可持续发展报告2020
Sustainable Development Report 2020

GoldCard 金卡智能

Make life better！

金卡，让生活更美好！

关于本报告 About this report

《金卡智能集团股份有限公司2020年可持续发展报告》是金卡智能集团股份有限公司连续第七年对外披露公司履行社会责任、践行可持续发展战略的年度报告，也是对外发布的第三份企业可持续发展报告。

"Sustainable Development Report -2020- Goldcard Smart Group Co., Ltd." is the seventh consecutive annual report disclosing activity of corporate governance and performance of corporate social responsibility and continuous development strategy of Goldcard Smart Group Co., Ltd. ("the Company") in the past year. It is the Company's third submission of published corporate sustainable development report.

企业社会责任报告
Corporate Social Responsibility Reports

可持续发展报告
Sustainable Development Report

报告范围
Scope of report

本报告的组织范围涵盖了公司对财务和运营政策及措施有控制权或有重大影响的所有实体。
本报告所披露信息发生时间为2020年1月1日至2020年12月31日，部分内容超出上述范围。
This report covers all entities in which the Company has controlling power or significant influence on the financial and operational policies and practices. The activities disclosed in this report occurs from January 1, 2020 to December 31, 2020, with some reasonable exceptions.

数据来源
Sources of data

本报告所披露数据均为金卡智能集团股份有限公司在经营、环境和社会方面的运营情况，全部来自公司的正式文件和统计报告，最终数据以集团年报为准。
The data disclosed in this report covers business, environmental and social operations of the Company, as recorded in the Company's official documents and statistical reports. The final confirmation of data is subject to the Company's annual report.

称谓说明
Clearance on addressing

为便于表述和方便阅读，在报告中"金卡智能集团股份有限公司"也以"金卡智能集团"、"金卡"、"公司"或"我们"表示。
For the sake of clear statement and convenience of reading in this report, Goldcard Smart Group Co., Ltd is also addressed as "Goldcard Smart Group", or the Company, or "We", which shall stand for the same.

编制依据
Reference to standards

本报告编制依据参照全球报告倡议组织（GRI）《可持续发展指南4.0》（G4）、国际标准化组织（ISO 26000）。
The compilation of this report follows the Global Reporting Initiative (GRI) Sustainable Development Guide 4.0 (G4) and the International Organization for Standardization (ISO 26000).

报告获取方式
Access to this report

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CONTENTS 目录

董事长致辞

MESSAGE FROM THE CHAIRMAN OF THE BOARD

2020年是不平凡的一年
在疫情全球隔离的情况下，我们尝试"云上"直播方式
我们设立的金卡智能抗疫基金先后向武汉、温州、杭州等地捐赠资金和物资
2020年，我们在燃气板块继续领跑的同时，也在水务板块取得了突破。
面对"十四五"规划，未来我们仍将推动行业数字化发展，造福千家万户。

2020年是不平凡的一年，面对突如其来的新冠疫情，我们全方位启动了金卡数字战"疫"方针，运用我们在全球部署的1,700多万台物联网智能终端、1,000多万台NB-IoT智能终端以及已经接入900多万台智能终端的IoT平台，有效实现远程抄表。900多家公共事业企业、9,000多万终端用户利用我们的云服务实现了"24小时，0接触"业务办理，有效保障了在疫情隔离下的基本服务需求。

The year 2020 is an extraordinary year. In face of the sudden COVID - 19, we have launched the "anti-epidemic" policy in all front. Taking usage of more than 17 million sets of global deployed Internet of Things intelligent gas terminals, more than 10 million sets NB-IoT intelligent terminals and the IoT platforms that have access to more than 9 million intelligent terminals, remote meter reading become reality. More than 900 public utility enterprises and more than 90 million end users have used our cloud services to achieve "24 hours, 0 contact" business handling, effectively ensuring the basic service provision under the isolation policy of the epidemic period.

在疫情全球隔离的情况下，我们尝试"云上"直播方式为30多个国家、3,000多家公用事业企业客户提供线上服务

和远程指导，满足了海外客户的各项业务需求，为海外客户持续创造价值。

Under the global isolation during epidemic, we tried cloud live broadcast to provide online services and remote technical support to customers of more than 30 countries and more than 3, 000 utilities, to meet the business needs of overseas customers and continue to create value for overseas customers.

我们设立的金卡智能抗疫基金先后向武汉、温州、杭州等地捐赠600余万元资金和物资，还为中国、俄罗斯、德国、保加利亚、哥伦比亚、尼泊尔、坦桑尼亚等数十余个国家的客户与合作伙伴送去了大批抗疫物资和医疗卫生设备。

The Goldcard Smart Anti-epidemic Fund established by us has donated more than 6 million yuan of funds and materials to Wuhan, Wenzhou, Hangzhou and other places, and we also sent large amount of anti-epidemic materials and medical and healthcare equipment to our customers and business partners in China, Russia, Germany, Bulgaria, Colombia, Nepal and Tanzania, etc.

2020年，我们在燃气板块继续领跑的同时，也在水务板

块取得了突破。依托强大的研发体系，我们在多项"卡脖子"技术方面取得一系列突破，我国首个燃气综合数字化可视平台的上线已成为行业样板。通过我们多年的努力实现了燃气客户产销差不超过4%，水务客户产销差不超过10%的目标。

In 2020, while continuing in taking the lead in the gas sector, we have also made a breakthrough in the water sector. Relying on a strong research and development system, we have made a series of breakthroughs in a number of "bottleneck" technologies, and the launch of China's first gas industry integrated digital visual platform has become an industry model. Through our years of efforts, we have fulfilled the goal of helping gas utility to achieve production and sales difference of not exceeding 4%, and water utility of not exceeding 10% .

面对"十四五"规划，和碳达峰、碳中和的总体目标，未来我们仍将把握企业战略发展机遇，坚定响应国家双碳战略，持续利用"云大物智移"等最前沿科技，推动行业数字化发展，造福千家万户。

In face of the "14th Five-Year Plan" and the nation's overall goal of carbon emission cap and carbon neutralization, we shall contin-

uously stick to the enterprise strategic development opportunities, firmly be responsive to the national dual carbon strategy, continue to make use of the most edge-cutting technologies in areas of "Cloud, Big data, New material, Artificial intelligent, and Mobile", to promote the digital development of the industry and to benefit millions of families.

金卡智能集团股份有限公司 董事长
Chairman of the Board,
Goldcard Smart Group Co., Ltd.

关于金卡智能集团
ABOUT GOLDCARD SMART GROUP

服务国家
30+

服务城市
2000+

服务公用事业企业
3000+

服务家庭用户
6000+

物联网智能燃气终端
1700 余万台

NB-IoT智能燃气终端
1000 余万台

IoT平台接入智能终端
1000 余万台

（一）公司概况
Company Profile

金卡智能集团股份有限公司是中国领先的物联网企业。2012年，公司在深圳证券交易所上市（证券代码：300349）。公司目前服务于全球30多个国家、2,000多个城市、3,000多家公用事业企业及6,000多万家庭用户。

Goldcard Smart Group Co., Ltd. is a leading Internet of Things enterprise in China. In 2012, the company was listed on the Shenzhen Stock Exchange (stock code: 300349). The company currently serves more than 3,000 utilities and more than 60 million residential users in over 30 countries and 2,000 cities.

公司积极追随物联网和互联网的时代潮流，构建了以智能控制器、智能终端、IoT平台和SaaS云服务为内核的物联网业务体系，围绕客户需求持续创新，以坚实的物联网内核不断开拓智慧燃气、智慧水务、智慧电力等应用场景，为客户提供高价值、高性能的产品及数字化端到端解决方案服务。作为行业的领先者，公司不断加大技术研发投入，现有研发人员800余人，建有8大研发中心，辐射北美、欧洲。金卡智能累计在国内外部署1,700余万台物联网智能燃气终端及NB-IoT智能燃气终端1,000余万台，IoT平台接入智能终端900余万台。其中，智能燃气终端全球占有率排名第一。金卡智能还为900多家燃气企业和9,000多万燃气用户带来云服务的便利，通过金卡ESLink云平台缴费额达300亿+。

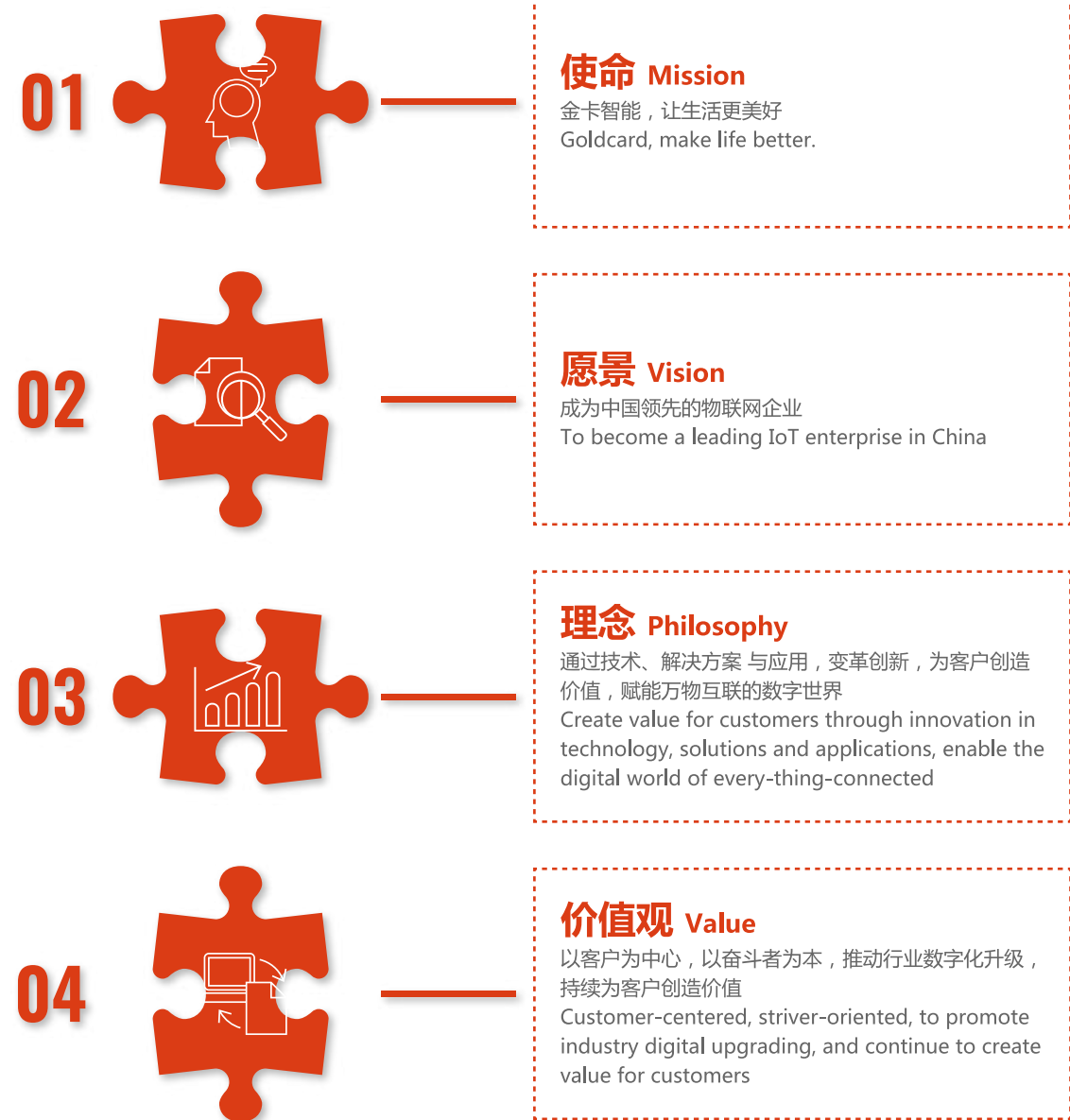The company actively keeps up with the tide of IoT and Internet, and builds up an IoT business system with intelligent controller, intelligent terminal, IoT platform and SaaS cloud services as the core foundation. It focuses on customer requirement and makes continuous innovation around the solid core of the IoT, constantly develops new application scenarios of smart gas, smart water and smart electricity, provides customers with high value, high performance products and digital end-to-end solutions. As a leader in the industry, the company continues to increase investment in research and development, with more than 800 R&D personnel and 8 research and development centers, radiating to North America and Europe. Goldcard Smart has deployed more than 17 million IoT smart gas terminals and 10 million NB-IoT smart gas terminals at home and abroad, and its IoT cloud platform has access to more than 9 million smart terminals. Goldcard market share of communicating gas terminals ranked first in the world. It also brings the convenience of cloud services to more than 900 gas enterprises and more than 90 million end users around the world. The bill collection amount through Goldcard ESLink cloud platform exceeds 30 billion RMB.

公司全球化战略不断拓展，目前已在英国、德国、法国、俄罗斯、巴西、秘鲁等30多个国家开拓市场，在全球建立10多个实验局，并依托"一带一路"，和华为联合推广NB-IoT智能燃气终端，不断走向全球。

The company continues develop its globalization strategy. At present, it has entered the market in more than 30 countries, including the UK, Germany, France, Russia, Brazil, Peru, and runs more than 10 pilot programs around the world. To support the "One Belt and One Road" national initiative, it has jointly promoted NB-IoT smart gas terminals with Huawei to the world.
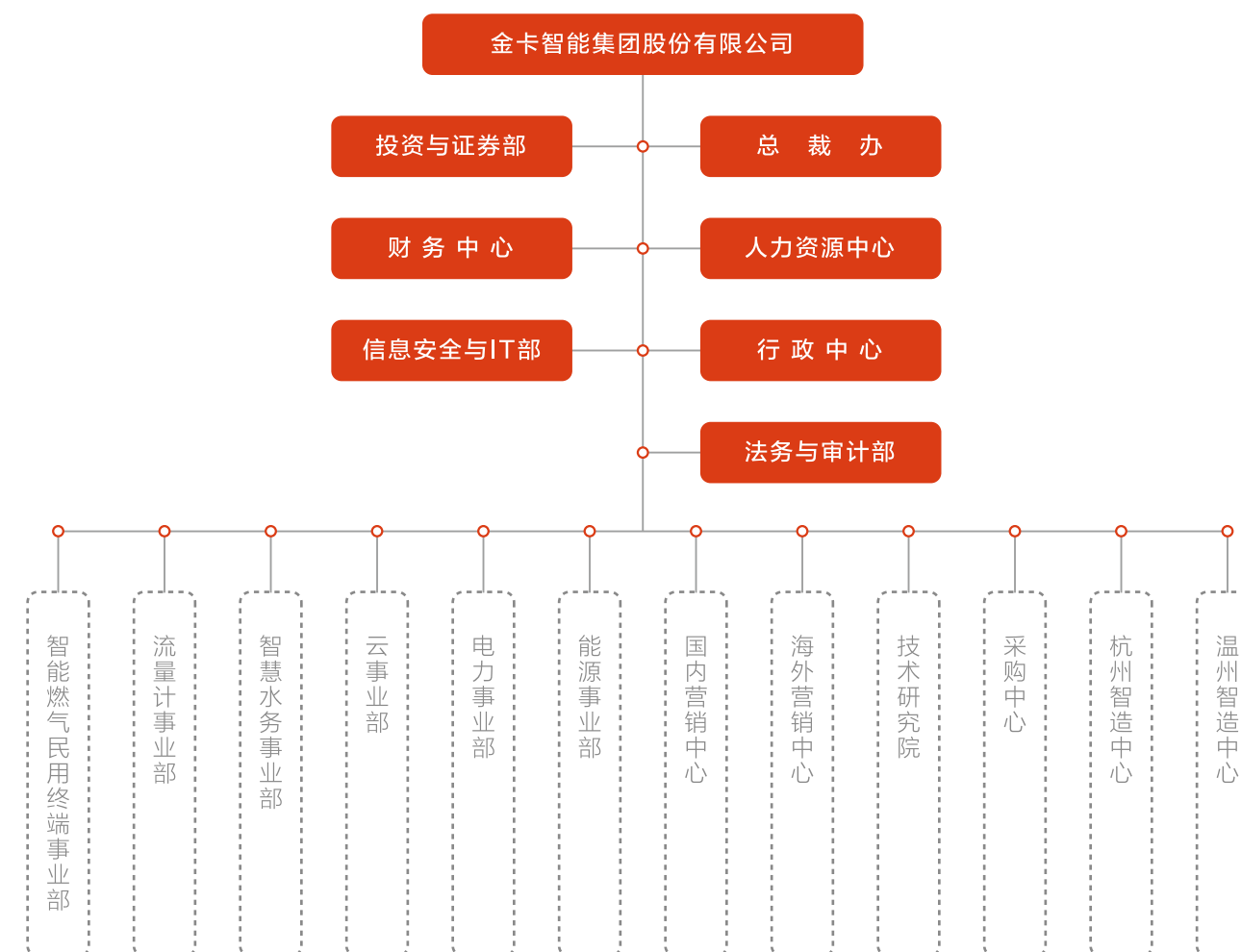
价值理念
Philosophy and Value Statement

01 使命 Mission
金卡智能，让生活更美好
Goldcard, make life better.

02 愿景 Vision
成为中国领先的物联网企业
To become a leading IoT enterprise in China

03 理念 Philosophy
通过技术、解决方案 与应用，变革创新，为客户创造价值，赋能万物互联的数字世界
Create value for customers through innovation in technology, solutions and applications, enable the digital world of every-thing-connected

04 价值观 Value
以客户为中心，以奋斗者为本，推动行业数字化升级，持续为客户创造价值
Customer-centered, striver-oriented, to promote industry digital upgrading, and continue to create value for customers

（二）公司治理
Corporate Governance

金卡智能集团股份有限公司
组织架构图

金卡智能集团股份有限公司

投资与证券部 — 总 裁 办
财 务 中 心 — 人力资源中心
信息安全与IT部 — 行 政 中 心
法务与审计部

智能燃气/民用终端事业部 | 流量计事业部 | 智慧水务事业部 | 云事业部 | 电力事业部 | 能源事业部 | 国内营销中心 | 海外营销中心 | 技术研究院 | 采购中心 | 杭州智造中心 | 温州智造中心

图：金卡智能集团组织架构图
Fig. Organizational Structure of Goldcard Smart Group

金卡智能集团严格按照《公司法》、《上市公司治理准则》、《深圳证券交易所创业板上市规则》、《深圳证券交易所创业板上市公司规范运作指引》以及国家有关法律法规的要求，建立包括股东大会、董事会、监事会、公司管理层在内的现代化企业组织制度和运行机制。

Goldcard Smart Group strictly follows the "Company Law", "Listed Companies Governance Guidelines", "Shenzhen Stock Exchange GEM Listing Rules", "Shenzhen Stock Exchange GEM Listed Companies Standard Operation Guidelines" and other relevant national laws and regulations. It established a modern enterprise organization system and operational mechanism including the shareholders' meeting, the Board of Directors, the Board of Supervisors, and the management team.

03

金卡可持续发展管理

Goldcard Sustainable Development Management

金卡可持续发展管理
GOLDCARD SUSTAINABLE DEVELOPMENT MANAGEMENT

作为中国领先的物联网企业，金卡智能集团致力于为全球客户提供智慧公用事业解决方案的同时，时刻注重将自身业务同实现联合国可持续发展目标（SDGs）相结合，建立并不断完善公司可持续发展管理体系，进而实现经济、社会与环境的协调可持续发展。

As China 's leading IoT enterprise, Goldcard Smart group commits to provide global customers with smart utility solution. At the same time, it always pays attention to connecting its own business with the realization of the United Nations Sustainable Development Goals (SDGs). It establishes and constantly improves the company' s sustainable development management system, so as to achieve the coordinated sustainable development of economy, society and the environment.

（一）可持续发展理念
Sustainable Development Philosophy

金卡智能集团股份有限公司的可持续发展理念是：
The sustainable development philosophy of Goldcard Smart Group is:

致力于做安全、智能、便捷的智慧公用事业综合解决方案服务商。金卡智能集团将安全作为首要目标，把公用事业的智能、便捷和超前的服务作为前提，持续创新，构筑智能城市。金卡智能集团坚守以人为本的发展理念，恪守商业准则，重视环境保护，积极履行企业社会责任，坚持践行可持续发展理念。

Committed to be a safe, smart and convenient smart utility integrated solution and service provider. Goldcard Smart Group takes safety as top priority, takes smart, convenient and preemptive service providing of the public utilities as the premises, and continuously innovates to help build smart municipals. Goldcard Smart Group sticks to the people-oriented principle, abides by the business morale, values environment protection, actively puts to action the corporate social responsibility and its sustainable development philosophy.
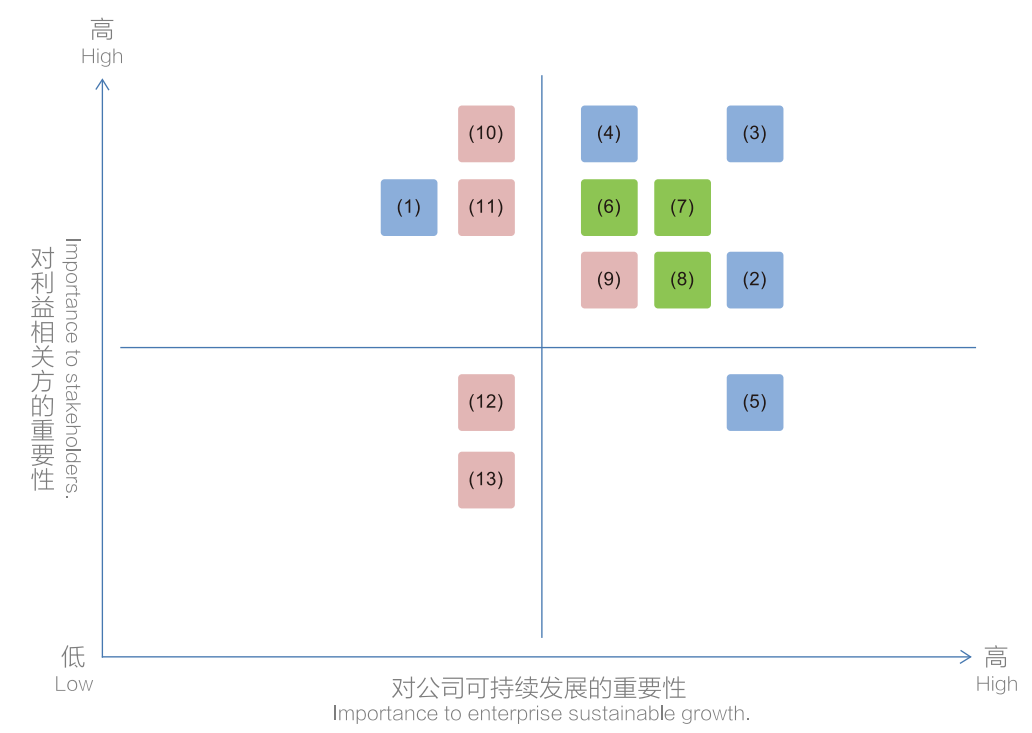
安全　　智能　　便捷

（二）实质性议题矩阵
Substantial Proposition Matrix

对实质性议题的筛选和管理是公司提升可持续发展管理水平，实现可持续发展目标的重要基础。金卡智能集团通过分析公司业务所产生影响和利益相关方所关注的议题，将其纳入实质性议题矩阵用纵向优先度和横向优先度分别体现对利益相关方评估决策的影响以及对经济、环境和社会影响的重要性。

The screening and management of substantial propositions is an important basis for the company to improve the management level of sustainable development and achieve the sustainable development goals. By analyzing the impact of the company's business operations and the issues concerned by stakeholders, Goldcard Smart Group incorporated them into the substantial proposition matrix with longitudinal priority and horizontal priority to reflect the respective importance of the impact of each proposition.

经济 Economy	环境 Environment	社会 Society
（1）诚信合规 Integrity and lawful （2）研发与创新 R&D and innovation （3）产品安全保证 safety of product （4）产品与服务质量 quality of product and service （5）客户认可 customer satisfaction	（6）节能减排 energy saving and emission reduction （7）资源利用 resource protection （8）绿色节能技术研发 green technology development	（9）供应链可持续发展 sustainable supply chain （10）职业健康与安全 occupational health and safety （11）员工能力提升与发展 staff skill promotion （12）社区发展 community development （13）公益慈善 public charity

（三）利益相关方沟通
Communication with Stakeholders

金卡智能集团积极聆听并主动回应利益相关方的期望，根据公司业务及运营的特点，公司识别出包括股东、政府及监管机构、客户、合作伙伴、员工及社区在内的六大利益相关方，并为利益相关方建立了有效的沟通机制和多元化的沟通渠道，确保及时准确的沟通与反馈。

Goldcard Smart Group actively listened to and actively responded to the expectations of stakeholders. According to the characteristics of its business and operation, the company identified six type of stakeholders, including shareholders, government and regulators, customers, business partners, employees and communities, and established an effective communication mechanism and diversified communication channels for stakeholders to ensure timely and accurate communication and feedback.

利益相关方 Stakeholders	要求与期望 Requirements & expectations	沟通方式 Communication mechanism
股东 Shareholders	公司业绩表现 Business performance results; 行业前瞻及风险把控 Business perspective and risk control;	定期召开股东大会/股东见面会 Scheduled shareholders' conference and briefing; 平等对待所有股东 Equal rights of all shareholders; 完善公司治理机制 Improve the corporate governance mechanism; 透明公开披露公司信息 Transparency in company information disclosure.
政府及监管机构 Government	合规经营 Lawful operation; 环境资源的保护与利用 Protection and efficient utilization of environment and resource; 促进地区经济发展 Promote regional economic development;	依法合规经营 Operate lawfully; 政企沟通及会议交流 Communicate through official channels and meetings; 贯彻落实双碳目标 Implement the dual-carbon targets; 现场考察及信息披露 Site inspection and information disclosure; 纳税及创造就业机会 Tax duty and job opportunity
客户 Clients	提供安全稳定的产品 Supply safe and reliable product; 提供优质服务 Provide high quality service; 创新及个性化的产品与服务 Innovative and customized products and services.	定期召开金卡用户大会 Scheduled Goldcard customers conference ; 加大产品和服务研发力度 Enhance new product and service development; 秉承"感动客户"的理念，为客户提供最优服务 Adheres to "Move the customers" morale, provides best service.
合作伙伴 Business partners	供应链管理 Supply chain management; 公平、公正、公开采购 Fair, integral and open procurement; 提供相应辅导与支持 Provide relevant guidance and support;	定期召开供应商大会 Scheduled suppliers conference; 倡导良性的行业竞争秩序 Advocate goodwill and order in industry competition; 开展供应链合作，实现产业链共赢 Cooperate with supply chain to achieve win-win.
员工 Employees	员工健康与安全 Employees health and safety; 员工发展及培训 Employees development and training;	提供健康安全的工作环境及健康安全培训 Provide healthy and safe working environment and health and safety training; 构建多元化人才发展通道，开展多元化培训 Build multiple personnel promotion channels, diversified training.
社区 Community	构建社区文化，支持社区发展 Support community cultural activity and overall development; 开展公益慈善活动 Carry out public welfare and charity activity;	开展社区公益活动 Carry out community welfare activity; 组织开展志愿服务活动 Carry out staff volunteer service; 开展基金会公益项目 Carry out charity fund activity;

（四）利益相关方认可
Recognition by Stakeholders

2020年，金卡智能集团持续稳健经营的同时也获得了一系列来自利益相关方的认可与好评。公司未来仍将一如既往的充分听取利益相关方诉求，并持续改进，坚持规范经营，加强创新协作，推动行业发展与变革，践行可持续发展理念。

In 2020, Goldcard Smart Group continued to operate steadily at the same time won a series of recognition and praise from stakeholders. In the future, the company will continue as always to fully listen to the demands of stakeholders, continue to improve, adhere to standardized management, strengthen innovation and cooperation, promote the development and reform of the industry, and carry on with sustainable development.

颁奖部门 Award Agency	所获认可与荣誉 Earned recognition and honor
深圳证券交易所 Shenzhen Stock Exchange	深圳证券交易所信息披露考核中获得A级评价 A-grade appraisal in SSE evaluation on company information disclosure practices.
中国证券报 China Securities Journal	金牛董秘奖 Golden Bull Award to the secretary of board
中国证券报 China Securities Journal	金牛企业社会责任奖 Golden Bull Award to corporate social responsibility
中国物联网产业应用联盟 China IoT Industry Application Alliance	物联网最具投资价值企业奖 IoT Best Investment Value Enterprise Award
	物联网最佳智慧能源应用方案奖 IoT Best Smart Energy Application Solution Award
	物联网最有影响力平台企业奖 IoT Most Influential Platform Enterprise Award
	物联网年度卓越人物奖 IoT Annual Outstanding Person Award
物联网智库 IoT Intelligence Bank	融合新基建榜证书 Certificate of list on integration to new infrastructure
浙江省企业社会责任促进会 ZheJiang Corporate Social Responsibility Promotion Asso.	浙江省企业社会责任标杆企业（社区参与和发展） Benchmark Enterprise of Corporate Social Responsibility in ZheJiang Province (Community involvement and development)
浙江省企业家协会 ZJ Entrepreneur Association	浙江省成长性最快百强企业 Top 100 companies of fastest growth in Zhejiang Province
浙江省企业联合会 ZJ Enterprises Asso.	
浙江省工业经济联合会 ZJ Industry Economy Asso.	
杭州钱塘新区慈善总会 Charity Association, Qiantang Dist., Hangzhou	慈善突出贡献奖 Award of extinguish contribution in charity
温州市红十字会 Red Cross Society, Wenzhou	红十字爱心捐赠奖 Award on Red Cross Love Donation

04

专题聚焦一：
金卡数字战"疫"

Focus 1: Goldcard Digital War on "Epidemic"

专题聚焦一：
金卡数字战"疫"

FOCUS 1: GOLDCARD DIGITAL WAR ON "EPIDEMIC"

2020年，突如其来的新冠疫情席卷全球。疫情之下，燃气、水务等公用事业行业数字化转型需求持续加大，无接触式服务、精细化管理、大数据运营成为重中之重。面对新冠疫情，公司第一时间启动了金卡数字战"疫"方针，基于NB-IoT技术的智能燃气终端、水终端及云服务技术实现了远程抄表、线上缴费、账单查询等线上业务办理，同时还实现了在线实时监控、远程调价，利用大数据实现区域用气用水分析，完成区域调度，确保用气、用水稳定，为打赢疫情阻击战起到重要作用。

In 2020, the sudden COVID - 19 pandemic swept across the world. Under the pandemic, the demand for digital transformation of gas, water and other public utility industries continues to increase. Contactless services, fine management and big data operation have become the top priority. In the face of COVID - 19, the company immediately launched the Goldcard digital war on "pandemic" policy, with smart gas terminal, water terminal and cloud service based on NB-IoT technology to achieve remote meter reading, online payment, bill query etc. cloud operations, also enable online real-time monitoring, remote price adjustment, using big data to achieve regional gas/water usage analysis and complete regional scheduling, ensure stable gas, water supply. It played an important role in winning the battle against the pandemic.

案例：金卡智能集团全力保障居民用气，助力湖北抗疫
Case: Goldcard Smart Group helps Hubei pandemic war by ensuring stable resident gas consumption

在国内疫情攻坚最关键时期，为保障疫情隔离下的湖北居民仍然能够稳定用气，金卡智能集团携手武汉东方燃气和仙桃中油燃气，在疫情期间累计向各个小区免费物业投放了超过1,000多台蓝牙充值设备，并且向全区各街乡的社区、小区免费赠送蓝牙充值宝，解决了IC卡终端用户买气难的问题，确保居民享受"不出小区"就可充值的便利服务。同样身处疫情中心的襄阳市，疫情期间金卡智能集团携手华润燃气向襄阳市各小区投放了100余台蓝牙充值宝设备，有效解决了全市数万IC卡燃气用户因小区封闭无法前往营业厅购买天然气的难题，保障了襄阳市居民正常用气需求。另外，对孤寡老人及行动不便的弱势群体，公司提供上门充值服务，一项项便民的服务给疫情下的湖北百姓送去了温暖，也为湖北省疫情防控做出重要贡献。

In the critical domestic anti-pandemic period, to ensure the quarantined Hubei residents can steadily purchase gas, Goldcard Smart Group works in hand with Wuhan East Gas and Xiantao Chinaoil Gas, distributed to all communities in the region for free more than 1, 000 Bluetooth recharge equipment, and free Bluetooth individual recharge device, to solve the problem of IC card end users to buy gas without leaving their community. Same in Xiangyang City, also in the center of the pandemic. Goldcard Smart Group and China Resources Gas put in use more than 100 units of Bluetooth recharge devices into Xiangyang communities during the pandemic closedown, effectively solved the problem that tens of thousands of IC card gas users in the city who used to buy natural gas in the business hall, and ensured the normal gas consumption of residents of Xiangyang City during the closure of the community. In addition, for the lonely elderly and vulnerable groups with mobility difficulties, the company provides door-to-door recharge services, a convenient service that has sent warmth to the people of Hubei Province under the pandemic, and has also made important contributions to the prevention and control of the pandemic in Hubei Province.

案例: 易联云服务助力重庆燃气在线抗"疫"
Case: Eslink cloud service helps Chongqing Gas online battle on pandemic

2020年3月，金卡智能集团旗下易联云收到了来自重庆燃气公司的一封感谢信，以感谢易联云在疫情期间推动微服务大厅快速上线，以及7*24小时在线支持微服务大厅平稳运行。在疫情隔离期间，微服务大厅成为了重庆燃气在疫情期间的"急先锋"，百姓可在线进行账单查询、燃气费缴纳、业务申报、自助抄表等，有效降低营业厅的压力，减少人员接触，减轻疫情期间给重庆燃气的影响。为保障受疫情影响停业的中小企业顺利渡过难关，重庆市政府针对性的对中小企业按照现行天然气销售价格的90%结算，微服务大厅又成为中小企业申请优惠用气的窗口，对于符合福利范围的中小企业，在微服务大厅操作即可享受优惠价格。通过运用易联云打造的微服务大厅，重庆市500多万百姓在疫情隔离期间的用气需求得以保障。

In March 2020, Eslink, a subsidiary of Goldcard Smart Group, received a letter of thanks from Chongqing Gas for its rapid launch of WeChat APP online service hall during the pandemic period and the 7 * 24 hour online technical support to the smooth operation of online service hall. During the pandemic closedown period, the online service hall became the "vanguard" of Chongqing Gas. People can perform online bill inquiry, gas fee payment, business registration, self service meter reading, etc. , to effectively reduce the pressure on the business hall, reduce personnel contact, and reduce the pandemic impact on Chongqing Gas. In order to ensure that the small and medium sized enterprises overcome the impact of the pandemic successfully, Chongqing municipal government set a 90% discounted gas price to affected small and medium sized enterprises. The online service hall has become the main window for small and medium sized enterprises to apply for the preferential gas price and complete all the required procedures. With the online service hall launched by Eslink, the safe gas supply to more than 5 million people in Chongqing was guaranteed during the pandemic closedown period.
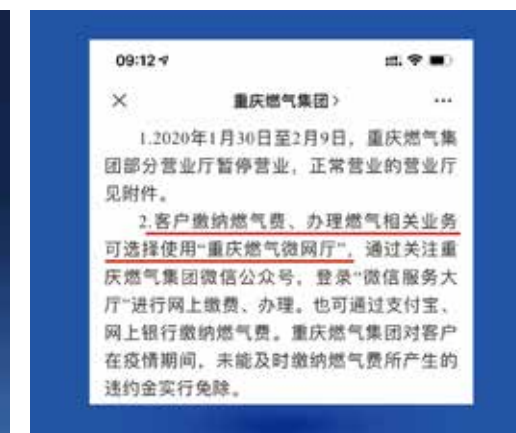
案例

案例：金卡水务助力河北省安全防"疫"
Case: Goldcard Water assist Hebei Province in epidemic prevention

金卡水务运用"智慧水务端到端整体解决方案"，有效助力河北省水务企业开展安全防疫工作。金卡水务运营系统提供了水务行业从客服计费的全程用户需求侧的管理，同时实现了管网生产监控、工程建设、设备运维的管网供给侧的精细化管理。通过将微信、支付宝、网厅、APP等各类服务渠道融入到水务企业对外客服和对内运营创新管理的服务中，用户可通过微信、支付宝等渠道将用水问题与客服及时沟通，24小时在线缴费，完美的解决了用户足不出户的缴费需求，让河北人民享受到在疫情防控下更加安全、更加智慧、更加便捷的用水服务。

Goldcard Water take usage of "Smart Water End to End Integrated Solution" to effectively help water enterprises in Hebei Province to carry out safely the epidemic prevention work. Goldcard water operation system provides the whole water industry demand side management from the customer service to billing, and also realizes the refined management of the supply side of industry, including the pipeline network production monitoring, engineering construction and equipment operation and maintenance. By integrating WeChat, Alipay, virtual business hall, APP and other service channels into external customer service and internal operation innovative management services, users can communicate water issues with customer service staff in time by WeChat, Alipay and other channels, make online payment any time in the day. It is a perfect solution for households making payments without leaving their homes, enables Hebei people to enjoy safer, more intelligent and more convenient water services under the pandemic prevention and control.

新冠疫情全球爆发，为全球燃气行业带来巨大的挑战。在国内疫情开始缓解，金卡智能集团组织全员积极复工复产的同时，海外疫情出现爆发之势，公司也密切关注着海外客户和合作伙伴的抗疫情况。为确保海外客户与合作伙伴能够在疫情全球隔离之下提供稳定、可持续的燃气供应，公司第一时间成立了海外业务服务团队，突破传统海外业务工作模式，利用互联网远程服务手段，针对来自各地区、各国不同客户与合作伙伴的个性化需求逐一协助解决，确保了海外客户与合作伙伴业务发展的稳定、可持续。

The global outbreak of COVID－19 has brought huge challenges to the gas industry worldwide. While the domestic situation began to ease, and Goldcard Smart Group organized all the staff actively to resume work and production, the overseas epidemic situation became worse. The company paid close attention to the anti pandemic situation of overseas customers and partners. In order to help overseas customers and partners to provide stable and sustainable gas supply under the global epidemic isolation, the company immediately set up the overseas business service team, break through the traditional overseas business work mode, took use of Internet remote service means, helped to solve the personalized needs of different regional customers and partners one by one. It helps the stable and sustainable business development of overseas customers and partners.

案例

案例：金卡智能云直播线上研讨会服务全球用户
Case: Goldcard cloud online seminar serves global customers

在新冠疫情全球隔离背景下，金卡智能集团突破传统工作模式，通过主题Webinar、线上参观、线上展会等方式，为海外客户与合作伙伴提供云上远程服务。在充分听取了海外用户的实际需求的基础上，公司利用互联网云直播的方式为来自欧洲、亚洲、北美、南美、中东等30多个国家和地区的近60个海外客户与合作伙伴带来多场独特的云上智慧燃气研讨会，为海外用户带来了疫情下的中国燃气数字治理方案，也为海外各国抗击疫情，保障所在国疫情下基本用气稳定、便捷起到重要作用。

Under the background of the global isolation during COVID－19, Goldcard Smart Group broke through the traditional working mode and provided cloud remote services to overseas customers and partners through themed Webinars, online visits, online exhibitions and other ways. On the basis of fully listening to the actual needs of overseas users, the company made use of the Internet live broadcasting, brought many unique cloud smart gas seminars to nearly 60 overseas customers and partners in Europe, Asia, North America, South America, the Middle East and other more than 30 countries and regions. These seminars brought to overseas users under the pandemic the knowledge of China's gas industry digital governance plan, helped overseas countries to fight against the pandemic, guaranteed basic stable gas supply and convenient service in those countries.

05

专题聚焦二：
攻坚克难，金卡防疫生产两不误

Focus 2: Overcome Hardship, Goldcard Balances
Pandemic Prevention and Production

专题聚焦二：攻坚克难，金卡防疫生产两不误

FOCUS 2: OVERCOME HARDSHIP, GOLDCARD BALANCES PANDEMIC PREVENTION AND PRODUCTION

金卡智能集团积极响应党中央及浙江省委号召，坚定落实"一手抓防疫，一手抓生产"的总体要求，细致扎实做好防疫准备工作，2月12日正式复工，成为杭州首批复工企业。

Goldcard Smart Group actively responded to the call of the CPC Central Committee and the Zhejiang Provincial Party Committee, firmly implemented the overall requirements of "grasping pandemic prevention and production in both hands", and made meticulous and solid preparations for pandemic prevention. It officially resumed work on February 12, becoming one of the first enterprises to resume work in Hangzhou.

有序恢复生产
Resume Production in Order

"以客户为中心"是金卡智能集团不变的理念。为减少疫情对客户订单与业务的影响，公司各部门协同配合，在严格的疫情防控下努力推动复工复产。

"Customer centric" is the core philosophy of Goldcard Smart Group. In order to reduce the impact of the pandemic on customer business orders, all departments of the company have worked together to promote the resumption of work and production under the strict pandemic prevention control.

研发部门采取远程办公模式，日常通过电话会议、连线服务器等方式实现远程开发，降低项目工期影响。公司在2月初启动全体研发人员云办公模式，对各项目进行排期规划，与客户开展项目对接。在疫情之下，为了保障物联网与云服务相关项目紧急上线，研发人员加班加点，确保百姓在家购气，保证燃气企业平安运行，持续推动行业数字化转型。

The R&D department adopts the telecommuting mode, and realizes remote development through regular telephone conference, connected server etc., to reduce the impact of the project development period. In early February, the company launched the cloud office mode for all research and development personnel, scheduling each project and carrying out project docking with customers. During the pandemic, in order to ensure the emergency launch of the Internet of Things and cloud service related projects, research and development personnel worked overtime at home, contributed to ensuring that people can buy gas at home, ensuring the safe operation of gas enterprises, promoting the digital transformation of the industry continuously.

采购部门第一时间和供应商沟通，对关键原材料进行库存补货，确保紧急订单优先交付。金卡智能集团及旗下天信仪表公司对订单进行紧急生产，多方调配物流渠道，确保产品第一时间到达目的地。

The procurement department immediately communicated with suppliers and replenished to inventory key raw material, ensured priority delivery of emergency orders. Goldcard Smart Group and its subsidiary Tancy Instrument carried out emergency production of orders and deployed logistics channels in various ways to ensure that the products reach the destination in the first time.

金卡销售团队始终与客户在一起，与客户逐一开展电话会议，保证国内外工作正常运行。公司内部进行了为期2周的在线培训和内训，有效提高公司销售人员应对疫情的业务能力。

The Goldcard sales team has always been with customers and held conference calls one by one to ensure the normal operation of work at home and abroad. The company has conducted two weeks of online internal training to effectively improve the business ability of sales staff to respond to the pandemic.

全面防疫部署
Overall Pandemic Prevention Measures

"以客户为中心"是金卡智能集团不变的理念。为减少疫情对客户订单与业务的影响，公司各部门协同配合，在严格的疫情防控下努力推动复工复产。

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针对疫情防护要求，公司快速成立了疫情防控专项小组，第一时间采购了口罩、消毒液等物资，严格执行园区人员管控、体温量测上报、佩戴口罩、隔离办公、园区杀消、办公用餐分餐打包等防范举措，确保员工的健康和工作安全。

In view of the pandemic protection requirements, the company quickly set up the pandemic prevention and control special team, immediately purchased face masks, disinfectant and other materials, strictly implemented the workplace personnel control, body temperature measurement and report, wearing masks, isolated office space, zonal disinfection, office meal packaging and other preventive measures, to ensure the health and work safety of employees.

大数据应用，精密智控
Big Data Application, Precise and Smart Control

5G时代下，大数据在疫情期间起到了至关重要作用。公司通过智能应用每日收集员工的健康与行程问卷，对每位员工进行数据分析与及时追踪，做到数据到人、数据到日、数据到点，同时对重点疫区与隔离员工进行特别关注。

In the 5G era, big data played a crucial role during the pandemic. Through intelligent application, the company collected employee health and itinerary questionnaires daily, conducted data analysis and timely tracking of each employee, so as to achieve the personal, daily and pin-pointed data, with special attention to the key epidemic areas and isolated employees.

06

第一章 智慧赋能行业进步

Chapter 1 Intelligence Enable Industry Advance

第一章
智慧赋能行业进步
CHAPTER 1 INTELLIGENCE
ENABLE INDUSTRY ADVANCE

（一）助力城市智慧转型
Supporting City Smart Transformation

疫情之下，我国的城市发展对于公用事业领域数字化、智慧化的需求进一步提升，无接触式服务、精细化管理、大数据运营成为我国城市智慧转型的重中之重。金卡智能集团充分利用物联网、云计算、大数据、人工智能等前沿技术，打造智能化产品与解决方案，推动我国城市智慧化变革。

Under the pandemic, China's urban development requirement for the digital and intelligent application in the public utility sector has been further stimulated, contactless services, fine management and big data operation have become the top priority of China's urban smart transformation. Goldcard Smart Group makes full use of the IoT, cloud computing, big data, artificial intelligence and other edge-cutting technologies to create intelligent products and solutions, helps to promote the intelligent transformation of China's cities.

案例

案例：杭燃集团携手易联云打造全国首个城市燃气综合数字可视化平台
Case: Hangzhou Gas coop with EsLink building first municipal digital integral gas operation visual platform in China

2020年4月，杭州燃气集团携手金卡智能集团旗下易联云推出全国首个燃气综合数字可视化平台，实现了杭州城市燃气管理信息化向数字化升级的关键一步。平台利用数字的力量赋能"杭燃供气、杭燃服务、杭燃优家、杭燃体验"四大产品，打造燃气智慧驾驶舱，提升城市燃气安全运营能力，为百姓带来更加便捷优质的服务体验，为全国燃气行业数字化管理开创了新的杭州模式。

In April 2020, Hangzhou Gas and EsLink, a subsidiary of Goldcard Smart Group, launched the first municipal digital integral gas operation visual platform in China, realizing a key step in the digital upgrading of urban gas management in Hangzhou. The platform uses the power of digital to enable four products of "Hangzhou Gas Gas Supply, Hangzhou Gas Service, Hangzhou Gas Excellent Home and Hangzhou Gas Experience" to create an intelligent gas cockpit, improves the safe operation ability of urban gas, brings more convenient and high-quality service experience to the people, and creates a new Hangzhou model for the digital management of the national gas industry.
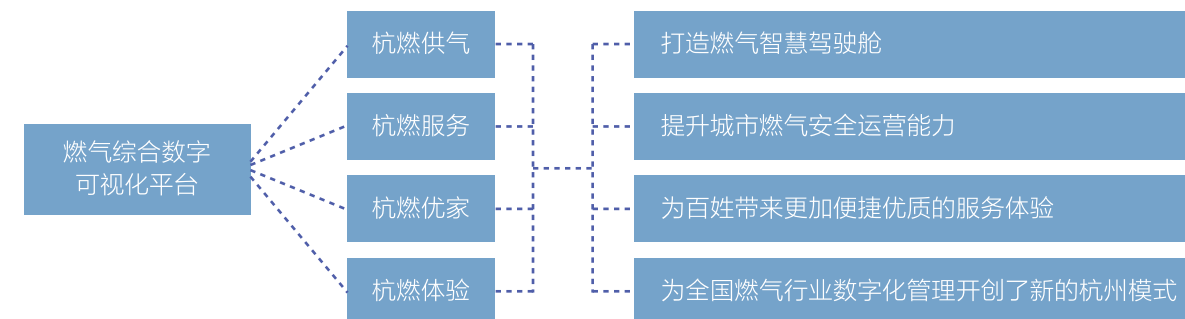
杭州燃气数字可视化平台成为打通管网与用户服务的"神器"，为辅助管理决策和运行抢修调度插上了翅膀。未来，杭州燃气与金卡易联云将推动平台围绕打造城市智慧燃气大脑的目标进一步升级，数据覆盖范围扩大至燃气和非气全产业，提高实时数据比例，引入大数据分析、预警及预测等深度数据应用技术和5G应用场景，实现高科技展示和生产应用的深度融合，为全国燃气行业数字化管理创造出"世界一流"的标准。

Hangzhou digital gas operation visual platform has become the "artifact" to connect the gas pipe network with user service, providing wings assisting management decision making and operation of emergency repair scheduling. In the next, Hangzhou Gas and Goldcard EsLink will work together to promote the platform around the goal of further upgrading the urban smart gas "brain", to expand data coverage to gas and none gas industry, increase the proportion of real time data, introduce big data analysis, early warning and prediction etc. deep data application technology and 5G application scenarios, realize the high-tech showcase and high integration with production application, create for the national gas industry digital management a "world-class" standard.

案例：金卡智能集团推动5G数字燃气走进雄安新区
Case: Goldcard Smart Group promote 5G digital gas in Xiong'an New Area

2020年12月，北京燃气集团携手金卡智能集团与旗下天信仪表、易联云共同参加2020年雄安新区燃气技术与设备展览会。金卡智能集团推出的覆盖燃气行业上下游，高中低压全系列产品备受瞩目，成为雄安新区5G产业应用重要的合作伙伴。未来，金卡智能集团将持续推动5G NB-IoT智慧燃气解决方案在雄安新区全面布局，助力雄安新区实现燃气数字化、智慧化发展。

In December 2020, Beijing Gas Group, together with Goldcard Smart Group and its Tancy Instrument and Eslink, participated in the 2020 Xiong'an New Area Gas Technology and Equipment Exhibition. Goldcard Smart Group whole series of high, medium and low pressure products cover the upstream and downstream of the gas industry, have attracted much attention and became an important partner in the 5G industrial application in the Xiong'an New Area. In the future, Goldcard Smart Group will continue to promote the comprehensive layout of 5G NB-IoT intelligent gas solutions in the Xiong'an New Area, and help the Xiong'an New Area to realize the digital and intelligent development of gas industry.

（二）智慧助推行业发展
Smart Boosting Industry Development

公用事业关乎民生，特别是疫情之下，物联网尽其无人化、智慧化、非接触化等优点，确保了在疫情隔离下百姓生产生活的正常运行。金卡智能集团基于NB-IoT技术的智能燃气、智慧水务解决方案起到了举足轻重的地步。未来国家将持续加大对物联网应用的支持力度，金卡智能集团也将持续加大智慧公用事业投入，持续为社会创造价值，助推行业发展。

Public utilities are related to people's livelihood, especially under the pandemic, the Internet of Things has demonstrated its advantages of unmanned, intelligent and contactless in ensuring the normal operation of people's production and life under the closedown of the pandemic. Goldcard Smart Group's NB-IoT technology based smart gas and smart water solutions play an important role. In the future, the state will continue to increase its support for the application of the Internet of Things, and Goldcard Smart Group will continue to increase its investment in smart public utilities, continue to create value for the society, and boost the development of the industry.

智慧化　无人化　非接触化

案例：金卡智能集团推出"浙江制造"水气双标准填补行业空白
Case: Goldcard Smart Group promote "made in Zhejiang" gas and water standards to fill the industry gap

2020年，由金卡智能集团旗下天信仪表和天信科技推动制定的《临界流音速喷嘴法气体流量标准装置》与《远传超声水表》"浙江制造"双标准获批发布。这两项标准测试方法简便实用，具有较高可操作性，不仅实现填补了相关产品尚无国际、国家、行业标准的空白还将更好地指导生产和满足市场用户实际使用需求，对促进行业产品质量提升和产业健康发展具有重要意义。

In 2020, the Zhejiang industry standard "Critical Flow Sonic Nozzle Gas Flow Standard Test Bench" and "Remote Transmission Ultrasonic Water Meter" promoted by Tancy Instrument and Tancy Technology of Goldcard Smart Group were approved and released. These two standard test methods are simple and practical with high operability. They not only fill the gap of no international, national and industrial standards for relevant products, but also better guide the production and meet the actual use needs of market users, which is of great significance to promoting the improvement of product quality and the healthy development of the industry.

案例：金卡智能集团当选国家流量仪表评价计量测试联盟副理事长单位
Case: Goldcard Smart Group elected vice chair of national flow instrument measurement and test alliance

为进一步提升计量技术水平及计量市场健康发展，加强计量技术与市场的粘合度，国家流量仪表计量测试联盟于2020年正式成立，金卡智能集团当选副理事长单位。联盟将为计量行业的标准制定、人才储备及联合实验室建立构建强大的体系支撑。金卡智能将充分发挥联盟成员优势，研究流量仪表全寿命周期中的计量测试技术，构建流量仪表评价服务体系，推动流量仪表产业科技创新、质量升级，提升我国流量仪表产业核心竞争力。

In order to further improve the level of measurement technology and the healthy development of the measurement market, and strengthen the adhesion of measurement technology and the market, the National Flow Instrument Measurement and Test Alliance was officially established in 2020, and Goldcard Smart Group was elected the vice chair member. The alliance forms a strong system support for the formulation of standards, talent reserve and joint laboratories of the measurement industry. Goldcard will take full advantage of alliance member, study the measurement and testing technology in the whole life cycle of flow meters, build the flow instrument evaluation service system, promote the scientific and technological innovation and quality upgrading of the flow instrument industry, and enhance the core competitiveness of China's flow instrument industry.

两化融合创行业典范
Model of Integration on Information and Industry

金卡智能集团持续推动两化融合力度，坚持一手"强计量"，一手"重数字"的企业发展战略，2020年获评浙江省两化融合示范企业，成为行业典范。公司不断加强实验设备检测能力，落实"机器人＋"工程，建立了高度自动化的装备和设施，并增加云检测功能，推动了生产方式向柔性化、智能化、精细化转变。同时，公司建立了完善的全生命周期管理体系，利用智慧物联网技术，确保每款智能终端可追溯，与浙江省"二检合一"平台实现数据自动化对接，成为我国智慧燃气行业的标杆。

Goldcard Smart Group continues to promote the integration of the information and industry, adhering to the enterprise development strategy of "reliable measurement" and "highly digital" . In 2020, it was awarded the information and industry integration demonstration enterprise in Zhejiang Province and became a model of the industry. The company has continuously strengthened the testing ability of inspection equipment, implemented the "robot+" project, established highly automated equipment and facilities, and increased the cloud testing function, promoted the transformation of the production mode to a flexible, intelligent and refined way. At the same time, the company has established a perfect full life – cycle management system, using the intelligent Internet of Things technology to ensure the traceability of each smart terminal, and realized the integration of data with the "factory inspection and initial verification two in one" platform in Zhejiang Province, became the benchmark of China's smart gas industry.

案例：金卡智能集团荣获全国首张民用燃气终端"二检合一"证书
Case: Goldcard Smart Group get first domestic gas terminal "two inspections in one" certificate in China

2020年7月，金卡智能集团荣获浙江省市场监督管理局颁发的《专项计量授权证书》，成为全国首家民用燃气终端强制检定"二检合一"改革试点企业。金卡智能集团积极响应国家强制检定改革方案，依托公司多年来在产品智能化、信息化方面的积累，不断完善计量检定能力，有效运行质量管理体系，确保出厂检定的产品计量性能合格，同时将检定数据及时上传至杭州市民生计量公共服务平台。该平台将以整合电力、燃气、水务集团的大数据资源为切入口，最终实现涉及百姓切身利益的民生计量可查、可看、可追溯。此次公司荣获"二检合一"证书标志着浙江省强制检定"二检合一"改革取得实质性进展，有效节约社会成本，提升计量保障能力，为我国燃气公用事业的可持续发展做出有效贡献。

In July 2020, Goldcard Smart Group was awarded the Special Metrological Authorization Certificate issued by Zhejiang Market Supervision Administration, becoming the first pilot enterprise of "two inspections in one" for compulsory verification of domestic gas terminals in China. Goldcard Smart Group actively respond to the national mandatory verification reform plan, rely on the company's past accumulation of product intelligence and information, continuously improve the measurement verification ability, effectively run the quality management system, to ensure that the factory output of product qualified with measurement standard. At the same time the verification data is timely upload to Hangzhou people's livelihood public metrological service platform. The platform will integrate big data from electricity, gas and water industries, and finally realizes that the vital measurement data of livelihood of the people can be checked, seen and traceable. The company's award of the "two inspections in one" certificate marks the substantive progress made in the reform of "two inspections in one" in Zhejiang Province, which effectively saves social costs, improves the measurement reliability, and making effective contributions to the sustainable development of gas utilities in China.

（三）安全树立行业标杆
Safety Benchmark for the Industry

金卡智能集团持续以创新的产品与解决方案，不断助力公共事业企业安全前行，构筑城市燃气安全长城。在社会各界对燃气安全的高度关注下，公司成立了专业安全研发机构，同杭州燃气、港华燃气、广州燃气等多家燃气企业开展联合研发，对安全用气监控数学模型进行创新型研究。

Goldcard Smart Group continues to use innovative products and solutions to help public utility enterprises to move forward safely and build the great wall of urban gas safety. Under the high attention of gas safety from all walks of life, the company has set up a professional safety research and development institution, carried out joint research and development with many gas enterprises including Hangzhou Gas, Town Gas China and Guangzhou Gas, and carried out innovative research on the mathematical model of gas safety monitoring.

2020年，公司参考了日本户内燃气安全管理和实践经验，以及保安型智能燃气终端功能，推出了本质安全切断型物联网智能燃气终端，以及具有10大用气安全监控功能的超声波燃气终端，以确保用气安全。同时，燃气终端管理系统将终端上的信息及时推送到对应的管理部门及客户，实现对异常用气的安全监控与快速应对。未来，公司将持续提升产品本质安全水平，运用数字化、智慧化手段与行业合作伙伴携手为构建安全城市燃气而不懈努力。

In 2020, in reference to the Japanese experience in household gas safety management and practice, as well as the security intelligent gas terminal function, the company launched the intrinsically safe cut-off intelligent gas terminal of the Internet of Things, as well as an ultrasonic gas terminal with 10 gas safety monitoring functions to ensure the safety of gas use. At the same time, the gas terminal management system pushes the information on the terminal to the corresponding management departments and customers in time to realize the safety monitoring and rapid response to the abnormal gas use. In the future, the company will continue to improve the essential safety level of products, and use digital and intelligent means to work together with industry partners to build a safe smart city.

案例

案例：金卡5G安全智慧厨房亮相杭州
Case: Goldcard 5G smart safe kitchen on display in Hangzhou

2020年9月，金卡智能物联网燃气终端、燃气报警器联手杭燃智能厨房设备共同推出的首个5G安全智慧厨房亮相杭州，为杭州市民带来了安全数字厨房科技。作为5G安全数字厨房的核心，金卡物联网智能燃气终端能有效发现管道连接异常、胶管老化、阀门沙眼等因素造成的燃气泄漏。在出现气流异常时，能及时关闭阀门，确保供气安全。金卡物联网燃气报警器在检测到燃气泄漏时，会将泄漏信息上传至云端并将泄漏信息推送至燃气用户和燃气企业，并也将泄漏信息"告知"其他家庭设备，指挥物联网燃气终端关阀、开窗通风、抽油烟机开启排风功能等。同时，燃气企业会收到报警通知，可及时安排最近的外勤人员前往查看，快速解决问题。燃气用户还可以通过手机APP对厨房进行智能监控，当智能设备出现异常或燃气泄漏时可及时获取推送信息，并快速联系相关机构处理。同时对家庭用水、用电、用气实现精准控制。未来5G安全数字厨房将走进千家万户，为百姓家庭安全用气保驾护航。

In September 2020, the first 5G smart safe kitchen comprised of Goldcard smart IoT terminal, gas alarm and Hangzhou Gas smart kitchen equipment was unveiled in Hangzhou, bringing safe digital kitchen technology to Hangzhou citizens. As the core of 5G safe digital kitchen, the smart gas terminal of Goldcard can effectively detect gas leakage caused by abnormal pipeline connection, aging hose, sand hole in valve etc. In case of abnormal gas flow, the valve can be closed in time to ensure the safety of gas supply. Goldcard IoT gas alarm detects the leak information, sends it to the cloud and pushes the leak information to gas users and gas supplier, it will also send leakage information to other family equipment, to enable the IoT gas terminal to close the valve, to switch on window ventilation, to open exhaust function on the kitchen extractor, etc. At the same time, the gas supplier receives the alarm notice, arranges the field staff nearby to check the site in time and quickly solve the problem. Gas users can also carry out intelligent monitoring of the kitchen through the mobile phone APP. When the intelligent equipment is abnormal or gas leakage occurs, they can get the site information in time and quickly contact the relevant institutions for processing. All the same time, the domestic water, electricity, gas usage can be under precise control. In the future, the 5G safe digital kitchen will enter thousands of families to ensure people enjoy safety gas utility service.

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第二章 智慧创新驱动发展

Chapter 2 Smart Innovation Drive Development

第二章
智慧创新驱动发展
CHAPTER 2 SMART INNOVATION DRIVE DEVELOPMENT

（一）国产化自主研发
Domestic Independent Research

作为国家高新技术企业，金卡智能集团将推动产品与服务的国产化自主研发视为最重要发展的战略，公司在国内外设立8大研发中心，拥有研发人员800余人。2020年，由公司自主研发，也是中国首台国产化气体高压超声产品TUS型气体超声流量计成功获得装挂应用，该产品在国家石油天然气大流量计量站武汉分站完成了国内首次天然气实流测试，满足0.5级准确度要求，达到国际先进水平。TUS型气体超声流量计采用多声道布局，支持4G/5G通讯方式，具有自诊断功能，实现产品全生命周期管理，将广泛应用于长输管道、城市燃气、石油、化工等领域，为我国燃气领域产品、服务的全面国产化奠定基础。

As a national high – tech enterprise, Goldcard Smart Group regards promoting the domestic independent research and development of products and services as the most important development strategy. The company has set up 8 research and development centers at home and abroad, with more than 800 research and development personnel. In 2020, the Goldcard independent developed, and the first domestically developed, high pressure TUS gas ultrasonic flow meter was successfully put in operation. This product completed the first gas real flow test in Wuhan Branch of National Oil and Natural Gas Large Flow Measurement Station, meeting the accuracy requirements of level 0.5 and reaching the international advanced level. TUS – type gas ultrasonic flow meter adopts multichannel layout, supports 4G/5G communication mode, with self-diagnosis function to realize product whole life cycle management, and can be widely used in gas transmission pipeline, urban gas, petroleum, chemical industry and other fields, laying a foundation for the comprehensive localization of products and services in the gas industry in China.

采用多声道布局

支持4G/5G通讯方式

具有自诊断功能

实现产品全生命周期管理

将广泛应用于长输管道、

城市燃气、石油、化工等领域，

为我国燃气领域产品、服务的

全面国产化奠定基础。

TUS型气体超声流量计

案例：天信仪表超声流量计推动燃气计量国产化替代
Case: Tancy Instrument ultrasonic flow meter promote gas metering domestication substitution

2021年3月，国家石油天然气大流量计量站武汉分站利用工作级标准装置，完成天信仪表集团有限公司研制的TUS-6-8气体超声流量计首次天然气实流测试任务。本次测试的DN200超声流量计为天信仪表集团有限公司自主研制的首款高压气体超声流量计，测试结果满足0.5级超声流量计的要求，标志着我国自主研发的国产气体超声流量计计量性能已赶超国际先进水平。本次测试任务的顺利完成，标志着国内开始具有检定0.5级高压天然气流量计的自主知识产权，为推动国产超声流量计的技术进步，也在天然气贸易计量中的国产化应用奠定了基础。

In March 2021, Wuhan Branch of National Petroleum and Natural Gas High Flow Metering Station used the working class standard device to complete the first real gas flow test to the TUS-6-8 high pressure ultrasonic gas flow meter developed by Tancy Instrument Group. The DN200 ultrasonic flowmeter of this test meet the requirements of class 0.5 level ultrasonic flowmeter, marking that the measurement performance of domestic independently developed gas ultrasonic flowmeter in China has surpassed the international advanced level. The successful completion of the test task marks the beginning of the verification level 0.5 in China with independent intellectual property rights. It lays the foundation for promoting the technological progress of domestic ultrasonic flowmeter and also in the domestic application of natural gas trade measurement.

TUS型气体超声流量计

- 拥有独特的声道布局，可提供六声道、八声道两个版本
- 不确定度优于0.2%，准确度满足0.5级要求
- 搭载4G/5G技术，可将数据上传至云平台，进行产品的全生命周期管理
- 内置高精度温度传感器，自动修正表体温胀系数
- 具备超强的自诊断功能，可将诊断结果无线传送至终端，能够快速诊断分析设备状态
- 搭配在线气相色谱分析仪、流量计算机，可实现准确的能量计量

TGC在线气相色谱分析仪

- 可实现组分的快速分析，至C6+分析周期小于2分钟
- 采用微型气体可插拔分析模块设计，确保性能，方便维护
- 集成控制器实现本地人机交互，配置5G远程通讯模块
- 云数据存储，可进行全生命周期的数据管理

案 例

案例：金卡自主研发NB-IoT天然气报警器获"德国红点奖"
Case：Goldcard independent invent NB-IoT gas alarm wins Red Dot2020
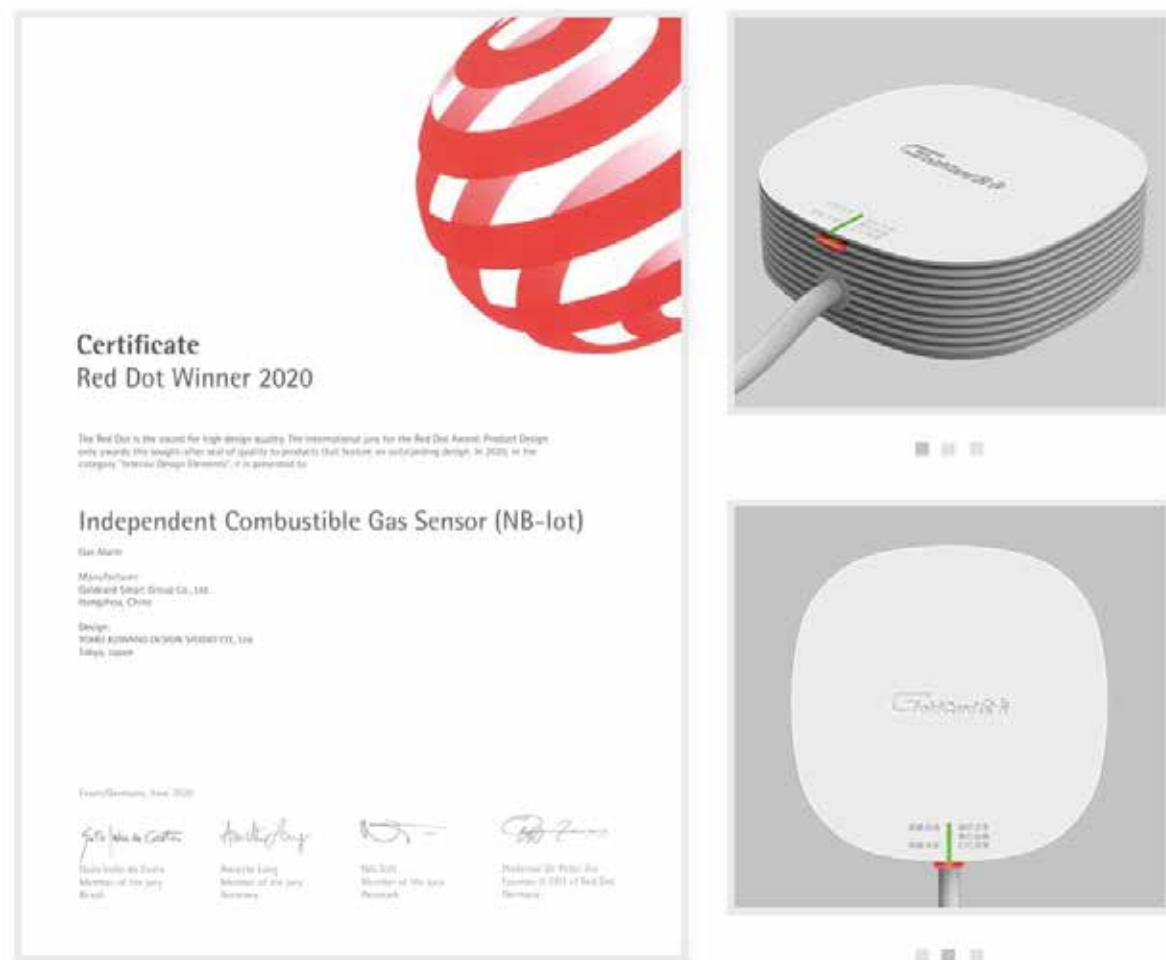
2020年，由金卡智能集团自主研发的NB-IoT天然气报警器荣获"德国红点奖" 此次获奖不仅是对金卡NB-IoT天然气报警器卓越研发设计的认可，也是对我国高品质自主研发的肯定。为了让天然气报警器发挥更大的实力，公司加大科技研发投入，设计出高颜值、高可靠性的燃气报警器。目前，金卡NB-IoT天然气报警器已荣获3项发明专利、5项实用新型专利和1项外观专利。

In 2020, the NB-IoT natural gas alarm independently developed by Goldcard Smart Group won the "German Red Dot Award" . This award is not only a recognition of the excellent design of Goldcard NB-IoT natural gas alarm, but also a recognition of the high - quality independent research and development in China. In order to make the natural gas alarm a market star, the company increased investment in technology research and development, designed an eye-catching, highly reliable gas alarm. Up to date, Goldcard NB-IoT natural gas alarm has won 3 invention patents, 5 utility model patents and 1 appearance patent.

（二）创新服务赢得认可
Innovation in Service Won Recognition

金卡智能集团秉承以"客户为中心，为客户和社会创造价值"的服务理念，形成了辐射全国的客户服务网络，在全国各省市设立了售后服务中心，为客户提供 24 小时*365天的一对一服务，致力于打造满足客户需求的高品质服务。2020年，公司在智慧燃气及智慧水务领域不断完善客服业务能力，提升客户服务品质，强化服务纵深，为客户及社会提供了更加多元化的服务体验。

Adhering to the service concept of "customers at the center, creating value for customers and society" , Goldcard Smart Group has established a customer service network radiating the country, set up after sales service centers in various provinces and cities, providing customers with one to one any time service, and is committed to creating a high - quality service to meet the customer needs. In 2020, the company continued to improve the customer service business capacity in the field of smart gas and smart water, improve the customer service quality, strengthen the service depth, and provide a more diversified service experience for customers and the society.

案 例

案例：金卡用户大会传递行业发展新价值
Case: Goldcard customers conference sends new value of industry development

2020年，以"因智而聚，燃点未来"为主题的金卡智能集团用户大会举办。本次用户大会汇聚了行业内100余家燃气企业，着眼于我国燃气行业未来发展机遇，就5G技术引领燃气行业大发展大变革进行了探讨。金卡智能集团以用户大会为平台，紧密依托金卡智能集团5G技术解决方案，向与会企业详细描绘了燃气行业未来发展蓝图，并汇集行业优秀案例，以更加贴近客户需求的方式探索创新客户服务模式，为客户企业提供更为优质的服务，也为我国燃气行业的创新与发展开拓新思路。

In 2020, the Goldcard Smart Group user conference with the theme of "Gathering for Wisdom, Igniting the Future" was held. This user conference gathered more than 100 gas enterprises in the industry, focused on the future development opportunities of China's gas industry, and discussed the great development and reform of the gas industry led by 5G technology. Goldcard Smart Group takes the user conference as the platform, closely addressing Goldcard 5G technology solutions, detailed to participating enterprises the gas industry future development blueprint, and gathered industry excellent user cases. Being closer to customer needs help to explore innovative customer service mode and to provide customer better service quality. It also develops new ideas for the innovation and development of China's gas industry.

案例：金卡智能数字化售后服务荣获"五星"认证
Case: Goldcard digital sales service won Five-star certificate

2020年3月，金卡智能集团荣获"五星"服务认证，展现了公司在售后服务方面的领先实力。在5G时代下，公司售后服务体系已融入数字化元素，在不断优化售后流程的同时，建立了维修知识库，进而更快更好地解决客户需求，并以客服数据为基础，形成数据驾驶舱，让决策者了解售后服务情况，为产品性能的提升提供可靠支持。未来，金卡智能在为客户提供更完备、更智慧的解决方案的同时，也将不断完善服务体系，不断提高服务管理水平及强化服务能力，以客户为中心，利用物联网科技力量推动售后服务升级变革。

In March 2020, Goldcard Smart Group was awarded the "Five Star" service certificate, showing the company's leading strength in after sales service. In the era of 5G, the company after sales service system has integrated in digital elements. While optimizing after sales process, it establishes maintenance knowledge bank, solves faster and better customer need. And based on customer service data, data cockpit is formed, making decision makers clear about after - sales service situation, providing reliable support for the improvement of product performance. In the future, Goldcard Smart will provide more complete and intelligent solutions for customers, and also continue to improve the service system and constantly improve the service management level, strengthen the service ability, centered on customers, and use the power of Internet of Things technology to promote the upgradation and reform of after - sales service.

供销差管理服务
Managing the Supply-to-Sales Difference

疫情期间，燃气的非居民用户特别是餐饮行业基本处于停工状态，这使得燃气公司的天然气销售量大幅下滑，同时国家要求非居民用户气价、水价同比下调，公用事业企业迎来巨大挑战。金卡智能集团针对这一情况为公用事业企业客户推出了供销差管理服务，有效解决了客户因压力、温度、流量等各种异常现象和产品故障所造成的输差损失，众多公用事业企业通过金卡智慧服务实现了企业的降本增效。

During the pandemic period, non resident users of gas, especially the catering industry, were basically in standstill, which significantly reduced the gas sales of gas companies. At the same time, the government required to reduce water and gas prices to non resident users on year-on-year basis, which formed a huge challenge to public utility enterprises. In view of this situation, Goldcard Smart Group launched supply-to-sales difference management service for utility customers, which effectively solved the supply-to-sales loss to gas companies caused by the pressure, temperature, flow and other abnormalities and equipment failures. Many utility enterprises have realized cost reduction and improved efficiency of enterprises through Goldcard smart services.

案例：金卡智能供销差管理服务安徽省燃气客户降本增效
Case: Goldcard supply-to-sales difference management service helps Anhui Gas cost reduction and efficiency increase

加强工商业用气计量管理是燃气公司控制供销差管理的重要手段。2020年，金卡智能集团携手安徽省燃气企业合作伙伴，基于工商用户计量分析系统和计量终端全生命周期管理系统开展了一系列的输差分析和管理工作。自2019年冬季采暖以来，利用系统辅助深度挖掘流量计数据价值，逐步展开流量计的分析和巡查范围，发现了诸多流量计故障事件，对其中存在压力、温度、流量等各种异常现象和故障进行解决，对存在卡顿、慢跑、脏表等情况分批维修、送检，弥补了流量计运维工作存在的遗漏和盲区，在普查过程中也妥善解决了一些存在偷盗气嫌疑的情况。通过一系列的智慧服务工作，燃气企业合作伙伴的输差问题得到了良好的改善，获得了燃气企业合作伙伴的高度评价。

Strengthening the measurement management of industrial and commercial gas users is an important means for gas companies to control the supply-to-sales difference. In 2020, Goldcard Smart Group, together with Anhui Gas, carried out a series of transmission analysis and management work based on the industrial and commercial usermetering analysis system and the whole life cycle management system of the metering terminal. Since winter heating in 2019, by using the system to assist in depth dig into flow meter data value, gradually expanding the analysis and inspection scope of flowmeter, many flowmeter fault events were discovered. Pipe network issues such as temperature, pressure and flow were addressed. Meters with faults, jam, jogging and dirty meter were sent for maintenance and re-inspection. Other omissions and blind spots in the operation and maintenance of the flowmeter were properly amended. Also some suspected situations of gas stealing were dealt with. Through a series of intelligent service work, the supply-to-sales difference issue of the gas enterprise partners has been well improved, and it has been highly appraised by the gas enterprise partners.

案例：天信科技服务杭州水务集团精准计量
Case: Tancy Tech serves Hangzhou Water in precise metering

2020年，金卡智能旗下天信科技收到了来自杭州市水务集团有限公司的感谢信，对公司高精准度、高可靠性的产品以及高品质、快速响应的专业服务给予充分肯定。自2019年，天信科技联手杭州水务集团针对杭州地区部分井盖结构较厚导致水表远传信号差问题制定解决方案，目前已完成上百处改造，终端上线率达到100%。

In 2020, Tancy Tech, a subsidiary of Goldcard Smart, received a letter of thanks from Hangzhou Water Group, fully affirming the company's high precision and high reliability products and high quality and responsive professional services. Since 2019, Tancy Tech and Hangzhou Water Group have formulated solutions for the problem of poor communication signal caused by the thick structure of some manhole covers in Hangzhou. At present, hundreds of rework have been completed, and the terminal online rate has reached 100%.
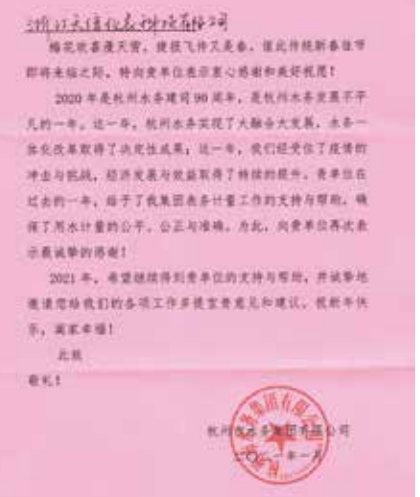
提供增值服务
Providing Value-added Service

近年来，燃气企业在常规线上服务的基础之上增设电商、家政预约等服务以增加用户粘性，金卡易联云平台为此推出了增值服务为燃气企业快速搭建一站式商城平台，帮助客户实现线上服务升级。疫情隔离期间，由金卡易联云推出的燃气企业在线商城平台成为百姓采购日常生活必需品的重要选择。燃气企业将农副产品信息上传在线平台，通过微信公众号和短信向市民推送农产品的线上购物链接，市民可通过在线商城下单购买，燃气公司的网络管理人员同时承担产品上门派送工作。在特殊的困难时期，通过互联网手段实现了农户、燃气企业和居民的三赢。

In recent years, some gas enterprises have added other services, such as e-commerce or domestic maintenance reservation, on the basis of regular online service to increase user stickiness. For this end, Goldcard EsLink has launched value-added services to help gas enterprises quickly build a one-stop mall. During the pandemic close-down period, the online mall platform of gas enterprises launched by Goldcard Eslink has become an important channel for people to purchase daily necessities. Gas enterprises upload the information of agricultural and sideline products on the online platform, and push online shopping links of agricultural products through WeChat public account and SMS messages. Citizens can order and purchase through the online mall and the network staff of the gas company undertakes the delivery of products. In this special difficult period, the triple wins of farmers, gas enterprises and residents were achieved through the Internet means.

农副产品信息上传到平台 → 燃气企业在线商城平台 → 推送农产品的线上购物链接 → 市民下单 → 产品派送

（三）创新拓展海外市场
Innovation in Expanding Overseas Market

金卡智能集团不断加快国际化发展步伐，不断拓展海外市场人员，在技术层面主动对标国际，提高"硬功夫"，巩固"软实力"。2020年，公司数字化工厂通过欧盟MID D认证，获得出口欧盟市场免检资格。公司还通过了英国CPA（商品信息安全保障）认证，成为国内首家获得该项认证的智慧燃气解决方案服务商。这标志着金卡智能集团将跻身国际高端市场，提升国际化发展新高度。

Goldcard Smart Group continues to accelerate the pace of international development, constantly expand the overseas market personnel, take the initiative to follow the international standards at the technical level, improve the "hard strength", and consolidate the "soft ability". In 2020, the company's digital factory passed the EU MID D certification and was exempted from inspection to enter the EU market. The company has also passed the UK CPA (Commercial Product Assurance) certification, becoming the first smart gas solution service provider to obtain this certification in China. This marks that Goldcard Smart Group will enter the international high-end market and achieve a new height of international development.

受疫情影响，海外多国对进口产品强制增加本地化生产要求，以促进本地经济复苏，缓解就业压力。为应对这一变化，公司转变原有的产品直接供应模式，通过技术输出及在地化合作等多种模式，协助客户应对所在国政策变更。2020年，金卡智能集团联合哈萨克斯坦客户完成首个海外联合项目试点并成功交付应用，为公司持续拓展海外市场提供新思路。

Affected by the pandemic, a number of overseas countries have imposed localized production requirements for imported products in order to promote local economic recovery and relieve employment pressure. In response to this change, the company has changed the original direct supply of products mode, and assisted customers to deal with the policy changes of the host country through various modes such as technology support and cooperation in local industrialization. In 2020, Goldcard Smart Group and Kazakhstan customers completed the first overseas joint pilot project and successfully delivered to application, providing new ideas for the company to continue to expand the overseas market.

案例：金卡智能集团获英国CPA认证
Case: Goldcard received UK CPA Certificate

2020年3月，金卡智能集团通过英国CPA认证，成为国内首家获得该项认证的智慧燃气解决方案服务商。CPA认证是英国国家网络信息安全保障中心颁发的商品安全保障证书，是电子商品进入英国的政府强制性认证要求，是智能终端最严格且困难的信息安全认证。除了考核金卡智能集团在技术层面的能力以外，还将认证的要点聚焦在管理体系、质量控制能力、产品制造能力及企业的环境层面等，对企业的资质、综合管理水平具有极高的要求。此次获得英国CPA认证，将进一步印证金卡在智能终端和信息安全领域的设计、开发、制造、质量的软实力，步入全球智能终端第一方队，对开发国际高端市场打下良好基础，并有效提升全球品牌影响力。

In March 2020, Goldcard Smart Group passed the UK CPA certification, becoming the first smart gas solution service provider in China to obtain this certification. CPA certification is a commodity cyber security certificate issued by the UK National Cyber Security Centre. It is a mandatory government certificate requirement for electronic information goods to enter the UK. It is the most stringent and difficult information security certification for intelligent terminals. In addition to assessing the ability of Goldcard Smart Group at the technical level, the certification process also focuses on the management system, quality control ability, product manufacturing ability and the cultural environmental of the enterprise, which has very high requirements for the qualification and comprehensive management level of the enterprise. The UK CPA certification will further confirm the soft power of Goldcard in the design, development, manufacturing and quality assurance of intelligent terminals and information security, enter the first team of global intelligent gas terminals, lay a good foundation for the development of the international high – end market, and effectively enhance the global brand influence.

（四）强化知识产权保护
Strengthening IP Protection

金卡智能集团不断加快国际化发展步伐，不仅在技术层面对标国际，提高"硬功夫"，更是强化知识产权建设，巩固"软实力"。目前为止，金卡智能已建立完善的知识产权体系，打造专业的知识产权团队，累计荣获国内外有效专利526件，参与国内外标准建设50多项。

Goldcard Smart Group continues to accelerate the pace of international development, not only by following the international standards at the technical level, improves the "hard strength" , but also strengthens the construction of intellectual property rights and consolidates the "soft power" . So far, Goldcard Smart has established a perfect intellectual property system, and built a professional intellectual property team. It has won 526 valid patents at home and abroad, and participated in more than 50 standard compilations at home and abroad.

案例：金卡智能集团全面持续开展知识产权保护宣传教育工作
Case: Goldcard Group continues comprehensive IP protection propaganda

2020年，金卡智能集团持续开展知识产权保护宣传教育工作。公司知识产权部借助知识产权宣传月活动，将国家最新的知识产权相关政策、策略进行宣贯，共组织开展了4场培训，共培训人数近200人，培训主题包含《企业知识产权保护与管理应用》、《如何开展专利检索》、《公司知识产权申请流程及奖励制度》、《企业商业秘密的界定与保护》等，并通过考试和竞赛的形式巩固受培训者的知识架构。

In 2020, Goldcard Smart Group continued to carry out publicity and education on intellectual property protection. With the help of the company's intellectual property publicity month activity, the latest national intellectual property related policies and strategies were distributed in four organized training sessions with a total of nearly 200 people joined. The training theme includes enterprise intellectual property protection and management application, how to carry out patent retrieval, the company intellectual property application process and reward system, the definition and protection of enterprise business secrets. And to consolidate the trainees knowledge structure the examination and competition were arranged.
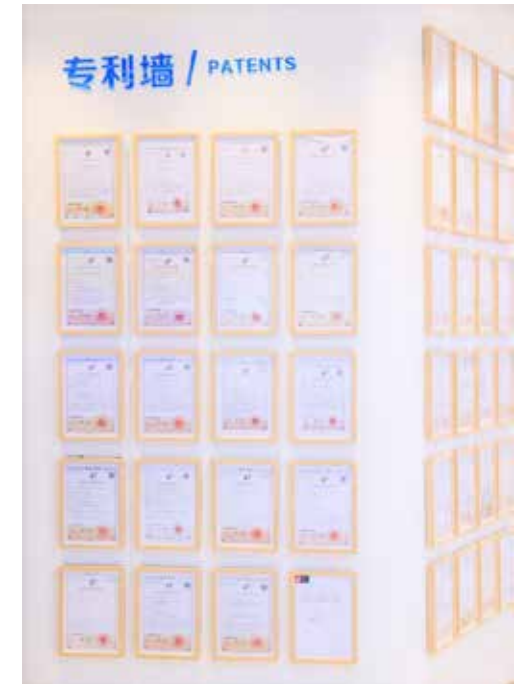
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第三章 智慧共享美好未来
Chapter 3 Smart Sharing a Beautiful Future

第三章
智慧共享美好未来

CHAPTER 3 SMART SHARING A BEAUTIFUL FUTURE

（一）完善供应责任
Perfecting Supply Responsibility

疫情之下，公用事业企业对物联网终端需求快速提升。为应对疫情形势下的市场新需求，金卡智能集团在2020年投入重金打造了两条全自动化装配生产线，使得产品的一致性和质量得到极大提升，在系统建设方面在原有ERP的基础上又推行了SAP系统，确保了公司能精准控制从订单管理到交付出货的全过程。在新产品和定制化产品流程方面，公司对原有的流程进行了优化，简化了过去冗余试验验证环节，使产品交付周期得到了极大提升。

Under the pandemic situation, the demand of public utilities for the IoT terminals has increased rapidly. In order to cope with the new market demand, Goldcard Smart group invested and built two fully automatic assembly production line in 2020, made great improvements on the product consistency and quality. In the production system, the SAP system was added to the original ERP, to ensure that the company can accurately control the whole process from order reception to delivery. In terms of new products and customized production processes, the company had optimized the original process, simplified the redundant trial production verification step in the past, and greatly improved the product delivery cycle time.

案例

案例：金卡智能集团上线SAP系统，实现供应能力升级
Case: Goldcard SAP online, upgrading supply capacity

2020年，金卡智能集团全力推动SAP系统的升级工作。历时150天，在经历了前期调研、蓝图设计、系统开发、单元测试与集成测试等6个环节阶段的准备工作后，于2020年底正式上线应用。此次SAP系统升级工作，覆盖金卡智能集团旗下10余家企业，涉及财务管理、销售管理、采购和仓储管理、生产管理4大关键业务模块，有效满足了公司决策、管控及业务运营的管理要求，有效提升公司的供应能力。

In 2020, Goldcard Smart Group pushed forward to upgrade the SAP system. It lasted 150 days, after the preparation work of six steps, including preliminary research, blueprint design, system development, unit testing and integration testing, it was officially launched for application at the end of 2020. The SAP system upgrade covers more than 10 enterprises under Goldcard Smart Group, involving four key business modules: financial management, sales management, procurement and storage management, and production management, which effectively meet the management requirements of the company 's decision-making, control and business operation, and effectively improve the company' s supply capacity.

2020年，公司供应链体系从两百多家深入合作的供应商中甄选出十多家各领域供应商进行了全面的年度审核，对供应商的体系建设、工艺设计、质量管控与供应能力进行评估考核，识别供应商在长期稳定供货过程中可能存在的质量风险、成本风险、交期风险与服务风险。针对存在不足的供应商，公司要求按照ISO9000、ISO14000、ISO45001等国际标准进行持续整改，辅导供应商有效提升优质优量的供应能力，同时倡导供应商将可持续发展更好的融入到供应链管理之中。

In 2020, the company selected more than 10 suppliers in various fields from more than 200 suppliers within its routine supply chain system to do comprehensive annual audit, evaluated the suppliers in system construction, process design, quality control and supply capacity, to identify the possible quality risks, cost risks, delivery risks and service risks in the long term stable supply process. For suppliers with insufficiency, the company requires continuous rectification in accordance with ISO9000、ISO14000、ISO45001 and other international standards, guides suppliers to effectively improve high quality and superior supply capacity, and advocates suppliers to better integrate sustainable development into supply chain management.

（二）心系员工发展
With Employee Development in Heart

金卡智能集团始终坚持"以人为本"的企业发展理念，在向物联网企业转型发展的过程中，始终赋能员工实现自身价值。多年来，公司坚定保障员工合法权益，关注员工健康与安全，重视员工提升与发展，持续加强员工沟通，与员工携手共进，共同创造公司的美好未来。

Goldcard Smart Group always adheres to the enterprise development concept of "people oriented", and in the process of transforming and developing to an IoT enterprises, it always enables employees to realize their own value. Over the years, the company has firmly protected the legitimate rights and interests of employees, paid attention to the health and safety of employees, emphasized the promotion and development of employees, continuously strengthened employee communication, and worked hand-in-hand with employees to jointly create a better future of the company.

保障员工健康安全
Protection of Employee Health and Safety

金卡智能集团获得了环境管理体系认证和职业健康安全管理体系认证，并以此为基础实施生态管理，在所有的工作场所识别、确定存在的环境问题、安全隐患、职业健康危险因素，通过在整个工厂系统精确定位问题根源，提出相应的解决方案，采取预防措施。公司定期组织员工参加安全知识培训及安全知识竞赛，从而增强员工的安全意识；通过到位、细致、亲切、人性化的督查行动，让员工切实体会到安全与他们时时相伴，培养员工主动要求安全的习惯，从而形成良好安全的文化氛围。公司全年累计8,145人次参与职业健康安全培训工作。

Goldcard Smart Group has obtained the environmental management system certification and occupational health and safety management system certification, and implemented ecological management on this basis, identified existing environmental problems, safety risks and occupational health risk factors in all workplaces, accurately located the root cause of the problem in the whole production system, proposed corresponding solutions and took preventive measures. The company regularly organizes employees to participate in safety knowledge training and safety knowledge competition, so as to enhance their safety awareness; through adequate, meticulous, friendly, humanized supervision action, employees can experience safety concern around them, and actively form good safety habits, so as to form a good safe cultural atmosphere. A total of 8, 145 person-time have participated in occupational health and safety training during the year.

截至2020底，公司未发生一起安全生产事故，无人员伤亡。公司严格落实疫情防控管理要求，全力推进疫情防控工作，全年无人员感染新冠病毒。经杭州市"平安钱塘"创建工作领导小组考察审核，授予公司2020年度钱塘新区"平安企业示范单位"。

As to the end of 2020, the company had no production safety accident, no casualties. The company strictly implemented the requirements of pandemic prevention and control, made every effort to promote epidemic prevention and control, and no one was infected with COVID-19 throughout the year. After the investigation and examination of the steering group of "Safe Qiantang Creation" in Hangzhou, Goldcard was awarded the "Safe Enterprise Demonstration Unit" in Qiantang New Area in 2020.

案 例

案例：金卡智能集团首次开展电梯困人救援演练
Case: Goldcard Smart Group practised elevator trapped people rescue training

金卡智能集团制定了健全的应急管理体系和应急管理预案，并组织员工开展各项安全培训及安全演练，提升突发事件发生时应急处理能力。2020年，公司首次进行电梯困人救援的应急预案演练。

Goldcard Smart Group has formulated a sound emergency management system and emergency management plan, and organized employees to carry out various safety training and safety drills to improve the emergency handling capacity. In 2020, the company carried out the emergency plan drill to rescue the elevator trapped people for the first time.

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培训赋能员工发展
Training Enable Employee Development

金卡智能集团公司秉承以人为本、人尽其才、唯贤任用的人才发展宗旨，搭建全方位的人才发展管理体系，推动多元化的员工职业发展培训。2020年，公司共组织各类培训135场，累计3,371人次参与培训，培训总学时达6,318小时。

Goldcard Smart Group, adhering to the talent development philosophy of being people - oriented, giving full scope to talents, and assigning jobs according to talents, builds an overall talent development management system and promotes diversified vocational development training for employees. In 2020, the company organized 135 various trainings, with 3, 371 person-time participating in the training, with a total training hours of 6, 318 hours.

组织各类培训
135场

累计参与培训
3,371人次

培训总学时达
6,318小时

分层级培训 Leveled training	高层管理者 Senior Managers	支持高管参加EMBA、MBA等进修学习，通过参加行业论坛、会议、培训深入了解行业发展趋势，组织青年领袖营等领导力培训，提升战略眼光、战略思维，支撑公司战略执行发展。 Support senior executives to participate in EMBA、MBA and other further studies, to obtain in-depth understanding of industry development trends through participating in industry forums, conferences and training. Organize leadership training such as youth leader camps to improve managers strategic vision and strategic thinking, and support the company's strategy implementation and development.
	中层管理者 Middle - Level Manager	参与行业论坛、标杆参观、读书等活动，组织各类培训，从管理角色认知、管理工具方法、到管理理念，全面提升管理能力，在完成重点战略任务中提升管理水平。 Participate in industry forums, benchmark business visits, reading and other activities, organize all kinds of training, from the management role cognition, management tools and methods, to the management concept, comprehensively improve the management ability, and improve the management skill level while completing key strategic tasks。
	基层员工 Executives	外部培训与内部培训相结合，导师在岗辅助，在专业技能、行业知识等多方面进行培养，达成团队管理绩效。 External training combined with internal training, with tutors on-job instruction, to improve professional skills, industry knowledge etc., to achieve team performance target.
专业技能 人才培养 Training on technical specialties		公司高度重视技术人员培训，包括外送研发人员学习先进技术及前沿趋势，如人工智能、大数据、云计算、物联网、互联网等前沿技术及其应用；结合公司实际、岗位技能，组织内部技术分享；引入行业专家对预研工作进行培训指导，将前沿技术及其应用传递至每个人。 The company attaches great importance to the training of technical personnel, including sending R&D personnel to learn advanced technologies and cutting - edge trends, such as artificial intelligence, big data, cloud computing, Internet of Things, Internet and their applications. Internal knowledge sharing combined with the actual work and job skills. Introduce industry experts to provide training and guidance on pre-research projects, and transfer the cutting - edge technologies and their applications to everyone.
新员工培训 New employee training		新员工入职后除参加新员工专项培训外，在试用期内全程安排导师辅导，制定试用期目标计划表，通过开展新员工座谈、新员工培训，试用期管理等，保证新员工的快速融入及产出绩效。 In addition to participating in the special training of the new entrance, the new employees will be provided with tutor guidance during the probation period. The probation period target plan is drawn to ensure the rapid integration and output performance of the new employees through the entrance discussion, new employee training and probation period management.

案例

案例：金卡青年领袖营首批青年才俊结业
Case: Goldcard youth leaders camp celebrates first batch graduates

青年领袖营是一项从金卡智能集团企业发展战略出发，结合金卡人才培养的目标，提升组织凝聚力与战略执行力，提高组织的工作与管理效率的人才培养计划。旨在通过开拓学员眼界，转变观念，提升商业敏锐度与领导力，面向公司未来，打造一支卓越的领导者队伍。项目自2019年04月启动,2020年10月结业，公司青年人才需完成变革领导力、企业发展战略、创新思维、绩效倍增等18门经营管理课程的授课学习。首期青年领袖营共计40余位金卡的青年潜才与重要岗位继任者结业。

Youth Leader Camp is a talent training plan that starts from the enterprise development strategy of Goldcard Smart Group, combines with the goal of Goldcard talent training, improves the organizational cohesion and strategic execution ability, and improves the work and management efficiency of the organization. The aim is to build a team of outstanding leaders for the future company through broadening the vision of students, changing their ideas, improving business acuity and leadership skill. The project started in April 2019 and completed in October 2020. The young talents of the company need to complete the teaching and learning of 18 management courses, such as reform leadership, enterprise development strategy, innovative thinking and performance doubling. In the first phase of the Youth Leadership Camp, more than 40 young latent talents and successors in important positions graduated.

完善薪酬绩效管理
Improve Remuneration and Performance Management

2020年，金卡智能集团持续完善和优化绩效管理体系，综合运用绩效管理工具，牵引组织聚焦市场与客户，做实绩效与客户价值、市场价值紧密挂钩，让绩效管理成为推动市场和客户满意度、认可度的强大驱动力。公司各级管理人员签订绩效合约，并分解落实至具体岗位，有效推动公司战略的落地执行，确保公司上下同心同力，共同实现公司的可持续发展。

In 2020, Goldcard Smart Group continued to improve and optimize the performance management system, used performance management tools to lead the organization to focus on the market and customers, and closely linked actual performance to customer value and market value, making performance management a powerful driving force for enhancing market and customer satisfaction and recognition. The managers at all levels of the company signed performance contracts and decompose them to specific positions to effectively promote the implementation of the company's strategy and ensure that the company worked at the same target to jointly realize the sustainable development of the company.

（三）守护绿色环境
Protection of Green Environment

作为物联网领军企业，金卡智能集团不仅在产业和品牌建设中走在前沿，也积极响应并主动推进绿色环保发展理念。公司将绿色环保融入企业运营，以绿色行动推进新旧动能转换，不断推动公用事业行业绿色发展氛围。公司将低碳、循环、节能、减排的理念融入企业发展的方方面面，通过持续推动技术创新，不断研发智慧物联与绿色发展融合的产品，努力提升产品全生命周期的绿色内涵，延伸绿色供应链，引领行业绿色前行，为企业与环境的绿色和谐贡献力量。

As a leading enterprise of the Internet of Things, Goldcard Smart Group has not only been at the forefront of industry and brand construction, but also actively responded to and promoted the concept of green and environmental conscious development. The company integrates green environmental protection into enterprise operation, promote the transformation of old and new growth drivers with green actions, and constantly promote the green development atmosphere of the public utility industry. The company combines low carbon, recycle, energy saving, emission reduction concept into all aspects of enterprise development, through continuous promoting technological innovation, research and development of smart and green development products, to promote the green connotation of the whole life cycle of its product, extend the green supply chain, lead the industry green development, and contribute to the harmonious enterprise and the environment.

绿色战略引领发展
Green Strategy Leads Development

金卡智能集团严格遵守国家相关法律法规要求，制定环境发展方针，制定环保发展工作计划，坚决落实环境保护工作。围绕"绿色设计、绿色制造、绿色营销、绿色服务"的发展思路，将环保因素融入产品研发与生产的全生命周期之中，持续提升企业运营的环保属性，与自然和谐发展。2020年，金卡智能集团未发生任何重大环境违规事件。

Goldcard Smart Group strictly abides by the relevant requirements of state laws and regulations, formulates environmental development policies, formulates work plans for environmental protective development, and resolutely implements environmental protection work. Centering on the development idea of "green design, green manufacturing, green marketing and green service", the company integrated environmental protection factor into the whole life cycle of product R&D and production, and continued to improve the environmental protection attributes of enterprise operation and developed harmoniously with nature. In 2020, no major environmental violations occurred in Goldcard Smart Group.

环保设施升级改造
Environment Protection Facility Upgrade

金卡智能集团制定了严格的污染物程序、危险废弃物管理程序等内部管理制度，对各类排放物进行严格监控监管，公司所有污染物排放均符合国家及地方环境标准。2020年，公司建立了更为严格的废气处理装置的管理及检查制度，确保废气处理装置有效运行；公司对废气处理装置进行改造，及时对废气处理装置内的活性炭进行更换，避免废气处理装置效果的减弱。同时将废气处理装置连接车间生产设备的管路进行调整，避免由于过多的支路导致排风量的减弱，从而保证废气收集的效果。

Goldcard Smart Group has formulated strict internal management systems for pollutant procedures, hazardous waste management procedures and so on, and strictly monitors and supervises all kinds of emissions. All pollutant emissions of the company comply with national and local environmental standards. In 2020, the company established a more strict management and inspection system for waste gas treatment to ensure the effective operation of waste gas treatment system. The company improved the waste gas treatment device and timely replace the activated carbon in the waste gas treatment device to avoid weakened effect of waste gas treatment device. At the same time, the exhaust gas ducts connected to the workshop production equipment is adjusted to avoid the weakening of the exhaust volume due to excessive branches, so as to ensure the effect of waste gas collection.

（四）支持脱贫攻坚
Support for Poverty Alleviation

2020年，是我国全面建成小康社会目标实现之年，也是脱贫攻坚收官之年。为积极响应党中央提出的"精准扶贫"号召，金卡智能集团主动履行社会责任，积极投身扶贫公益事业，通过扶贫帮扶结对子等方式，全力支持贫困地区脱贫攻坚。未来，公司将持续关注扶贫减贫公益事业，加强同落后地区开展产业合作、加强劳务人才合作交流、企业文化交流、爱心公益活动等，进一步帮助发展落后地区改善基础设施、提升劳动力素质，一同共享公司发展成功。

The year 2020 is the year of China's goal of building a moderately prosperous society in all respects and the final year of poverty alleviation. Actively responding to the call of "targeted poverty alleviation" proposed by the CPC Central Committee, Goldcard Smart Group took the initiative to fulfill its social responsibilities, actively participated in the public welfare undertakings of poverty alleviation, and fully supported the poverty alleviation in poor areas through the pairing with and assistant to poverty entities. In the future, the company will continue to pay attention to the public welfare undertakings of poverty alleviation and poverty reduction, strengthen industrial cooperation with backward areas, strengthen cooperation and exchanges in labor and human resources, corporate cultural exchanges, love and public welfare activities, further help the backward areas to improve infrastructure, improve the quality of labor, and share the development success with the company.

案例

案例：金卡智能公益基金会携手东南大学扶贫助农
Case: Goldcard Public Welfare Foundation cooperates with Southeast Univ. in poverty alleviation and farmer aid

受疫情影响，云南省楚雄彝族自治州南华县面临着农产品"出不了村、进不了城"的严重滞销局面。金卡智能公益基金会携手东南大学发起了"助力南华"公益倡议，通过从南华县购买大批农产品，与东南大学一同扶贫助力南华，为南华群众增收脱贫奉献真情、贡献力量。金卡智能与社会各界齐心协力，并肩同行，以大爱之心，为夺取脱贫攻坚战全面胜利贡献力量。

Affected by the pandemic, Nanhua County, Chuxiong Yi Autonomous Prefecture, Yunnan Province, is faced with a serious situation of unsalable agricultural products that "cannot get out of the village or enter the city". Goldcard Public Welfare Foundation and Southeast University launched the public welfare initiative of "Help Nanhua". By buying a large number of agricultural products from

County, Goldcard and Southeast University worked together to help Nanhua, and contribute to the increase of revenue and alleviation of poverty. Goldcard and all walks of life work together, walking side by side, contributing to the overall victory of the battle against poverty with great love.

案例

案例：金卡智能集团定点扶贫援助四川凉山州贫困户
Case: Goldcard helps poverty alleviation in Liangshan Prefecture, Sichuan Province

四川省凉山州布拖县地洛乡吞波村位于中国西南部，属彝族聚居村，距县城43公里。全村辖4个村民小组185户总人口812人，目前仍有贫困户71户335人在贫困线上挣扎，100%的贫困户存在住房不安全等问题。因为地处旱塬，缺少特色产业，该村村民收入以种植业和外出务工为主要来源。自2020年5月份扶贫结对以来，金卡智能集团通过微信群、电话访谈等方式与吞波村保持扶贫工作上的沟通和交流，了解当地政府在扶贫攻坚过程中的重点和难点工作。通过前期沟通访谈，金卡智能集团捐赠10万元为贫困户购置了电视柜、茶几、电磁炉、电饭煲等家具和生活用品，并通过村委会将扶贫善款发放到贫困户，帮助当地贫困户摆脱贫困。

Dengbo Village, Diluo Township, Butuo County, Liangshan Prefecture, Sichuan Province, located in southwest China, is a village inhabited by the Yi nationality, 43 kilometers away from the county town. The total population of 185 households under the jurisdiction of the village is 812. At present, 335 people in 71 households are still struggling under the poverty line, and 100% of the poor households have risky housing and other problems. Because it is located in the dry highland and lack of local characteristic industries, the villagers main income comes from planting and work in other region. Since the poverty alleviation pairing in May 2020, Goldcard Smart Group has maintained communication and exchanged ideas on poverty alleviation work with Tongbo Village through WeChat group, telephone interviews and other ways, to understand the key and difficult of the local government in the process of poverty alleviation. Through the early communication and interview, Goldcard Smart Group donated 100, 000 yuan to buy furniture like TV cabinet, tea table, induction cooker, electric rice cooker and other daily supplies for the poor households, and distributed the poverty alleviation funds to the poor households through the village committee to help the local poor households get rid of poverty.

（五）助力全面抗疫
Help Fight Against Pandemic in all Front

新冠肺炎疫情爆发以来，金卡智能公益基金会了解到奋战一线的医疗队伍物资匮乏的情况，积极、迅速展开行动，联系全球物资采购渠道、受赠单位及募捐通道，向武汉、温州、杭州等地600万元的防疫专项基金和物资。同时，金卡智能集团向港华燃气、华润燃气、中石油昆仑燃气、杭州燃气、武汉天然气等国内客户捐赠了大量的防疫物资，帮助客户正常运营，让老百姓方便办理业务。

Since the outbreak of COVID – 19 epidemic, Goldcard Smart Public Welfare Foundation learned about lack of materials of medical teams on the front line, actively contacted global material procurement channels, donation recipients and channels, and sent 6 million RMB worth special epidemic prevention funds and materials to Wuhan, Wenzhou, Hangzhou and other places. At the same time, Goldcard Smart Group has donated a large number of epidemic prevention materials to domestic customers such as Town Gas China, China Resources Gas, PetroChina Kunlun Gas, Hangzhou Gas and Wuhan Natural Gas to help customers in normal operation and make it convenient for residents to carry out business.

金卡智能集团也时刻关注海外疫情情况，公司在了解到国外防疫物资紧缺后，第一时间组织采购了大批口罩、隔离服、防护服等爱心防疫物资，分批捐赠给日本、韩国、秘鲁、俄罗斯、保加利亚、德国、哥伦比亚、尼泊尔等国家的几十余个客户与合作伙伴以及所在国的福利院。帮助海外客户与合作伙伴实现了疫情全球隔离下的居民供气维护、安检等工作照常开展，在确保燃气公司员工生命安全的同时，也保障当地居民的正常生产生活。

Goldcard Smart group also pays attention to overseas pandemic situation. After the company learned the shortage of epidemic prevention supplies in other countries, it immediately organized to purchase a large number of face masks, isolation clothing, protective clothing and other epidemic prevention materials, donated to dozens of customers and partners and the country's welfare homes in Japan, South Korea, Peru, Russia, Bulgaria, Germany, Colombia, Nepal and other countries. Goldcard helped overseas customers and partners to realize the gas supply maintenance and security check of residents terminals under the global isolation of the epidemic. While ensuring the life safety of employees of gas companies, it ensured the normal life of local residents.

案 例

案例：金卡智能集团向奋战一线的杭燃员工捐赠防疫物资
Case: Goldcard Smart Group donate anti-pandemic material to front-line workers in Hangzhou Gas

2020年2月7日，金卡银证软件副总经理丛培雪一行专程来到杭燃集团，为2,000多名坚守在城市燃气保供一线的杭燃集团员工捐赠医用口罩1万只、酒精消毒片200盒。杭州燃气集团党委书记、董事长芦俊特亲笔书写"金卡有爱"书法作品感谢金卡智能集团。芦俊表示，这批珍贵的防疫物资在第一时间分配发放给集团下属各单位，保障城市供气一线坚守岗位员工的需求。

On February 7, 2020, Cong Peixue, Deputy General Manager of Goldcard Yinzheng Software, made a dedicated trip to Hangzhou Gas to donate 10, 000 medical face masks and 200 boxes of alcohol disinfection tablets to more than 2, 000 employees of Hangzhou Gas who stick to the front line of urban gas supply. Lu Junte, secretary of the Party Committee and chairman of Hangzhou Gas Group, wrote the "Goldcard owns Love" calligraphy works to thank Goldcard Smart Group. Lu Junte said that this batch of precious epidemic prevention materials were immediately distributed to the subordinate units of the group to meet the

needs of employees that sticks to the urban gas supply front line.

坚守在城市燃气保供一线的杭燃集团员工
2000多名

医用口罩
1,0000只

酒精消毒片
200盒

09 展望2021
OUTLOOK TO 2021

GOLDCARD SMART GROUP
SUSTAINABLE DEVELOPMENT REPORT2020
金卡智能集团2020年可持续发展报告

10 报告指标索引
INDEX TO THE REPORT

GOLDCARD SMART GROUP
SUSTAINABLE DEVELOPMENT REPORT2020
金卡智能集团2020年可持续发展报告

展望2021
OUTLOOK TO 2021

展望未来，金卡智能集团将继续发挥行业领军作用，与产业链伙伴携手构建5G协同，数字化运营的智慧能源新生态，持续提供更优质的智能终端产品及技术解决方案，助推产业规模化发展，助力数字中国建设。

Looking forward to the future, Goldcard Smart Group will continue to play a leading role in the industry, work with industrial chain partners to build a new smart energy ecology of 5G collaboration and digital operation, continue to provide better intelligent terminal products and technology solutions, boost the large scale development of the industry, and help the construction of digital China.

GoldCard 金卡智能
让生活更美好 Make life better

报告指标索引
INDEX TO THE REPORT

		GRI4.0
关于本报告		G4-17、G4-18、G4-19、G4-20、G4-21、G4-23、G4-28、G4-29、G4-30、G4-31、G4-32
董事长致辞		G4-1、G4-2
关于我们	公司概况	G4-3、G4-4、G4-5、G4-6、G4-7、G4-8、G4-9
	公司治理	G4-34、G4-35、G4-38
可持续发展管理	可持续发展理念	G4-15、G4-16、G4-56
	可持续发展议题	G4-43
	利益相关方沟通	G4-24、G4-25、G4-26、G4-27
第一章 助力公共事业 智慧前行	智能金卡服务智慧城市	G4-EC7、G4-EC8
	助力国家重大工程建设	G4-EC4
	创新促进可持续发展	G4-PR3
	全方位构建安全体系	G4-PR1、G4-PR2
	优质服务赢得客户感动	G4-PR5
第二章 关注员工推动 企业发展	员工与公司共同成长	G4-LA10
	完善员工激励机制	G4-LA13
	企业文化与氛围建设	
第三章 践行责任贡献 社会和谐	推进供应链可持续发展	G4-57、G4-58、G4-EC9、G4-SO4、G4-SO10
	坚持践行绿色发展战略	G4-EN6、G4-EN7、G4-EN15、G4-EN16、G4-EN21
	践行公益爱心回馈社会	G4-SO1、G4-SO2