

R&D PROGRAM



INTRODUCTION

# Green Electrification 2035

Platforms for optimal power generation and use in a carbon-neutral society

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# Green Electrification 2035 program to achieve carbon neutrality target

A world-class R&D program to develop platforms for optimal power generation and electricity use

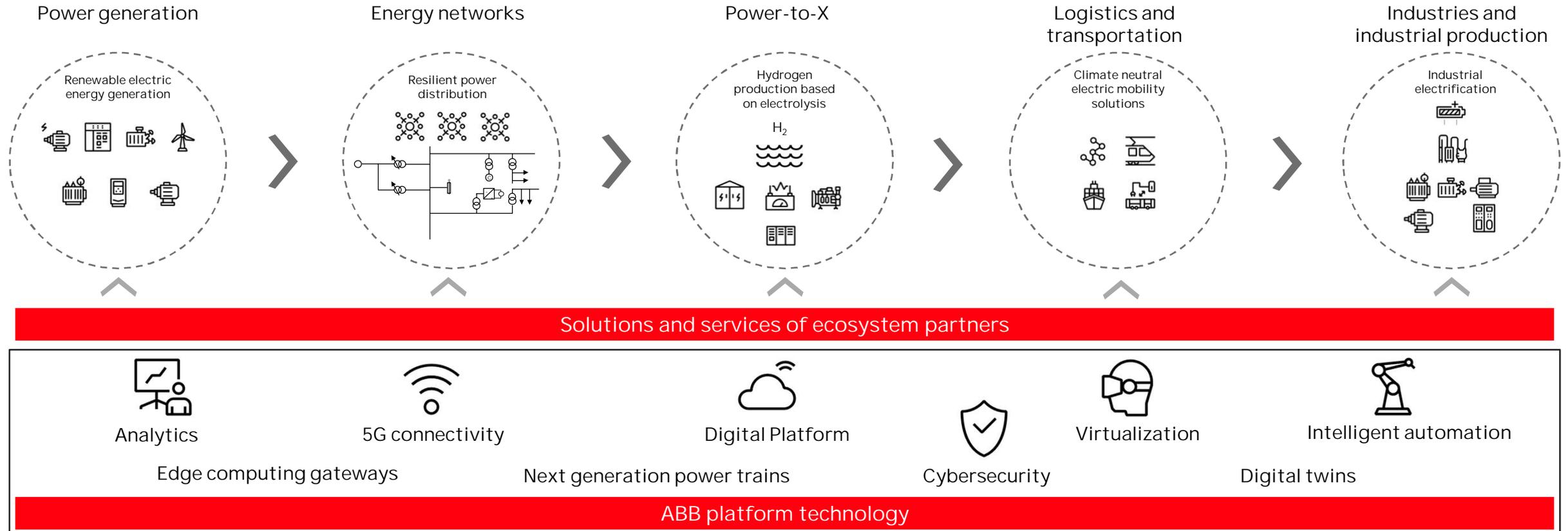
## Target

- To develop new integrated technology platforms for optimal electricity generation and use by combining modern 5G communication technology, data management, new electrical engineering solutions and power grid technology
- In the future, an increasing number of physical devices will be replaced by digital solutions that communicate with each other in a cyber-secure way
- The resulting system can react quickly to changed conditions, while minimizing energy loss and malfunctions
- The program will deliver in cooperation with its ecosystem partners controllable and safe overall solutions that optimize system-level energy efficiency and reliability
- The solutions are scalable, meet the growing demand for energy efficiency, and encourage platform ecosystem participants to become more competitive and grow internationally

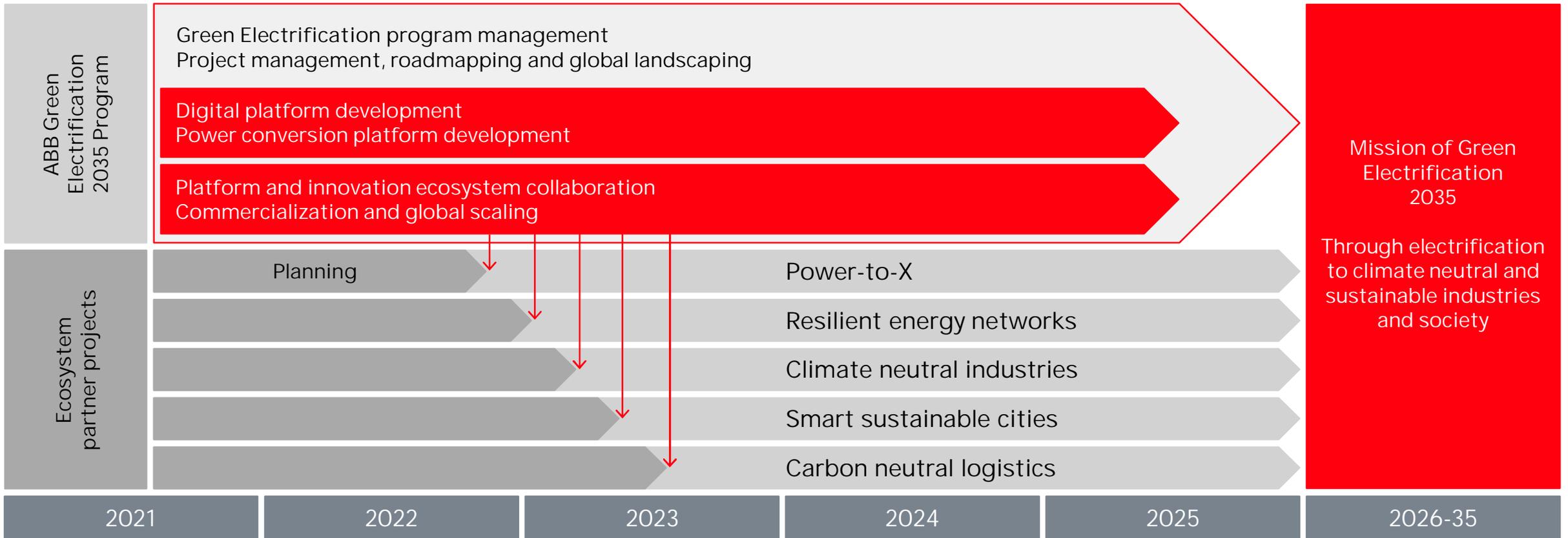


# Sustainable and competitive solutions with innovation ecosystem

Optimizing system-level energy efficiency and reliability



# ABB Green Electrification 2035 program



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# ABB Green Electrification 2035 program

## Ecosystem research and co-innovation focus areas 2021

### Topics for co-innovation projects

- Power-to-X, CCUS and Resilient energy networks
- Industrial electrification and sector coupling for optimized energy system efficiency and resiliency
  - New technologies and their utilization

### Digital Platform

- Cross-organizational DevSecOps practises to achieve resilience of autonomous critical infrastructure systems

### 5G

- Slicing services for critical infrastructure
- New technologies and their utilization

### Topics for research projects

### 5G and Cybersecurity

- Infrastructures to support research, testing and validation of the ABB GE2035 technology platforms

### Power-to-X and CCUS

- Research infrastructures to support the fundamental research and E2E efficiency optimization



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