 2units x 212100 = 21210,000Yuan,

which is approximately 1.06('000) yuan per year for a single cabinet.

Gross profit margin for a single cabinet is 54%

A Single Cabinet in SINNET's new IDC		
Revenue per cabinet per year ('000)		7
Cost per cabinet per year ('000)		
Electricity cost	1.27	
UPS	1.06	
Depreciation	0.7	
Operation Cost	0.2	
		3.24
Gross Profit per year('000)		3.76
Gross Profit Margin		54%

Source: Inner Mongolia Autonomous Region Development and Reform Commission

Appendix 1-3: Estimated Future Cash Flows for the New IDC

We estimate that the new IDC will have a positive NPV within 15 years, which is an acceptable number due to its high initial investment.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Financial Forecast																			
Price	7.20	7.42	7.64	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Cabinet number	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Operation rate	0	0	0	0	0.3	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
GPM	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Timeline	Invest	Invest	Construct	Construct	Construct	Partly operate	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done
Gross profit	0	0	0	0	2640	5280	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040
NI	0	0	0	0	2112	4224	5632	5632	5632	5632	5632	5632	5632	5632	5632	5632	5632	5632	5632
Investment decision																			
Invest	40,000																		
Cash flow	0	0	0	0	2640	5280	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040	7040
Spot rate	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PV	0	0	0	0	2068.509	3940.017	5003.197	4764.949	4538.047	4321.949	4116.142	3920.135	3733.462	3555.678	3386.36	3225.105	3071.529	2925.265	2785.967
NPV	-40000	-40000	-40000	-40000	-37932	-39992	-28988	-24223	-19685	-15363	-11247	-7327	-3594	-38	3348	6574	9645	12570	15356