

Promoting Partnership among Key Stakeholders for WEF Nexus: TISTR Perspectives

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TISTR at a Glance



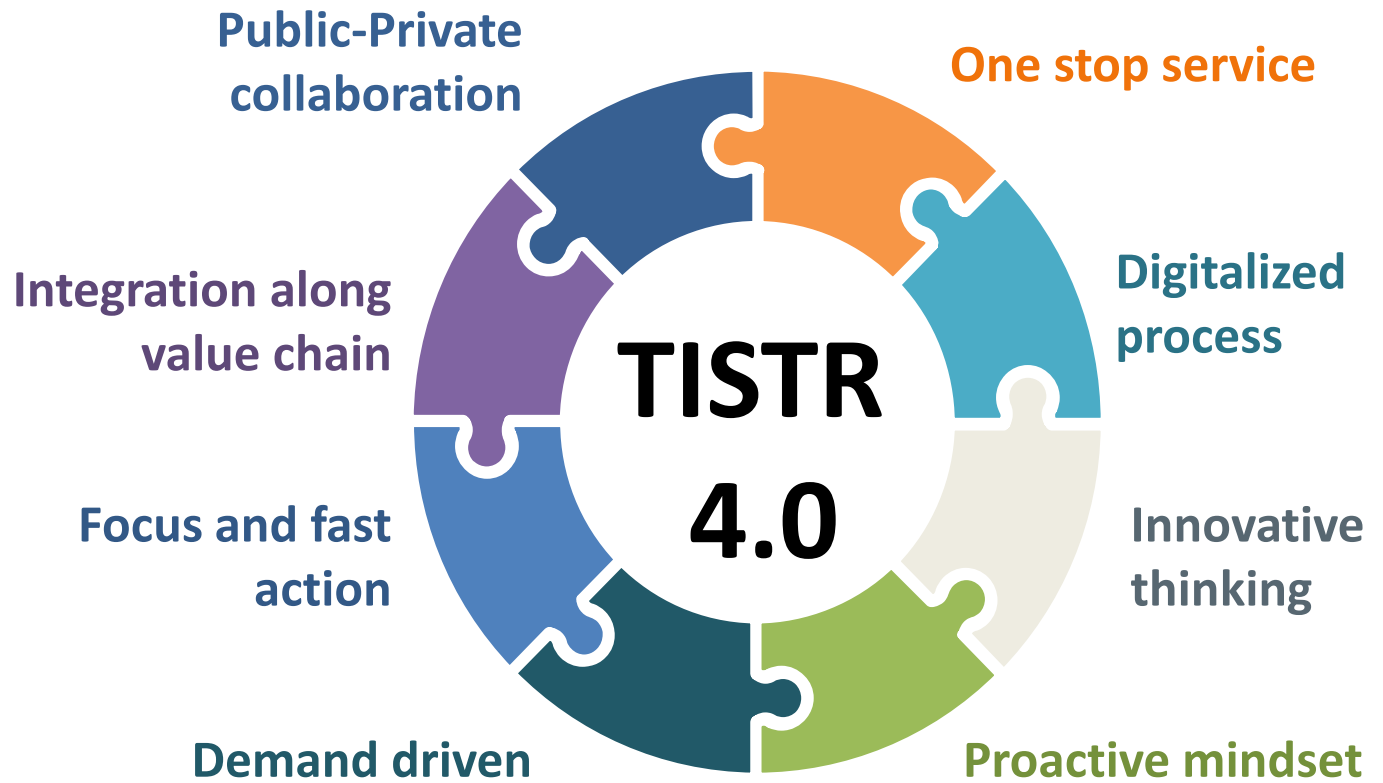
A non-profit state enterprise under MOST



A leading organization in integration of STI
for creation of a sustainable innovation-based society



- To conduct R&D in STI for value adding of products & services
- To provide services in MSTQ, cert. of QMS, training & consultancy services
- To transfer technology & innovation to industry & community enterprises, for economic, social and environmental utilizations
- To develop an effective organizational management system



SDGs & TISTR O·Z·O·N·E Concept

SDGs



WEF



TISTR



Opportunity
to create new business opportunities for the Thai economy/society



Zero waste management
to reduce waste to zero



Occupation
to build entrepreneurial expertise & career for community

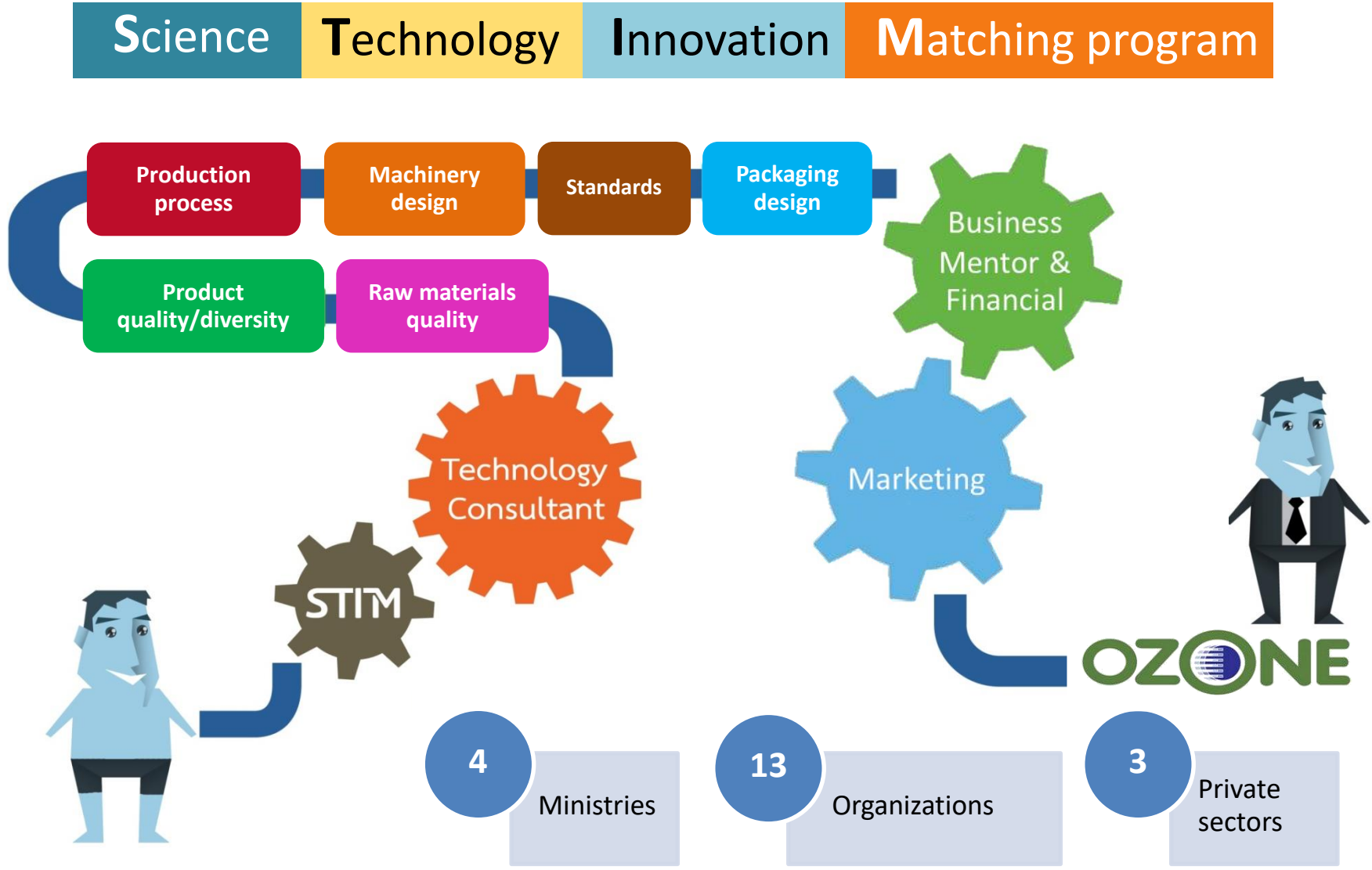


Natural resource based
to develop work from the natural resource in the country



Energy efficiency
to develop product quality with energy efficiency

Case I: STIM Program



Millennium Development Goals
MDGs



Ensure Environmental Sustainability

MDGs+ : Increase the Share of Municipal Waste Recycled to **30%**

(2014 Assessment: Not Achieved)

SDGs

SUSTAINABLE DEVELOPMENT GOALS



MSW Management in a Sustainable Way

Sustainable Solutions for Municipal Solid Waste and Plastic Waste Management

Integrate the Concept of Technology and 3Rs for Solid Waste Management

Reduce the Impacts on the Environment and Climate Change Under the Sustainable Waste Management

Increases Separation of Waste, the Efficiency of Recycling and Treatment to more Environment Friendly Process

Use Technology for W2E

Case II: A National Agenda on Municipal Solid Waste Management (MSW)

2016



Amount of MSW
Treatment & Disposal



Generated
27.1 M tons/year

Sanitary Disposed
36.2%



Landfill
9.8 M tons/year

Improper Disposed
42.1%



Open Dump
11.4 M tons/year

Recyclable
21.8%



**Recycle/
Fermentation/RDF**
5.9 M tons/year

MSW Problems: Cause & Effect

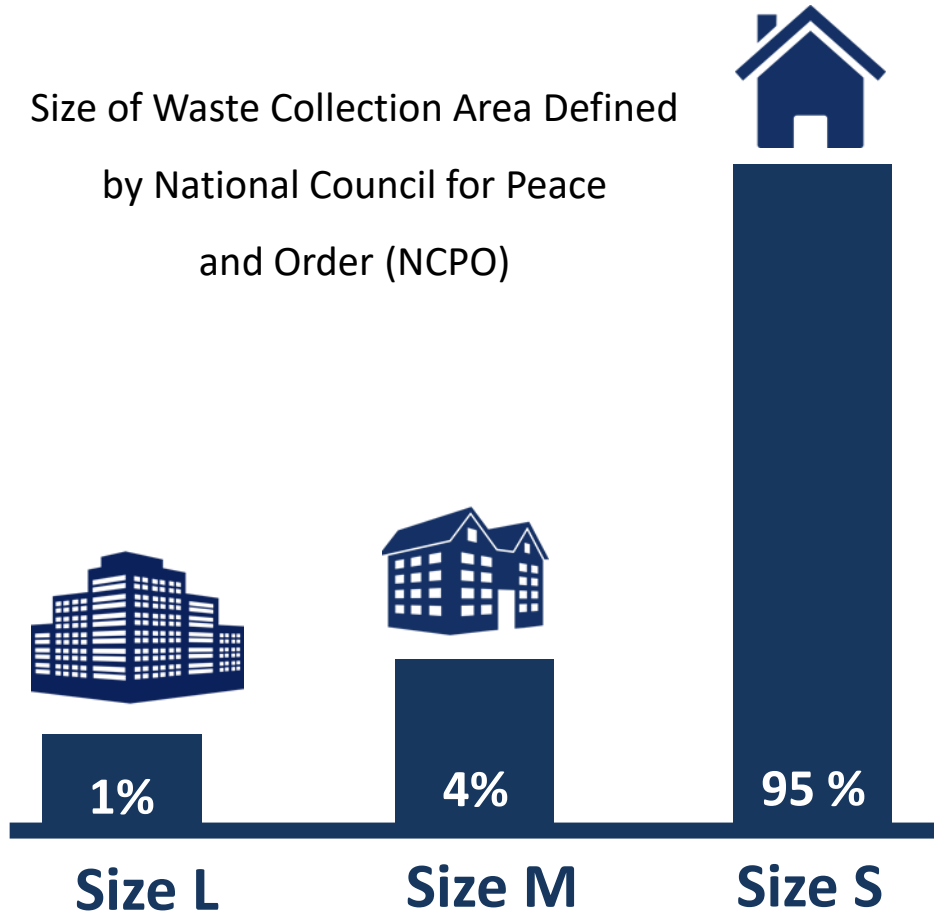


Amount of Waste
(M tons/year)

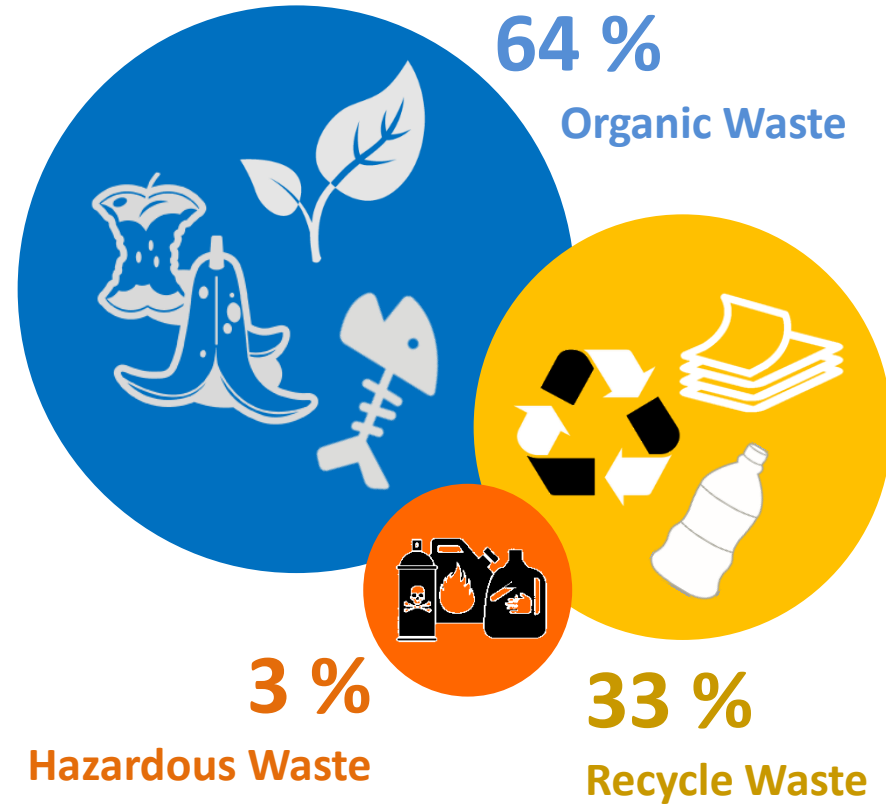


A National Agenda on MSW

Size of Waste Collection Area Defined
by National Council for Peace
and Order (NCPO)



(MSW > 300 t/d) (MSW 50-300 t/d) (MSW < 50 t/d)



Types of MSW

Sustainable Solutions for Municipal Solid Waste and Plastic Waste Management



Waste Minimization



High Added Value by Innovation



Job opportunity

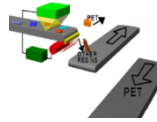
1. Public Hearing



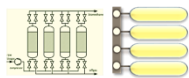
2. Memorandum of Understanding



3. Green Technology for Waste Management



Near Infrared and Vision System (NIR)



Pressure Swing Adsorption (PSA)



Sequencing Batch Reactor (SBR) via Smart Coagulant Clay



Odor Removal with Ozone and Natural Molecular Sieve Technology

4. Training for Student
"Young Scientist Classroom for Solid Waste Management"



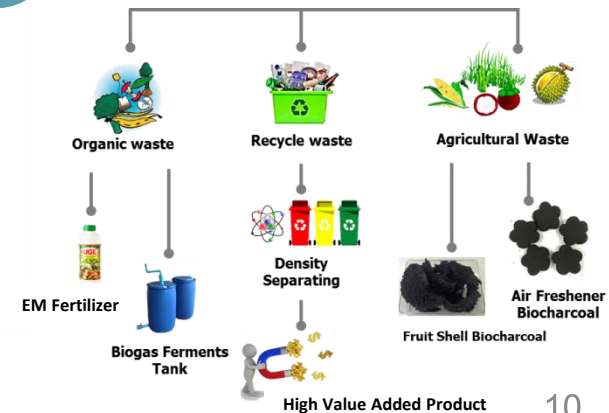
5. Training for Local Stakeholder
"High Value Added MSW "



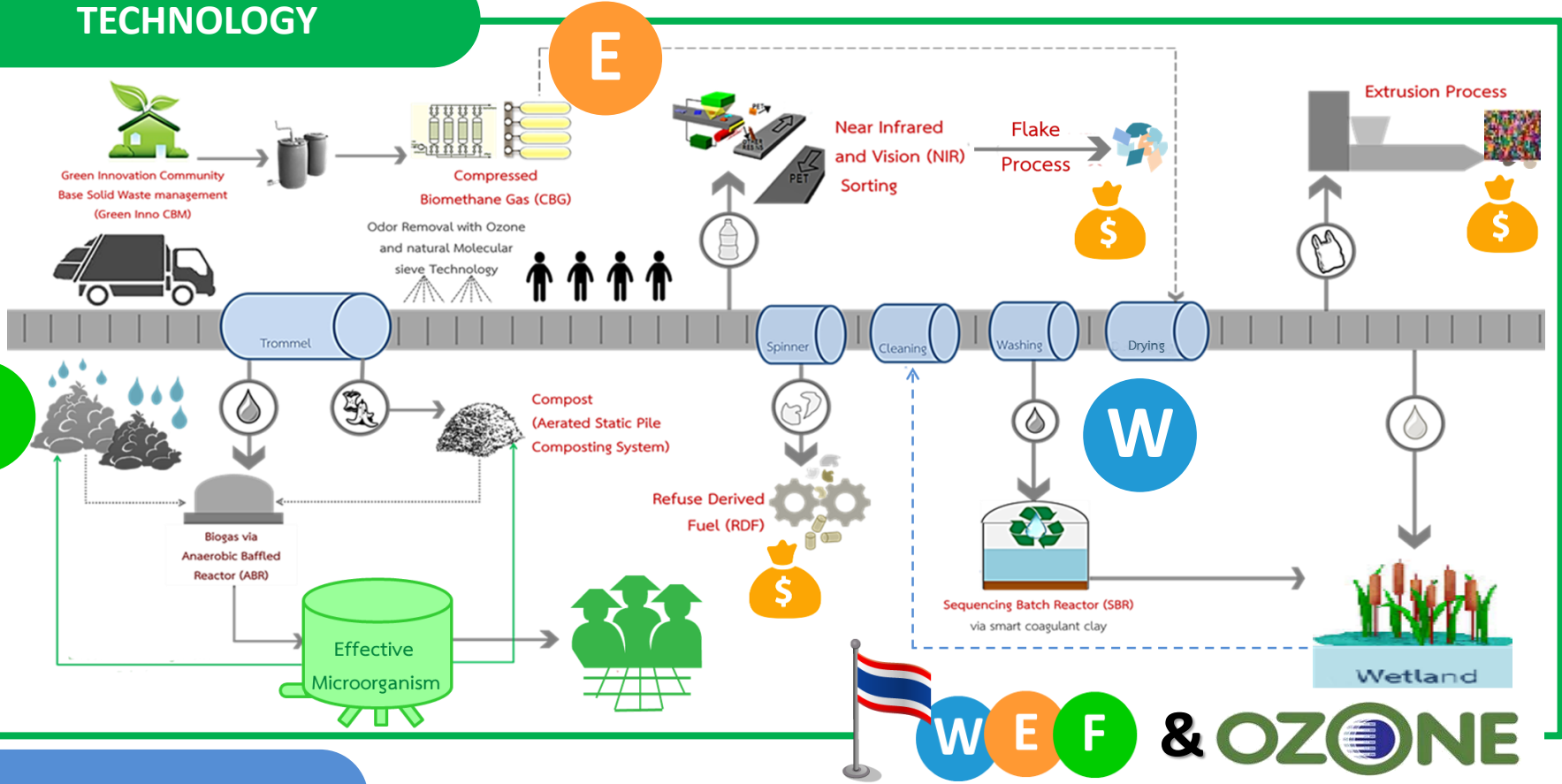
6. Green Innovation Community Based Solid Waste Management: Green InnoCBM



Drive to Thailand 4.0

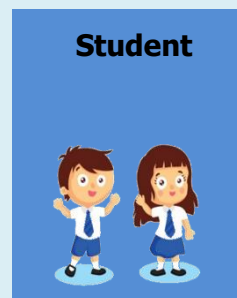


TECHNOLOGY

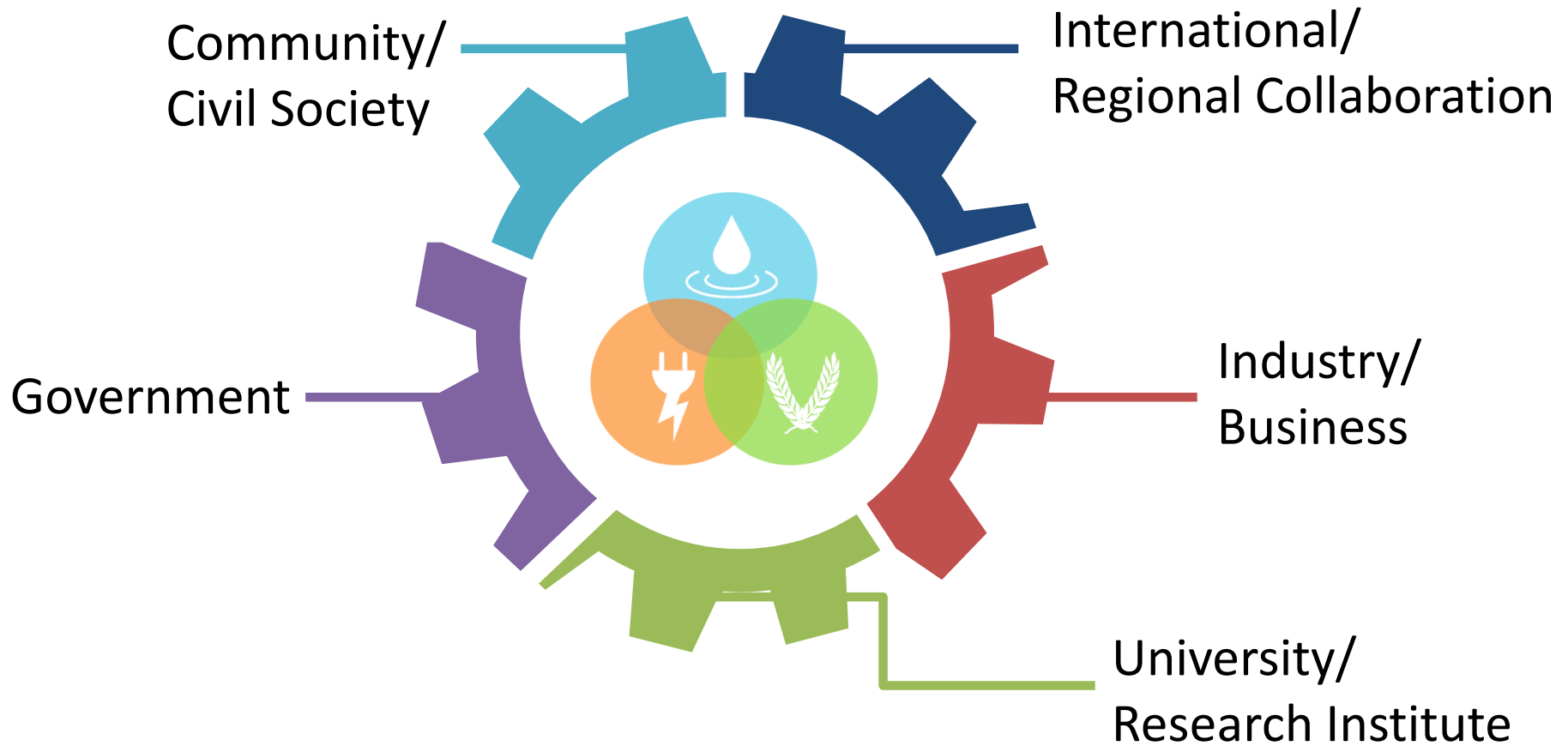


W E F & OZONE

TRAINING



Future Direction



Resilience for All Kinds of Challenges