**Table 3.1.** Summary of Industry 4.0 initiatives of advanced countries

| Country/Project | Core Value | Core Technology | Focus Industry |
| --- | --- | --- | --- |
| Germany  industrie 4.0 | Ensure technology leadership and develop a strategy for national industry upgrade. | • IoT  • CPS  • Sensor Systems  • Robotics  • Innovative production system  • Operational management | • Processing  • Automobiles  • Mechanical  • Electronics  • ICT |
| Factories of  The Future (European) | Integrate and demonstrate innovative technologies for advanced manufacturing systems (40–50 | •Advanced manufacturing processes  •Mechatronics for advanced manufacturing systems  •Information and communication  •Manufacturing strategies  •Modelling, simulation and forecasting methods and tools  •Knowledge‑workers | • Manufacturing |
| European Roadmap for Industrial Process Automation | Provide guidance and input for process industry companies, providers of process industrial IT and automation solutions | • Productivity, efficiency, scalability and flexibility  • Sustainability through circular economy – circular economy  through industrial internet  • Distributed production/modular factories and services  • Artificial Intelligence and Big Data  • Autonomous plants and remote operations  • Platform economy  • Cybersecurity  • Safety – human, machine and environment  • Competences and quality of work  • Human-Machine Interfaces and Machine-to-Machine  communications | • Pulp and Paper (including forestry)  • Metals  • Mining and Minerals  • Chemical  • Energy and Power  • Pharmaceutical  • Food Production and Processing  • Infrastructure  • Mobile platforms  • Oil and Gas |
| Built Environment 2050 (UK) | To lead an industry that is fit for purpose in a fast paced, digital and technologically advanced global economy. | • BIM  • RFID  • Telemetry Spines Integrated  • Self Assembly  • 3D Printing  • Self Procuring  • Advanced Robotics  • Autonomous Vehicles  • Self healing materials | • Construction |
| Towards 2040 (UK) | Determine how the automotive industry meets pressing environmental and sustainability challenges. | • Electrical energy storage  • Electric machines  • Power electronics  • Thermal propulsion systems  • Lightweight vehicle and powertrain structures | • Automotive |
| A Roadmap for Industry in Mexico | Build up two hyper-flexible manufacturing Clusters that will develop an I4.0 framework and a Manufacturing Operating System. | • Big Data Analytics  • Modeling And Simulation  • Robots  • IoT | • Manufactures  • Automobiles |
| Made in China 2025 | Establish state leadership in  advanced manufacturing. | • Networking  • Smart Manufacturing  • Industrial foundation  • IoT  • Intelligent products  • New production models | • New Information and Communications Technology (ICT) Industry  • Advanced Numerical Control Machine Tools and Robotics  • Aerospace  • Ocean Engineering Equipment and High-Tec Ships  • Advanced Rail Transit Equipment  • Energy Saving and Smart Vehicles  • Electricity Equipment  • Agriculture Equipment  • New Materials  • Biopharmaceuticals and High-performance Medical Equipment |
| Taiwan productivity 4.0 | Address labor shortages and productivity issues. | • IoT  • Smart robotics  • Big data | • Agriculture  • Commerce  • Manufacturing |