

## 强力推进智慧城市轨道交通建设

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随着我国城市化率的不断提升,特大城市、大城市的数量快速增加,建设与智慧社会相匹配的智慧城市轨道交通(以下简称“城轨”)已成为推进交通强国建设的一项重要任务。建设智慧城轨的战略指向是:在自主创新基础上,大力应用数字化、智能化、网络化等新技术革命成果,使之与城轨深度融合,推进城轨信息化,大力发展智能系统、建设智慧城轨。经多次讨论并反复征求领导和专家意见后,《中国城市轨道交通智慧城轨发展纲要》(以下简称《纲要》)已于2020年3月12日以中城轨〔2020〕10号文件正式颁布实施。

《纲要》明确了赶超世界先进水平的战略目标;构建了承载全部智慧城轨业务的云平台和大数据平台及其实现信息技术应用进入世界领先行列的方向;建立了系统完备的技术标准体系及其关键性技术标准,其目标是达到国际领先水平;形成了“1-8-1-1”智慧城轨的布局结构,即1张智慧城轨蓝图、8个智能(智慧)关键核心业务建设体系、1个城轨云和大数据平台、1套智慧城轨标准规范。

鉴于智慧城轨建设具有覆盖范围广、建设体量大、技术难度高、实施周期长的特点,《纲要》在统筹谋划、顶层设计的基础上,将智慧城轨建设细化为“两步走”实施方案:第一步——2025年基本建成中国特色智慧城轨,跻身世界先进智慧城轨国家行列;第二步——2035年进入世界先进智慧城轨国家前列,中国式智慧城轨领跑世界发展潮流。

建设智慧城轨必须坚持“两手抓”:一手抓智能化,强力推进新兴信息技术和城轨交通业务的深度融合,实现城轨信息化;一手抓自主化,增强自主技术创新能力和自主品牌创优能力,持续不断研发具有自主知识产权的享誉世界的新产品、新品牌。“两手”协力,统筹推进,确保智慧城轨建设目标的顺利实现。

为了顺利推进智慧城轨建设,必须制定正确的实施路径。

技术路径务必坚持先进适用原则:在“自主创新、安全可控”技术路线指导下,把握核心技术自主创新和可持续发展的主动权;创立自主知识产权的民族品牌,真正形成自主创新的竞争力;主导和引导国内、国际两个市场接纳和使用中国标准,提升在国际市场的话语权和影响力,实现城轨交通的智能化、智慧化。

工作路径务必坚持创新发展:实现8个关键核心体系的创新,搭建承载全部城轨业务的城轨云与大数据平台,建立中国智慧城轨技术标准体系等。

协会工作路径务必坚持精准服务方针:履行协会的职责,重点抓好智慧城轨建设的顶层设计、示范工程建设、成果推广应用、标准体系建设、促进政府和企业的衔接等5项工作。

行业工作路径务必坚持协同推进:组织引导全行业和会员单位增强信息化、智能化建设的主体责任,因地制宜,与时俱进,研究制定本单位的信息化、智能化建设方案,全力推进智慧城轨建设。

《纲要》从行业层面对智慧城轨建设的发展战略、建设目标、重点任务、实施路径、体制机制和保障措施等方面进行了统筹规划和顶层设计。《纲要》可作为城轨行业今后一个时期(2020—2035年)引领我国建设智慧城轨的指导性文件。我们期盼业界同仁凝心聚力,同舟共济,以“咬定青山不放松”的韧劲、“不破楼兰终不还”的拼劲,因地制宜、开拓创新、大胆探索、勇于实践,主动积极组织《纲要》的贯彻落实,同绘智慧城轨图,共筑交通强国梦。

### Motivate Smart Urban Rail Transit Construction

BAO Xuding

(Founder of China Association of Metros)

With the continuous rising of urbanization ratio in China and the rapid increase of megacities and metropolises, building a smart urban rail transit matching with smart society has become a crucial mission to advance the transportation power progress in China. The strategy of building smart urban rail transit points at: on the basis of independent innovation, by applying the revolutionary achievements of new technologies including digitalization, intelligitization, networking, a deep merge

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between technologies and urban rail transit industry will be achieved, motivating the industry informatization, pushing forward the smart operation system development and constructing smart urban rail transit. Through numerous discussions and repeatedly seeking advices from supervisors and experts, the Outline of Smart Urban Rail Transit Development (the Outline in short for the followings) is officially published and launched for implementation on 12 March, 2020 as the No.10 document of China Urban Rail [2020].

The Outline clarifies the strategic goals to catch up with and exceed world advanced levels; build cloud and data platform bearing all smart urban rail transit business and the practical information technology applications to enter world leading array; establish complete technology standard system and its core technology standards, aiming at reaching the world leading level; layout the 1-8-1-1 smart urban rail transit structure, as in 1 smart urban rail transit blueprint, 8 smart (intelligent) key core business construction systems, 1 urban rail transit cloud and big data platform, 1 smart urban rail transit standard regulation.

Since the construction of smart urban rail transit features wide covering range, large construction volume, high technical difficulty, long implementation cycle, the Outline has detailed the construction to a “two-step” implementation scheme on the basis of overall planning and top-level design. First step, completing smart urban rail transit construction with Chinese characteristics, entering the array of world leading smart urban rail transit countries by 2025; Second step, elevating to the top level among the world leading smart urban rail transit countries by 2035. When the time comes, the smart urban rail transit with Chinese characteristics will direct the world and start the trend.

Building smart urban rail transit must insist on ‘Two Hands’ strategy: *Intelligentization* on one hand, pushing forward the deep mergence between upcoming information technologies and urban rail transit business, realizing urban rail transit informatization; *Automatization* on the other hand, improving the innovation ability of independent technology and the evolution ability of independent brands, continuously develop new products as well as new brands that owns China’s independent intellectual property. By coordinating the power of two hands and motivating with overall planning, the goals of successful smart urban rail transit will be achieved.

To push forward smart urban rail transit construction smoothly, correct implementation path has to be designed.

The technical path must insist on the advanced adaptive principle. Under the overall guidance of “Independent innovation, controllable safety” for the technical path, it is necessary to take hold of the proactive governance of core technology and of independent innovation as well as sustainable development; to create national brand that owns independent intellectual property, forming the competitiveness of independent innovation; direct and guide both domestic and international markets to accept and adopt Chinese standard, increasing the discourse power and influences in international market, realizing the intelligent and brilliant urban rail transit.

The operation path must insist on innovative development; to promote the innovation of the 8 key core systems; build the cloud and big data platform that bears all urban rail transit business; establish the smart urban rail transit technology with Chinese standard system and others.

The work path of the association must insist on the direction of accurate service: to fulfill the responsibilities of association; take hold of the top-level design of smart urban rail transit construction, sample project construction, result promotion and application, standard system establishment, promote the connection between government and companies.

The work path of the industry must insist on coordinated motivation: to inspire and enhance the individual responsibility of all industry and member units towards information and intelligent construction. Based on the location and era, the information and intelligent construction scheme for each unit is to be designed specially and the smart urban rail transit construction will be promoted with full power.

The Outline has conducted overall planning and top-level design from the perspectives of development strategy, construction goal, key-point mission, implementation path, schematic system and ensuring countermeasures towards smart urban rail transit construction. The Outline can be the guidance document leading the construction of smart urban rail transit in China for the next stage of rail transit industry (2025–2035). We call for the united forces and ambitions from everyone in the industry to sail on the same boat, to adopt the persistence like bamboo holding on to mountain rocks and the determination to strive the battle till the end. We will adapt to circumstances; progress and innovate; explore audaciously; experiment bravely, and organize proactively the implementation of the Outline. We will paint the vision of smart urban rail transit together and shape the dream future of transportation power for our country.

(Translated by Zhang Liman)