

# Setting the scene

Digitalization as an enabler to a cleaner and more resilient system

Group of Expert on Cleaner Electricity System  
Task Force on Digitalization  
19th Session – October 4th 2023

**DigiTransfo expertise**

Electric Grid Digital Transformation and security  
| Energy Transition



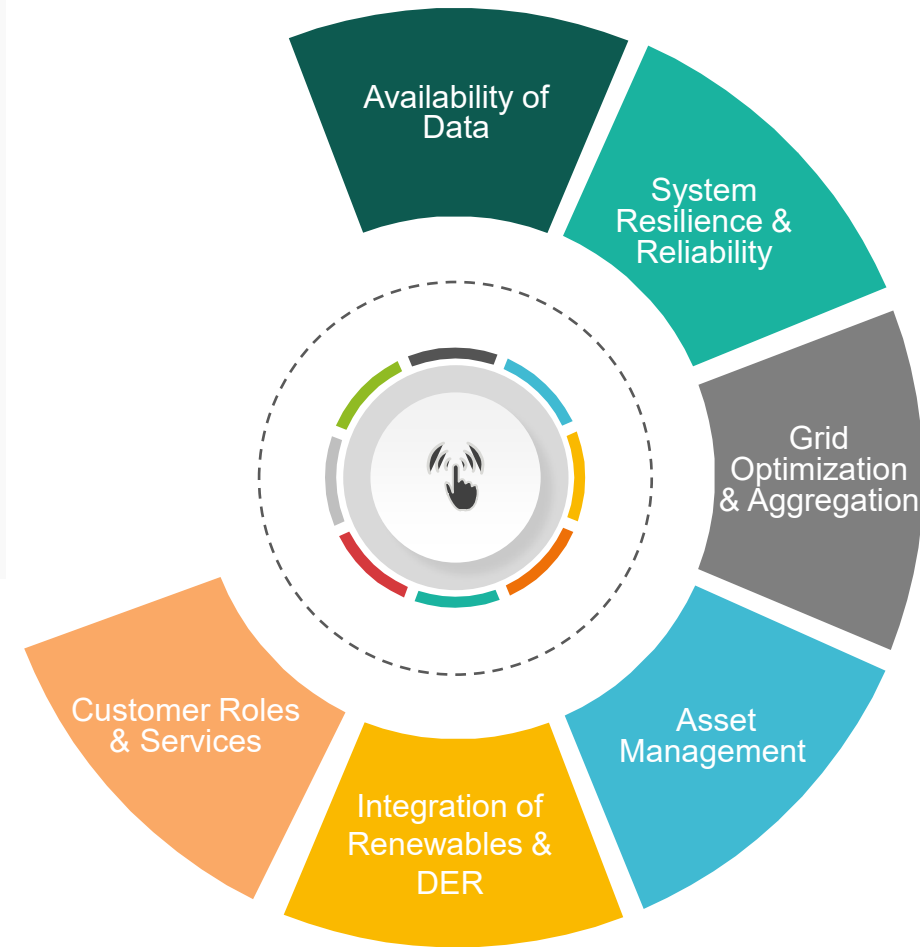
Powering Canada Forward:  
Building a clean, affordable and reliable electricity system for every region of Canada



# What is Digitalization?

## Definition:

Leveraging the process of converting physical or analog information into a systematic digital format to transform business model, decision for advancing overall productivity, cost, safety and sustainability



# What is Digitalization of the Electric Grid?



## Generation

- Modernize systems (protection, automation and control) with a next-generation technology digital platform

## Transmission

- Modernize systems (protection, automation and control) with a next-generation technology digital platform
- Digitalize yard
- Implement remote monitoring with existing technology

## Distribution

- More automation (reclosers, intelligent grid, etc.)
- More data collection and usage
- Workforce and assets management

## Data collection, analytics

- Enhance assets management
- Optimize operations
- Facilitate identification of lower-carbon goals and solutions



# Digitalization Benefits

## Asset Knowledge

- Operations
- Assets Management
- Maintenance

## Manage

- Load
- Charging

## Integration (renewables + DER)

- Changing resources mix
- Active customers

# Data



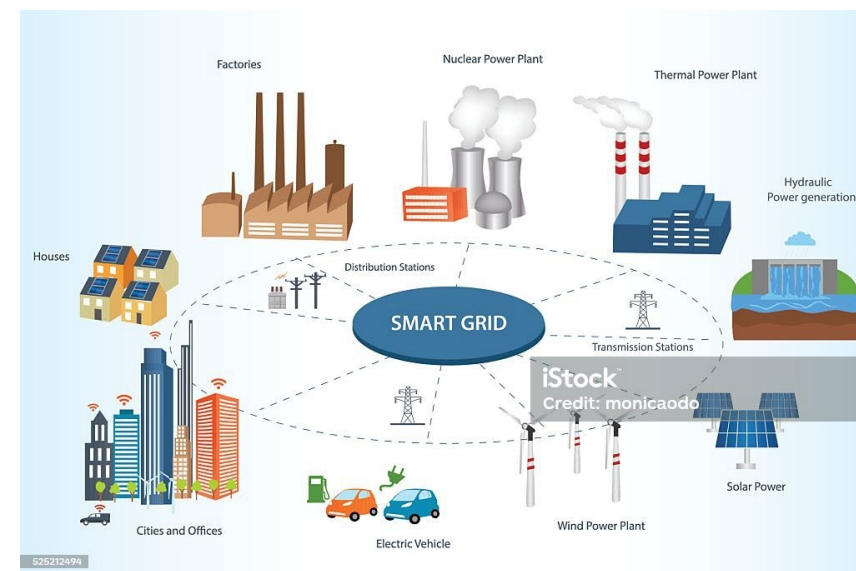
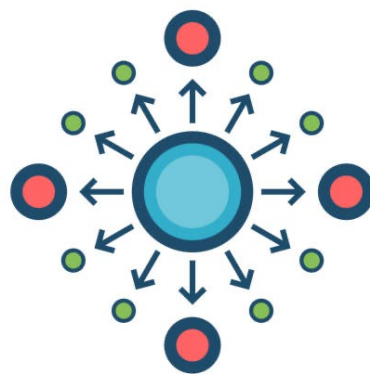
Digitalization  
Contributes to



Cleaner Electricity System  
+  
More Resilient System



# Digitalization as an enabler





# Challenges

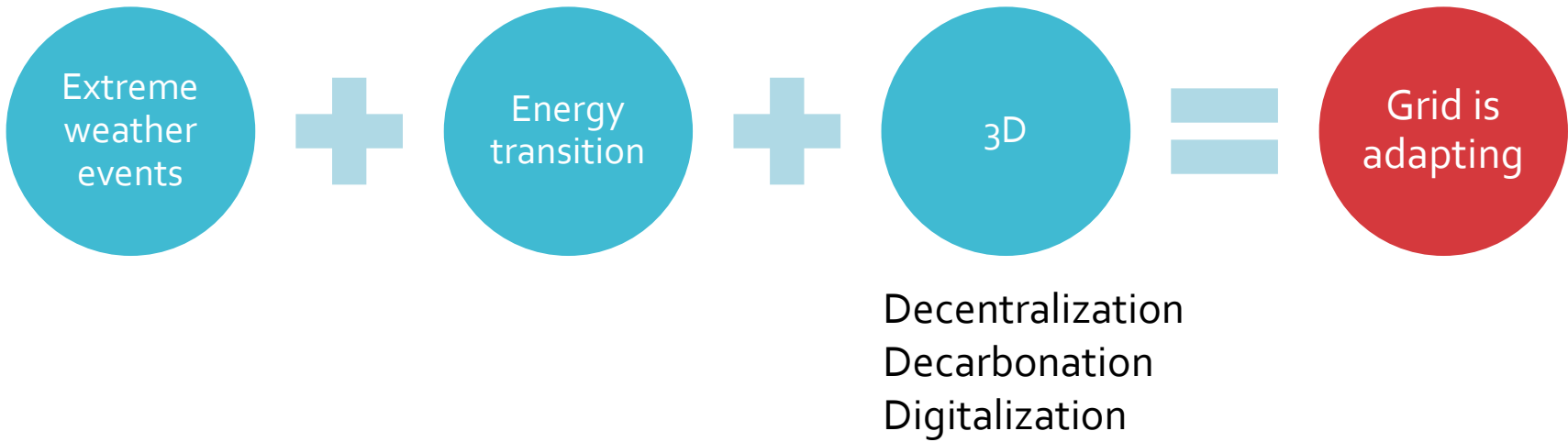
- Cybersecurity and data privacy
- Skilled workforce
- Literacy



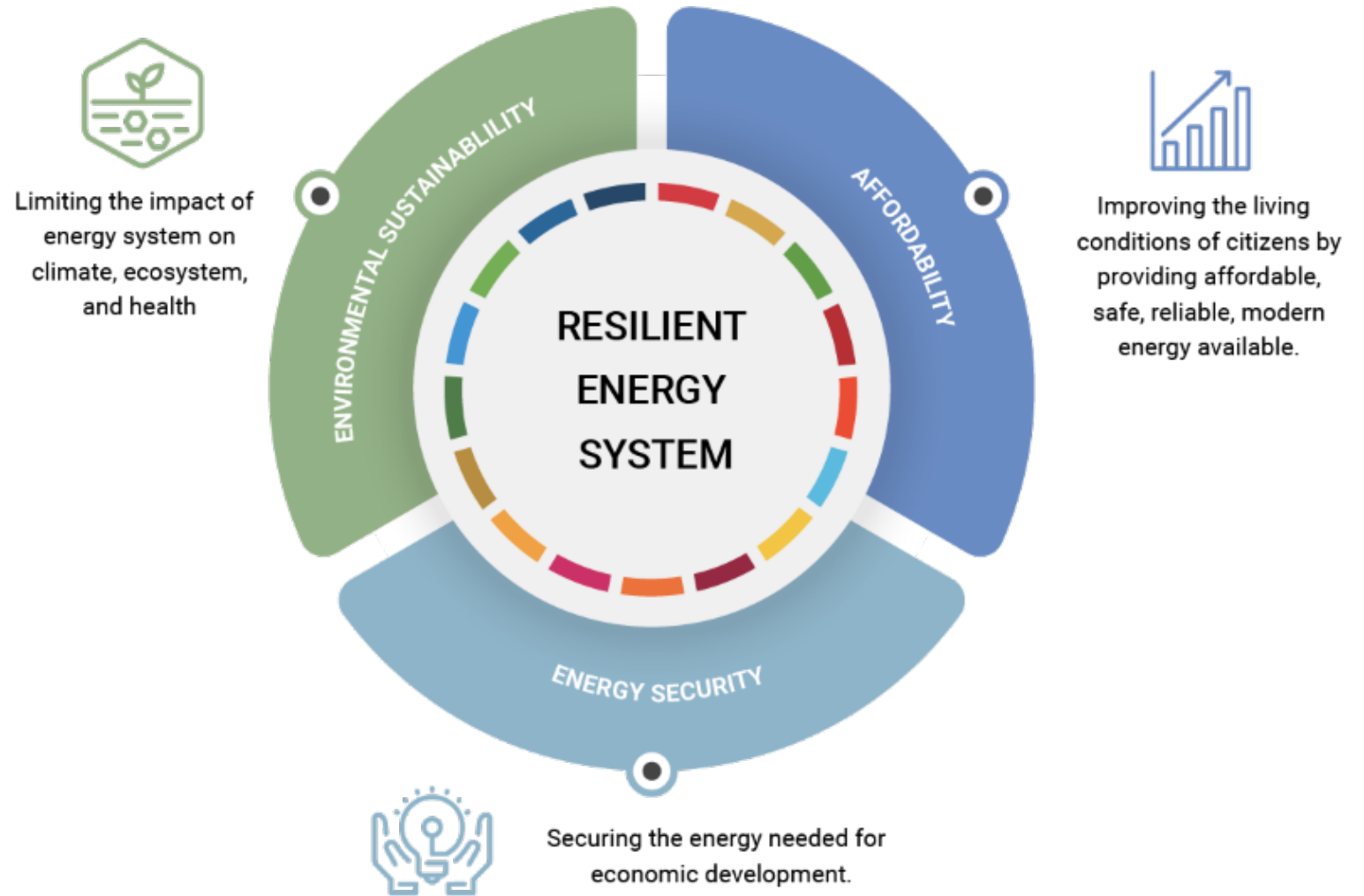


The electric grid is challenged

## Electricity is vital for society



# Building Resilient Systems



# Meeting the Challenges: Today's Session



Key Considerations and Solutions to ensure cyber resiliency in smart integrated network



Cybersecurity for the Electric Grid



Security Integration into Design and Operations