

数字时代新征程

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党的“十九大”做出建设交通强国的战略部署,吹响了加快建设交通强国的号角,党的“二十大”又以专章形式对完善科技创新体系、加快实施创新驱动发展战略做出了重大战略部署,强调企业科技创新的主体地位。“交通强国,城轨担当”,南宁轨道交通集团完整、准确、全面贯彻新发展理念,锐意进取,勇于创新,以“以人为本、智慧智能、艺术美观、经济合理”的设计理念,建设运营华南地区第一条全自动运行地铁线路,在智慧城轨和科技创新领域取得初步成效。随着全国城市轨道交通建设的快速发展和网络化运营,整个城市轨道交通行业面临如何转型升级、开拓创新的挑战。为此,笔者认为应在以下几个方面持续进行提升和发展:

1) 以全自动运行为引领,全面推动智慧城轨的发展。南宁市 2017 年首次建设全自动运行线路,面临建设模式新、全自动线路开通案例少、交付安全要求高等困难,通过以目标定位及运营场景为导向的设计、实施,最终实现了运行自动化、车站智慧化、维护少人化的建设目标。近年来,以《中国城市轨道交通智慧城轨发展纲要》为指导,先行城市在开展全自动运行线路建设同时,大力发展智慧车站、智能运维试点,推动智慧城轨的全方位、全过程发展。随着新技术发展,我们更应处理好智慧城轨共性与个性的关系,结合实际突出地方特色。基于此,南宁正在构建“1124 N”智慧城轨体系架构,通过一个统一的体系标准,覆盖区域内全部智慧城轨系统,以云平台、大数据平台为支撑底座,承载智慧服务、智能运行、智能运维、智慧管理四大核心业务,实现各核心业务的全息感知、互联融合、智能诊断及主动决策等 N 种应用项目,同时结合《中国城市轨道交通绿色城轨发展行动方案》开展“绿”“智”融合,形成安全、便捷、高效、绿色、经济的新一代智慧城轨体系。

2) 以科技创新为抓手,点亮企业高质量发展道路。科技是第一生产力,要使企业真正成为技术创新决策、研发投入、科研组织和攻关、成果转化应用的主体,就要强化企业科技创新主体地位,加强企业主导的产学研深度融合。南宁充分整合轨道交通资本、产业、技术、人才、应用场景等资源要素,开展“1+1+1+N”科技创新体系建设,即 1 个创新平台、1 个科创公司、1 个科技产业园加上系列科技企业,以进一步加强智慧智能及绿色节能等方面新技术、新产品的研发和应用。人才是第一资源,南宁市轨道交通也积极探索与高等院校、职业院校共建产业学院和工匠学院,建设面向东盟的留学目的地、高层次人才培训基地和人力资源区域培训基地。科创引领,着力打造以轨道交通为骨干、以常规公交为基础,以云巴、出租车/网约车、共享单车与慢行步道为补充接驳的“大公交”服务体系,不断提高公共交通系统的运营服务能力和水平。

3) 以国企改革为契机,助推城轨设备国产化自主化发展。企业数字化智慧化转型的本质是生产力和生产关系的重构;研发并应用拥有自主知识产权的国产化技术、产品是新时代发展的需要。南宁市按照“因地制宜、开拓创新、大胆探索、勇于实践”的原则,要求有关企业积极向国有资本投资公司、科技型企业转型升级,以投资聚产业,以产业引人才,积极参与新能源、电子信息、高端装备制造等重点产业,研发创新产品,并承载各种创新产品的转化推广,实现产品化、产业化,在轨道交通规划、设计、建设、运营等上中下产业上延链、补链、强链,通过产业链、创新链、人才链、资金链“四链”融合,打通科技经济融合发展通道,建设创新驱动的科技型企业,推动城轨设备国产化、自主化应用发展。

南宁轨道交通集团将继续围绕打造卓越的城市综合服务商的目标,踔厉奋发启新程,笃行不怠向未来,服务和融入新发展格局,抢抓全面加强基础设施建设的政策窗口期、新一轮科技革命和产业变革的战略机遇期,走出一条符合集团公司实际的高质量发展之路,为奋力谱写新时代南宁现代化建设新篇章、奋力开创新时代壮美广西建设新局面、全面建设社会主义现代化国家做出更大贡献。

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Groundbreaking Voyage into the Digital Era

HUANG Zhonghui

(Party Committee Secretary and Chairman of Nanning Rail Transit Group Co. , Ltd.)

The 19th National Congress of the Communist Party of China established the strategic deployment for building transportation power, sounding the call of accelerating this process, and in the 20th National Congress, a specific chapter was dedicated to the major parts of the strategic deployment including refining the technological innovation system and accelerating the implementation of innovation-driven development strategies, emphasizing the principal status of enterprise technological innovation. 'Rail transit shoulders the transportation power responsibility', Nanning Rail Transit Group carries out the concept in complete, accurate and comprehensive manner with the forceful will to advance and the courage to break the grounds. Leading by the 'people-oriented, smart and intelligent, artistic and aesthetic, economic and reasonable' design concept, the first FAO (fully automatic operation) metro line in Southern China is constructed and launched, making an effective first step in smart urban rail and technological innovation field. With the rapid exploitation and networking operation of nationwide urban rail transit construction, the whole industry is encountered by the challenge of transformation, upgrading and innovation. For this purpose, author believes that it is crucial to continuously improve and develop the following aspects:

1) Take FAO as guide and promote smart urban rail from all aspects. Nanning first built FAO line in 2017 and was faced with difficulties such as new construction mode, few operating FAO line cases, high requirements of delivery safety. Through design and practice guided by goal positioning and operation scenarios, the construction goal of automated operation, smart station, reduced maintenance personnel was achieved. In recent years, under the guidance of Development Outline of Smart Urban Rail Transit in China, the pioneer cities are operating FAO lines as well as promoting smart station, intelligent operation and maintenance pilot projects and the full-aspect full-process development of smart urban rail. With the development of new technology, we should handle the relationship between smart urban rail commonality and personality in a better way, highlighting the regional features according to reality. Based on this, Nanning is now building the '1124 N' smart urban rail system architecture. All smart urban rail systems within the range are under a unified system of standards. Four core business of smart service, intelligent operation, intelligent operation-maintenance, smart management are supported on the foundation of cloud platform and big data platform, realizing N types of application projects including the holographical cognition, interconnected amalgamation, smart diagnosis and active decision-making of every core business. Meanwhile, 'green-smart coalescence' is carried out with reference to the Action Plan of China Urban Rail Transit Green Urban Rail Development, forming the safe, convenient, highly efficient, green, economic new generation smart urban rail system.

2) Use technological innovation as a grapple to reveal the path for enterprise high quality development. Technology is the primary productive force, and to truly make enterprises the principal of technological innovation decision-making, research and development investment, science organization and breakthroughs and research result commercialization, it is necessary to consolidate the principal status of enterprise technological innovation and deepen the integration of production, education and research lead by enterprises. Nanning fully integrates the resource factors including capital, industry, technology, talents and application scenarios and carries out the '1 + 1 + 1 + N' technological innovation system construction, which is referring to 1 innovation platform, 1 technological innovation firm, 1 high-tech industry park and a series of technology enterprises to further strengthen the development and application of new products and technologies in smart, intelligent, green and energy-saving aspects. Talents are the primary resource, and Nanning Rail Transit is proactively exploring cooperative establishment of industry college and craftsmanship college with higher education and vocational education schools, and is building studying abroad destinations to Association of Southeast Asian Nations, high-level talent training bases and human resource regional training bases. Technological innovation takes the lead and exerts efforts in building a 'mass public transport' service system with rail transit as backbone, regular transit as base and skyshuttle bus, taxi/online ride-hailing, shared bike and pedestrian as auxiliary means for interchange, elevating the operation service ability and level of public transport system.

3) Regard the reformation of state-owned enterprises as a trigger to promote rail transit equipment domestication and independent development. Enterprise digital and smart transformation aligns with the essence of reconstructing production forces and relations. To research, develop and apply self-owned intellectual property, domesticated technologies and products is necessary for new era development. According to the principle of 'adaptive to site, exploitative innovation, audacious exploration, decisive implementation', Nanning has put forward requirements to associated enterprises about actively transforming into state-owned capital invest-

ment companies and technology companies, so that industries are gathered by investment and talents are attracted by industry. By actively participating in major industries such as new energy, electronic information, high-end equipment manufacture, developing innovative products and promoting the commercialization of them, the production and industrialization are realized. By extension, complementation and strengthening of chains in upper, middle, lower level of industries including rail transit planning, design, construction and operation, through convergence of '4-chain', industry chain, innovation chain, talent chain and capital chain, the passage of technology and economy merged development is broken through and innovation-driven technology enterprises are built, promoting rail transit equipment domestication and independent application and development.

Nanning Rail Transit Group will continuously strive for the goal of forging the excellency of city comprehensive service provider, on board for a journey through hardship and endeavor, towards the future and beyond in high spirits and hopes. To actively serve and blend into the new development layout, it is urgent to take hold of the policy window period of infrastructure construction comprehensive strengthening and the strategic opportunity stage of technological and industrial revolution, so that a practical path that accounts for the corporation high-quality development is paved. In the effort to write a new chapter of Nanning modernization construction in the groundbreaking era and to open up a new world of the marvelous Guangxi through diligent work, more constructive contribution will be dedicated to comprehensively build this modern socialist country.

Translated by ZHANG Liman

《城市轨道交通研究》再度入选《科技期刊世界影响力指数 (WJCI) 报告 (2022)》收录期刊



近日,《科技期刊世界影响力指数 (WJCI) 报告 (2022)》(以下简称《WJCI 报告》)发布,《城市轨道交通研究》继入选 2021 年版《WJCI 报告》收录期刊后,再度成功入选 2022 年版《WJCI 报告》收录期刊。

《WJCI 报告》是由中国科学技术信息研究所、《中国学术期刊(光盘版)》电子杂志社有限公司、清华大学图书馆、万方数据有限公司、中国高校科技期刊研究会、中国科学技术期刊编辑学会联合研制的世界科技期刊评价报告。

《WJCI 报告》旨在建立新的期刊评价系统,从全球 6 万余种活跃科技期刊中精选 1.5 万种具有地区代表性、学科代表性的重要学术期刊,通过研制发布“科技期刊世界影响力 WJCI 指数”,对其在全球科技创新活动中起到的出版传播效果和服务作用进行科学评价。《WJCI 报告》基于世界各国和地区 R&D 投入、科技论文产出、科研人员数量、期刊规模和水平 4 个维度综合衡量,确定各国和地区入选统计源期刊比例,来源期刊总体结构体现了地区公平性。《WJCI 报告》2022 版最终经严格评议,收录全球科技期刊 15 022 种,约占全球活跃科技学术期刊总量的四分之一,很好地体现了地区代表性和学科代表性。其中多语种及非英文期刊比例明显高于其他索引数据库。

基于对 8 个国际索引数据库 (WOSINEEL, JST, KCI, CABA, RSCI) 分类体系、期刊名录搜集整理的对比分析,以《中华人民共和国学科分类及代码》为总纲,参考《中国图书馆分类法》《学位授予和人才培养学科目录》,项目组自主

主编制了覆盖各级别学科领域的科技期刊分类体系,共 291 个学科类目,更好地体现了国际化和对新兴、交叉学科的支持。《世界引文数据库》收录了统计源期刊 2021 年的引文共 1.02 亿条,并在此数据基础上开展了世界期刊学术影响力评价,其中中国期刊贡献引文 831.35 万条。《WJCI 报告》2022 版共收录中国科技期刊 1 634 种,其中中文期刊 1 262 种。中国期刊 WJCI 指数均值为 1.378,居世界第九。

《城市轨道交通研究》是由同济大学主办,上海市交通委员会、中国铁路上海局集团有限公司、上海申通地铁集团有限公司、广州地铁集团有限公司、深圳市地铁集团有限公司、中车长春轨道客车股份有限公司、中车青岛四方机车车辆股份有限公司、中国铁路设计集团有限公司、上海工程技术大学等单位协办的学术类科技期刊,创刊于 1998 年,是我国城市轨道交通领域首个公开发行的科技期刊。2000 年起先后入选“中文核心期刊”“中国科技论文统计源期刊”,以及“《中国学术期刊影响因子年报》统计源期刊”“《科技期刊世界影响力指数 (WJCI) 报告》收录期刊”。

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