工业互联网产业联盟
Alliance of Industrial Internet

工业互联网网络发展与解决方案分享

Industrial Internet Network Development and Solutions Sharing

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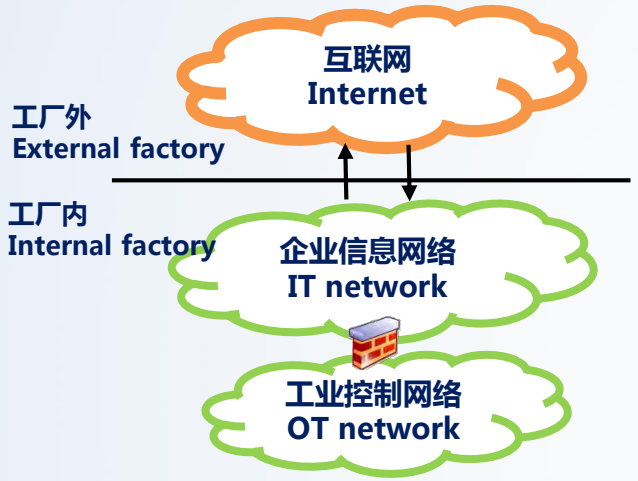
1 问题
Problems to be solved

2 网络连接框架与趋势
Framework and trend of IIN&C

3 解决方案分享
Solutions

Problems



VS

工业互联网新模式新业态
New models and businesses

智能化生产
Intelligent production

网络化协同
Network-based collaboration

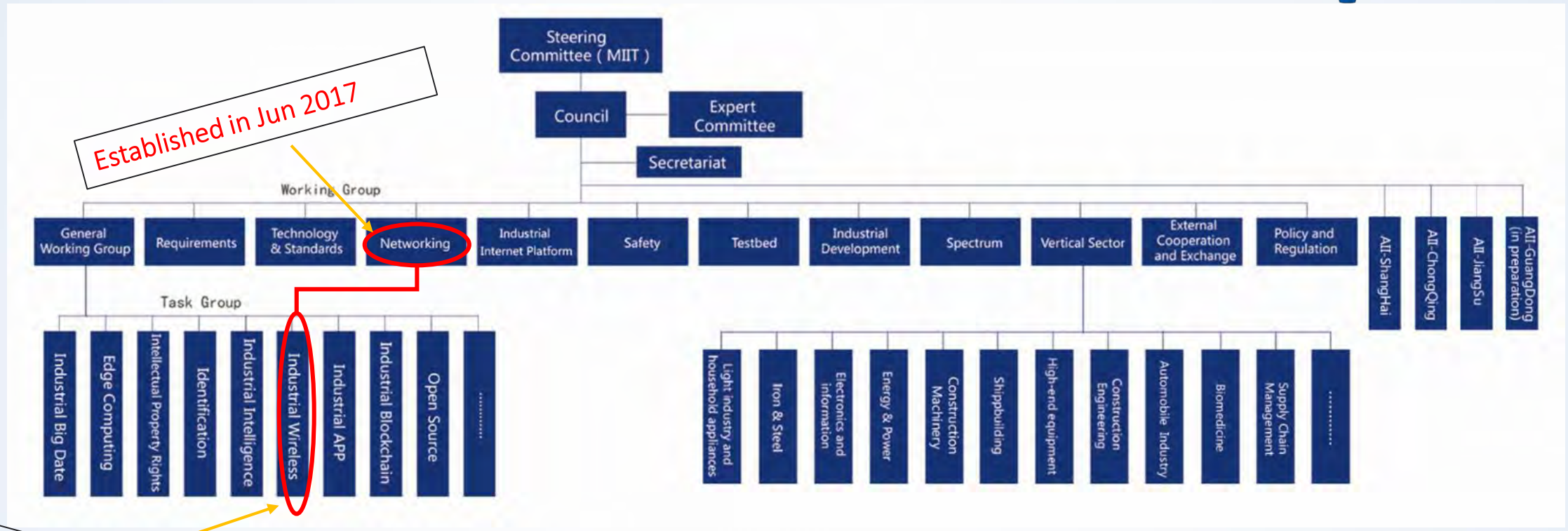
个性化定制
Customization

服务化转型
Service-oriented transformation

网络割裂，功能单一 Seperated networks, simple usages

- 互联网仅用于商业信息交互
  The Internet is only used for business emails
- 企业信息网络难以延伸到生产系统
  IT network is difficult to extend to production systems
- 大量的生产数据沉淀、消失在工业控制网络
  A large amount of production data is deposited and disappears in industrial control networks

AII Networking WG



服务于工业企业的网络化、智能化发展，推动新型网络技术在工业领域应用，组织标杆网络和产业链公共服务平台的搭建；推动工业互联网网络产业应用、标准研制、试验验证。

The networking WG focuses on the networked and intelligent development of industrial enterprises, promotes the application of new network technologies in the industrial field, organizes the construction of benchmarking networks and public service platforms, and promotes the application, standard development and test verification of industrial Internet network industries.

工业互联网网络连接白皮书
Industrial Internet Networking&Connecting White Paper

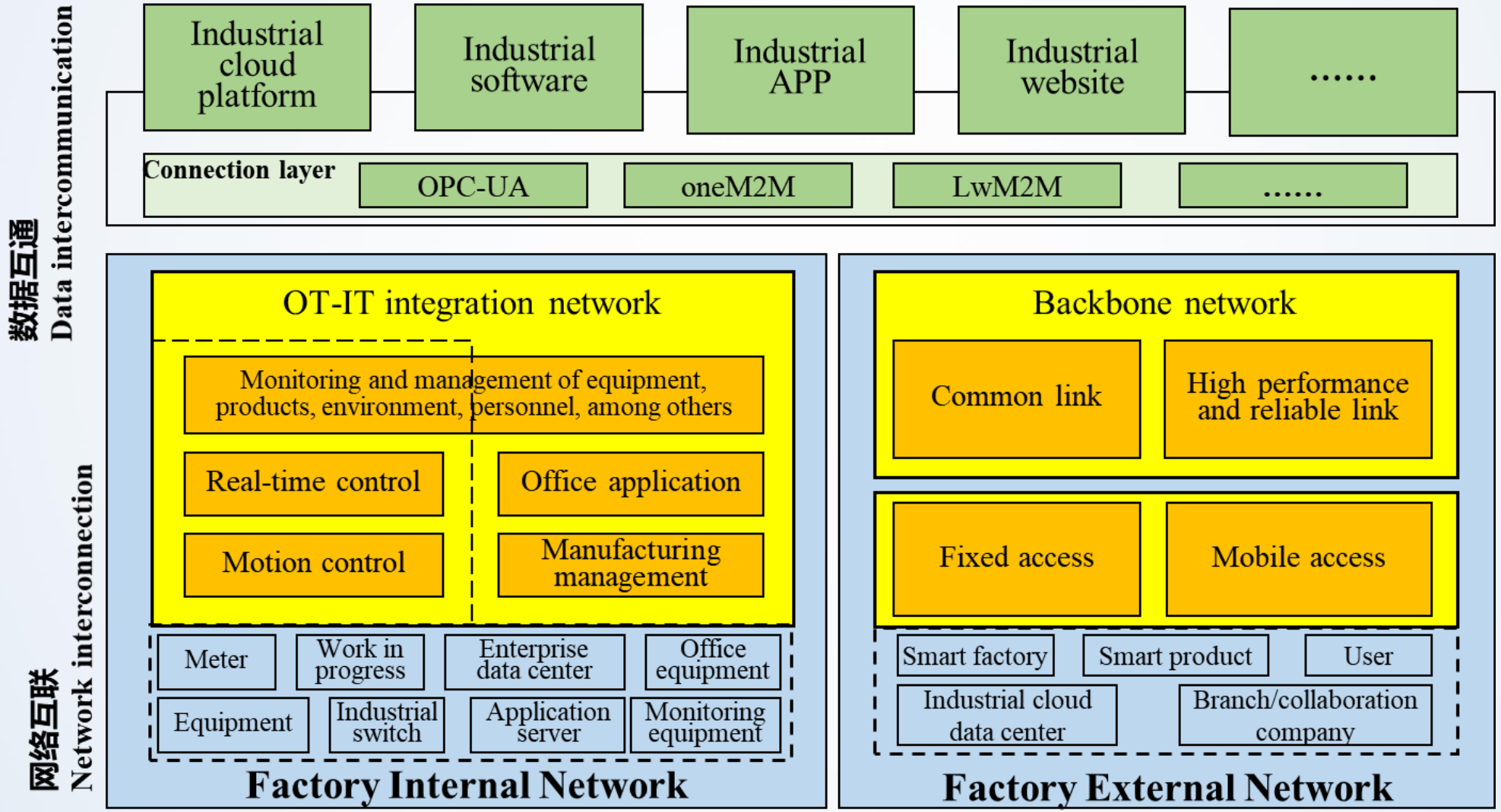
工业互联网网络优秀解决方案
Network Solutions Collection Of Industrial Internet

工业互联网无线电磁环境白皮书
Industrial Wireless Electromagnetic White Paper

无线应用场景白皮书——汽车制造领域
Wireless Application Scenario —Automobile Manufacturing

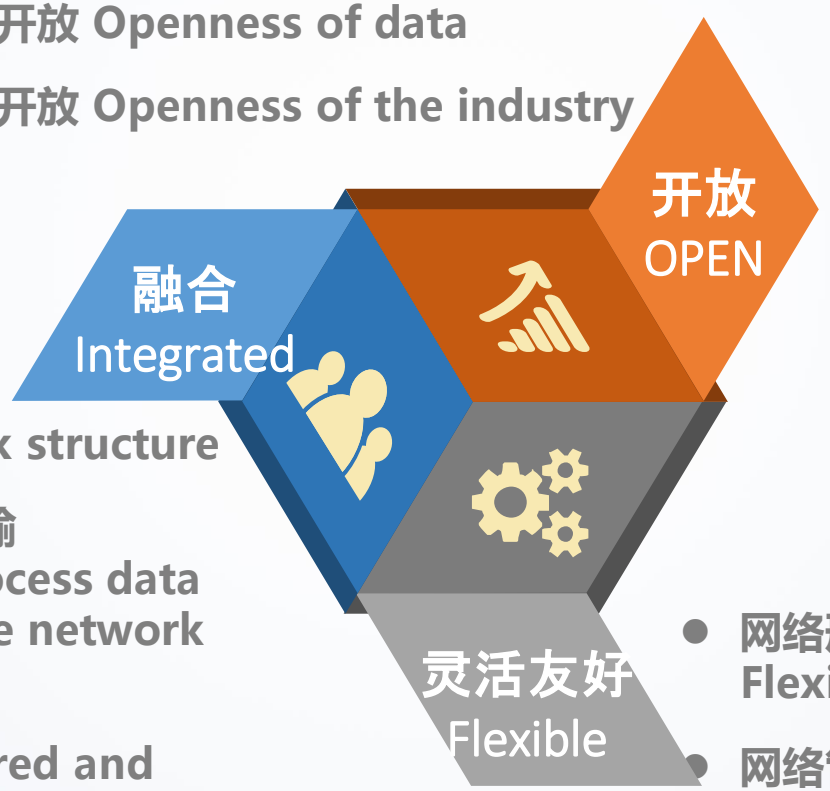
http://www.aii-alliance.org/index.php?m=content&c=index&a=lists&catid=23

工业互联网网络连接框架 Framework of Industrial Internet Networking&Connecting



工业互联网工厂内网络发展趋势 Development of factory internal networking

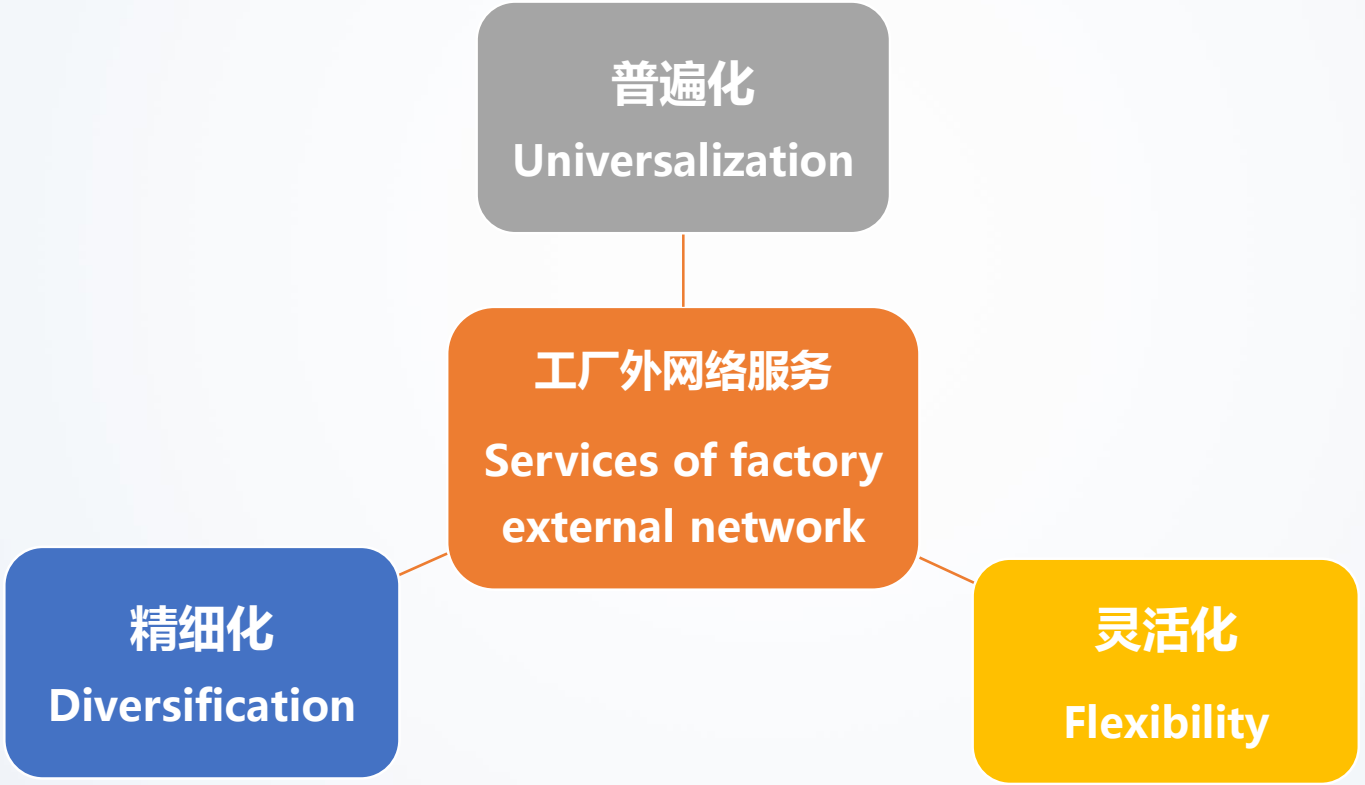
- 技术的开放 Openness of technology
- 数据的开放 Openness of data
- 产业的开放 Openness of the industry



- 网络结构的扁平化
  Flattening of the network structure
- 控制信息与过程数据共网传输
  Control message and process data transmission on the same network
- 有线与无线的协同
  Cooperation between wired and wireless networks

- 网络形态的灵活
  Flexibility of the network structure
- 网络管理的友好
  Friendliness of network management

工业互联网工厂外网络发展趋势 Development of factory external networking



Solutions Collection

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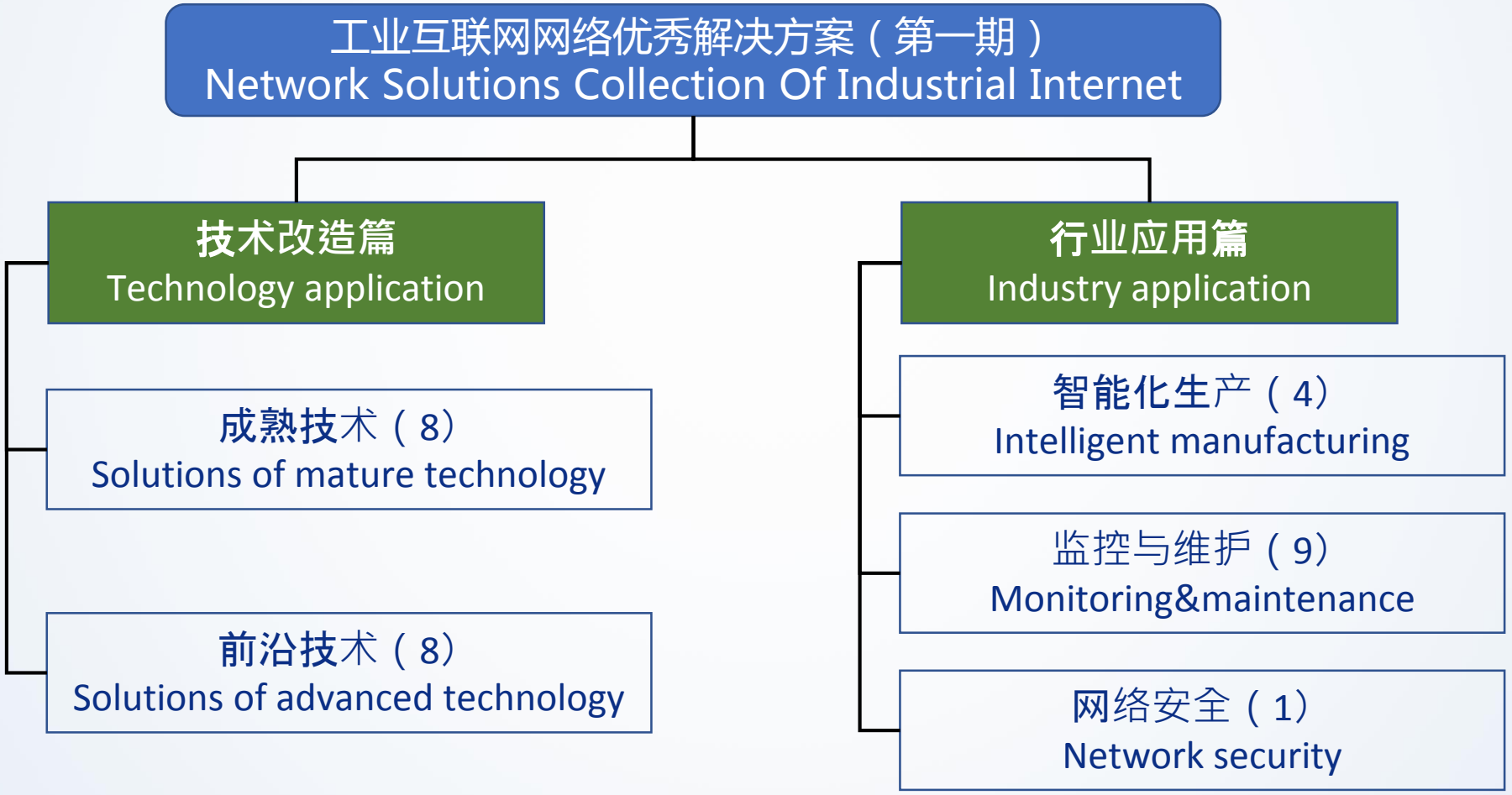
共收到25家单位提交材料，评选出30个解决方案。
25 enterprises submitted materials, 30 solutions were selected.



Solution example 1

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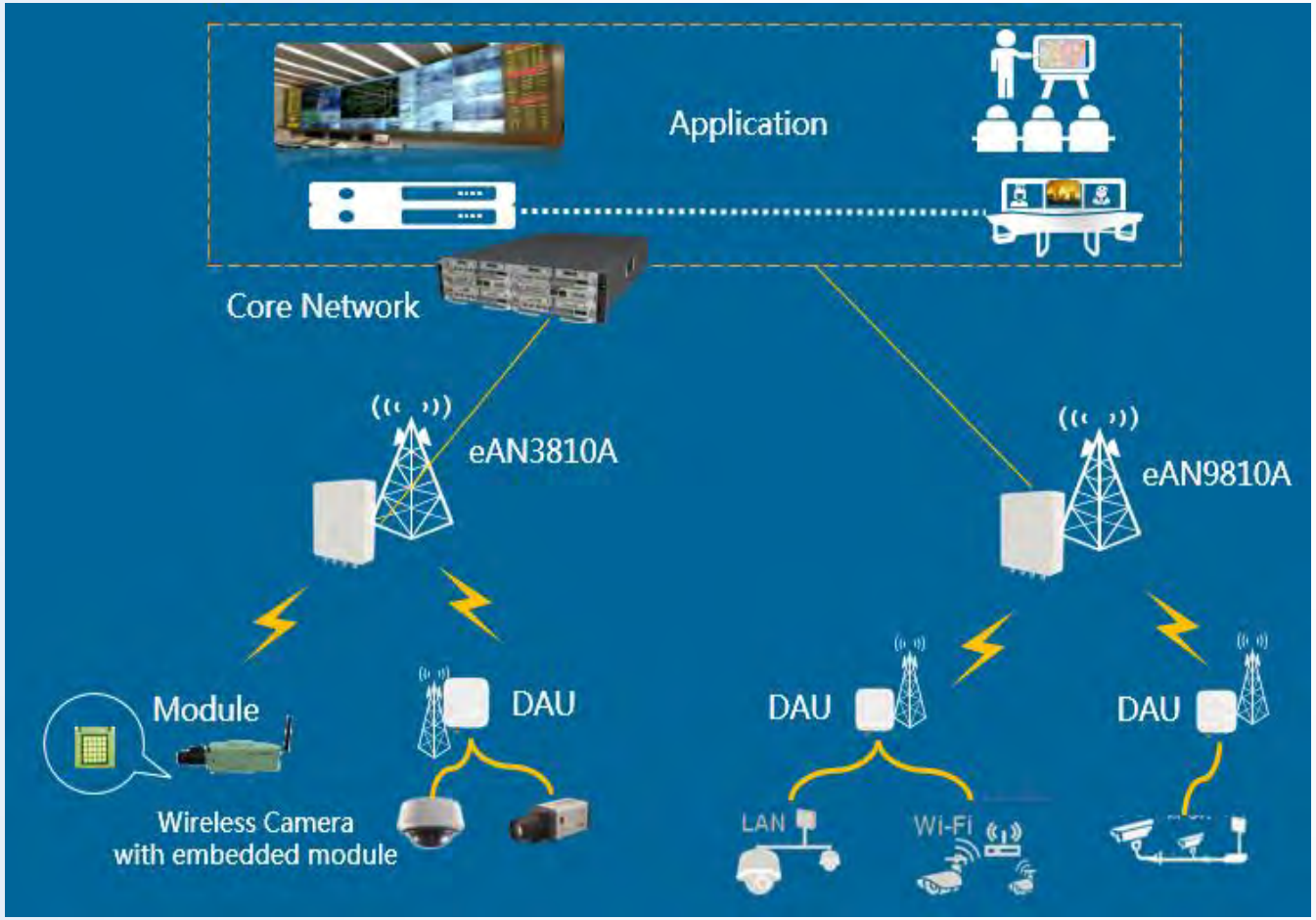
基于免授权频谱的LTE工业无线互联专网宽带方案
Industrial wireless private network solution based on unlicensed spectrum LTE



基本组网系统架构
Basic networking system architecture

亮点 Highlight:

- 无线私网
  Wireless private network
- 抗干扰
  Anti-interference
- 覆盖范围大
  Broad coverage
- 时延小
  Less latency

Solution example 2

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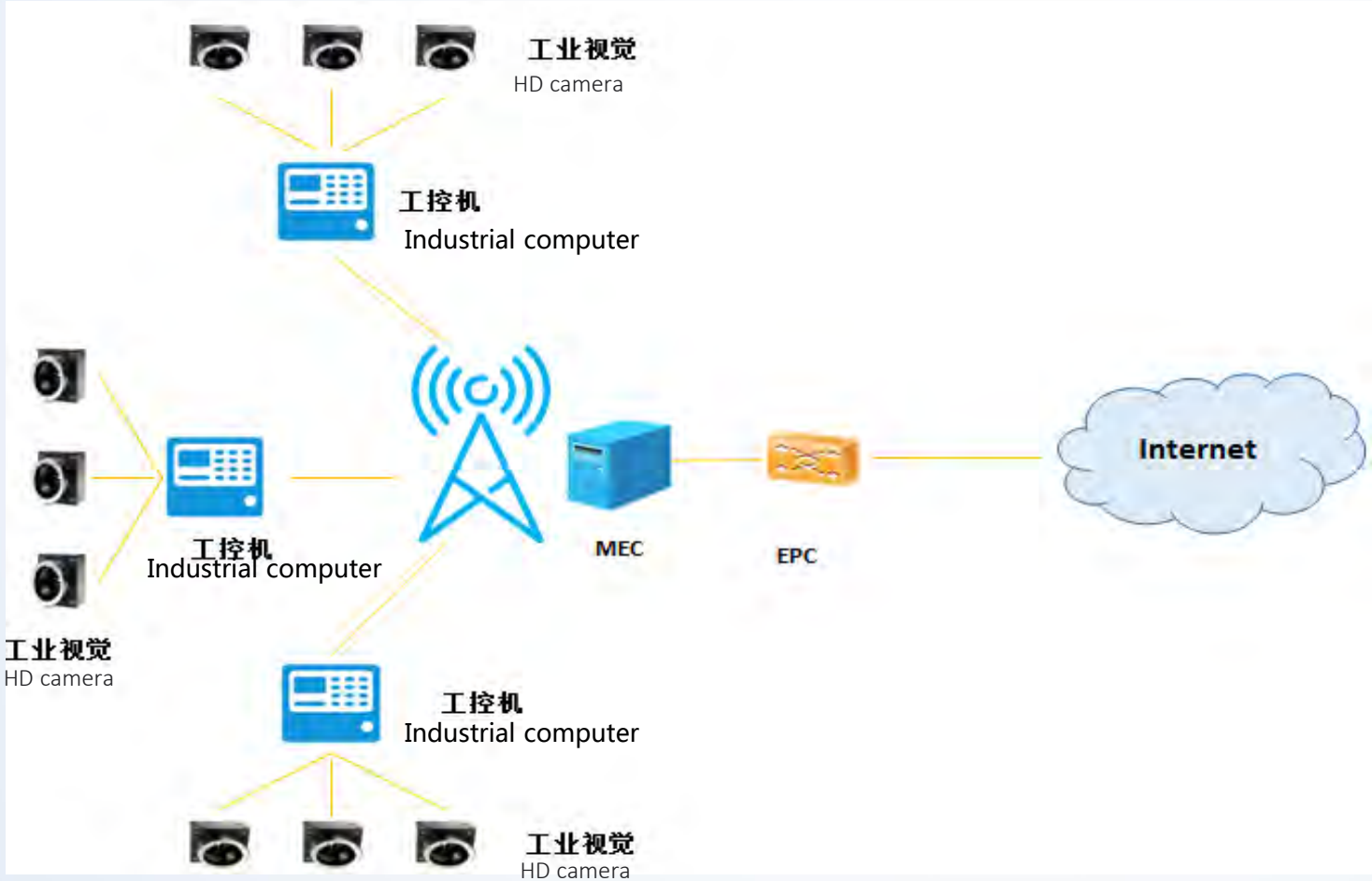
基于5G和人工智能技术的产品质量实时检测和优化方案
Real-time detection and optimization of product quality based on 5G and AI



亮点 Highlight:

- 5G
- 移动边缘计算
  Mobile Edge Computing
  (MEC)
- 增强移动宽带
  eMBB

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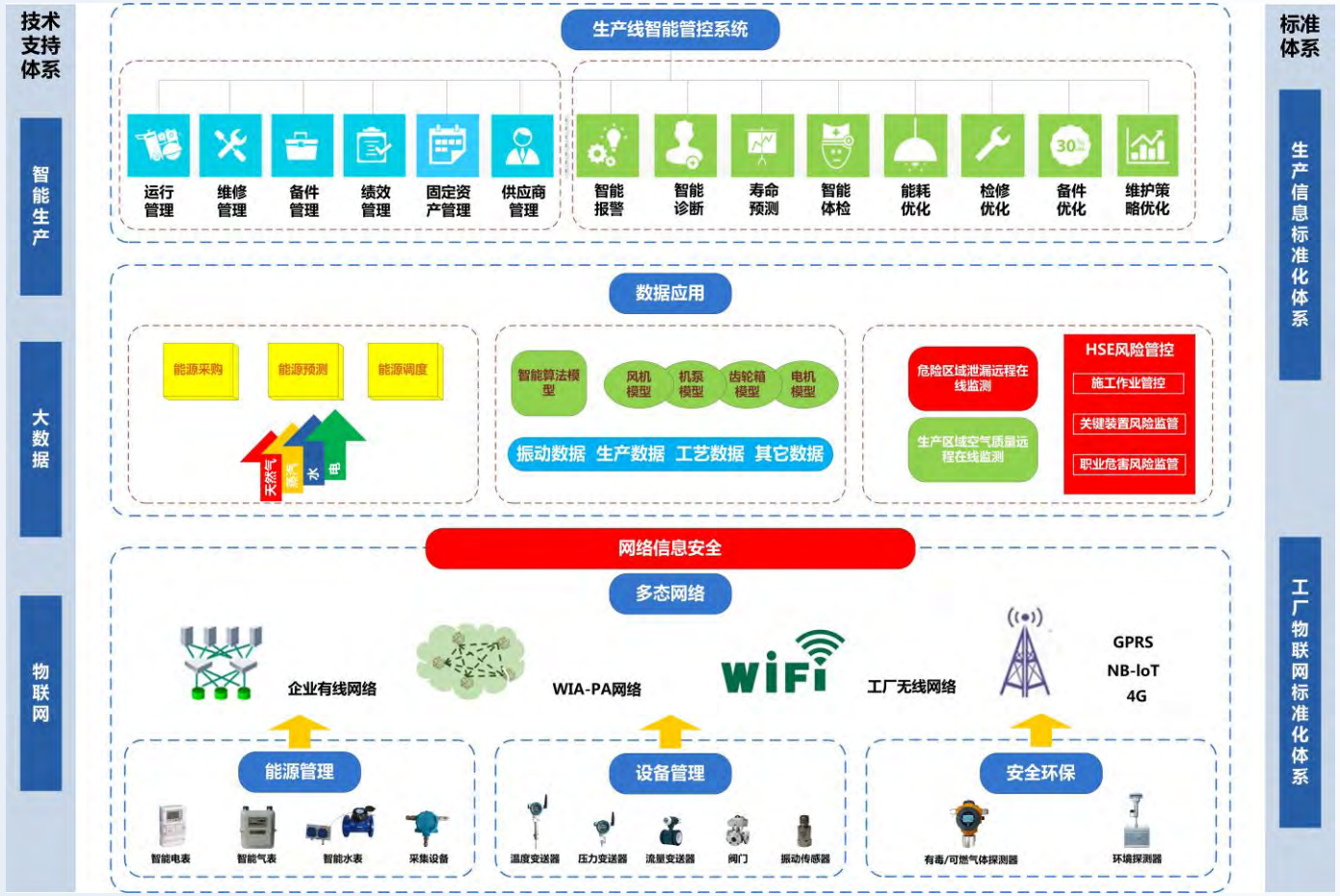
铸管行业生产线智能管控系统解决方案
Production line intelligent management system in cast pipe field



生产线智能管控系统架构 Intelligent management system architecture

亮点 Highlight:

- WIA-PA
- 无线覆盖 Wireless coverage
- 云网结合 Cloud-network

融合·协作·共赢

共同把握工业互联网的历史机遇

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