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**HIGH IMPACT COMMON SERVICES WITHIN BOS 2.0**

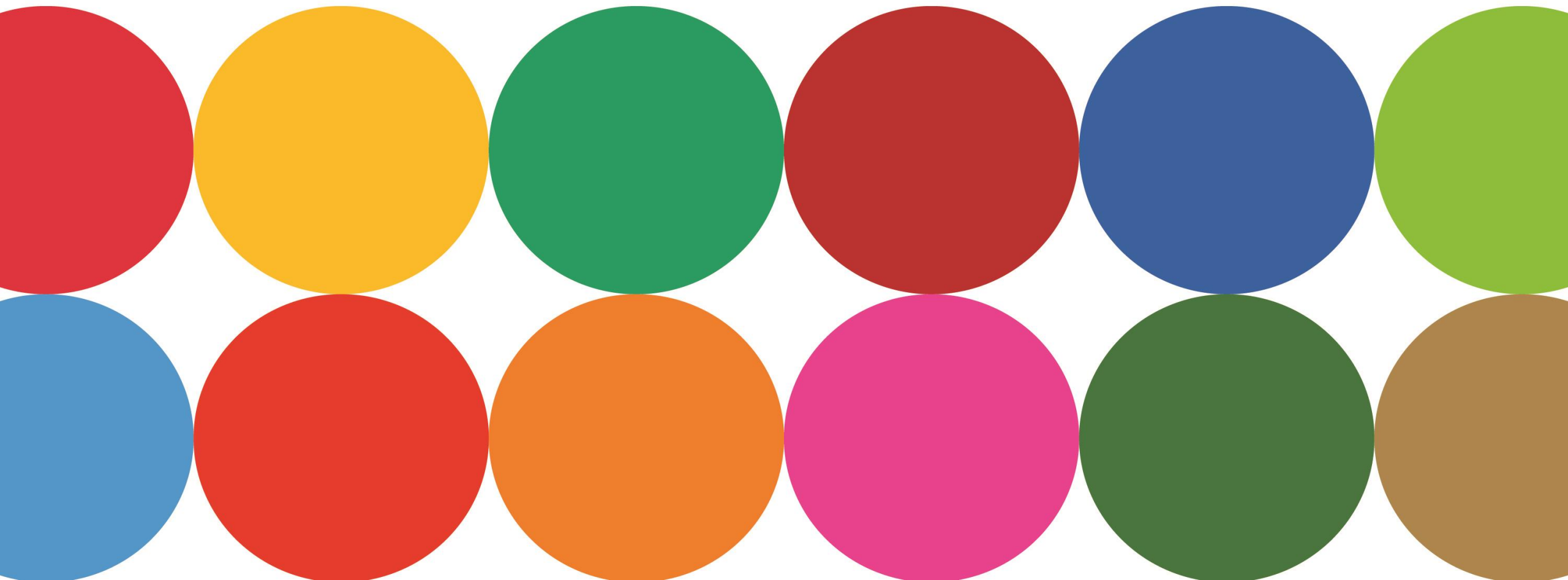
# **Green & Sustainable Energy Solutions**

Thur, Jan 27<sup>th</sup> 2021, 7:00 am NY/ET

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UNITED NATIONS  
SUSTAINABLE  
DEVELOPMENT  
GROUP



# HIGH-IMPACT COMMON SERVICES

High-Impact & SDG  
Common Services



UN Humanitarian  
Booking Hub



Gender Responsive  
Procurement



Disability Inclusion



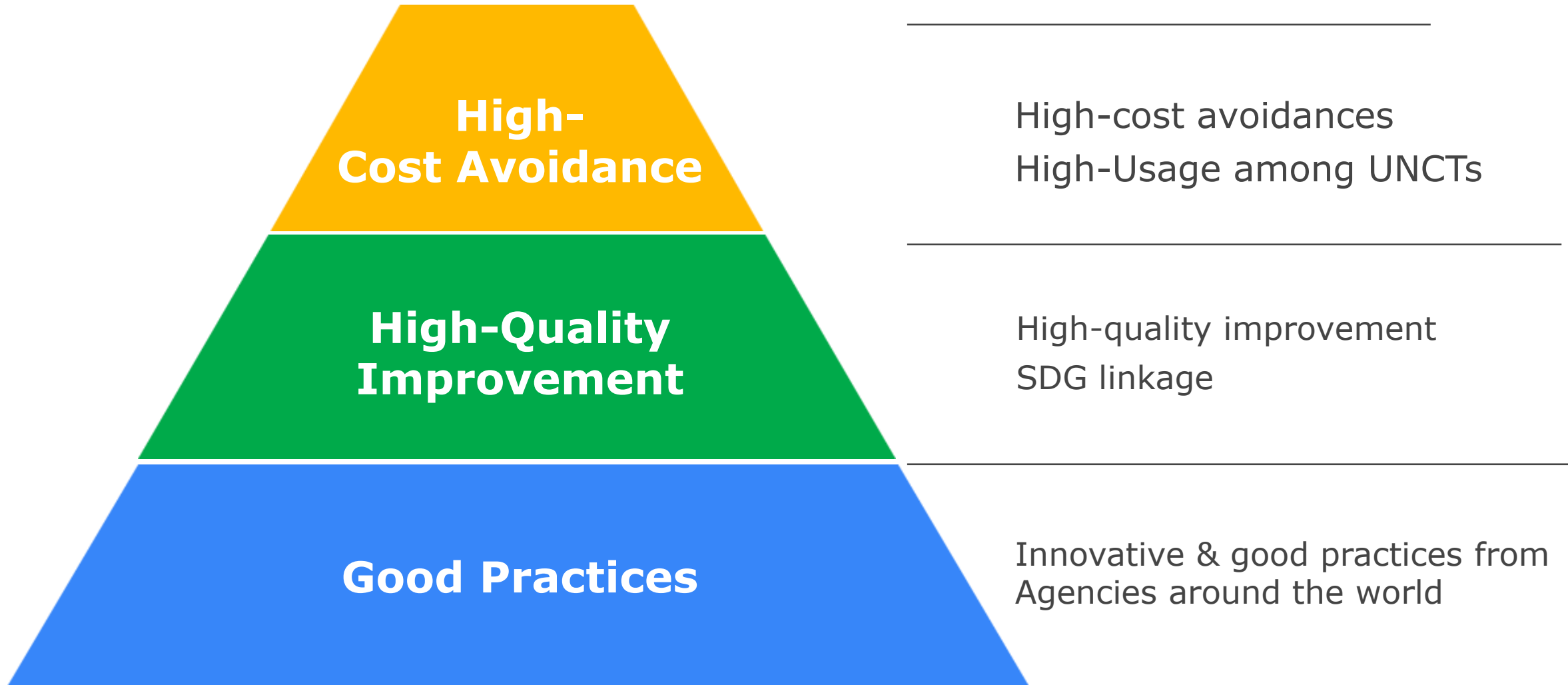
Green Energy Services



Sustainable Cafeteria



# What are High-Impact Common Services?



# Objectives & Benefits of Scaling High-Impact Common Services



Standardization  
Simplifies BOS Process

Maximizes Cost-Avoidances

Quality-improvement & Strengthen SDG Integration

Use System-wide Data to scale good practices

## Intro & Background



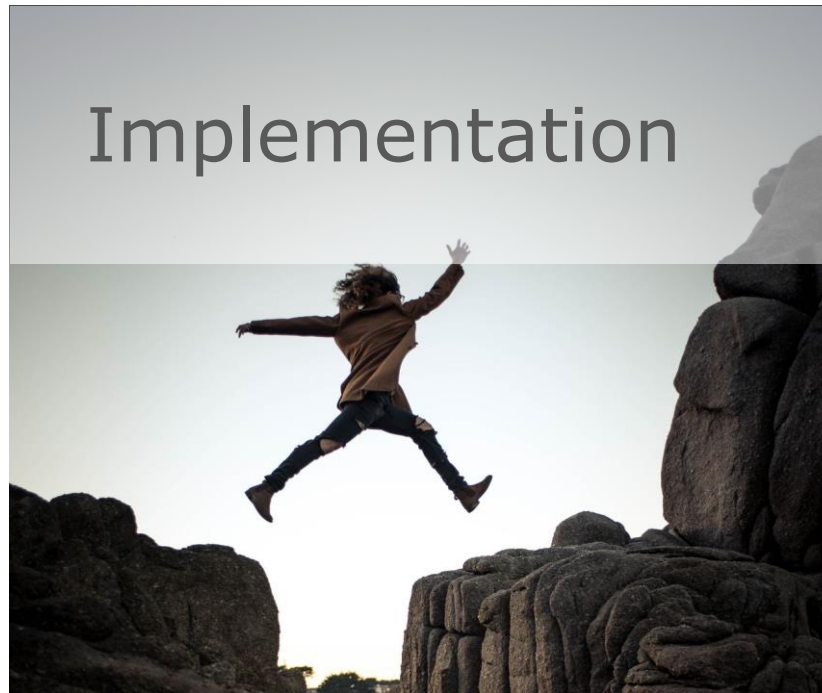
## Objectives



## Benefits



## Implementation



## Recommendations





# United Nations Development Programme

## Information and Technology Management (ITM)

Photo: Solar Panel Installation South Sudan Rajaf Police Academy / 2018

Information and Technology Management (ITM)

Prepared by:

Created on:

Last update:

ISO Quality Inspected.  
Approved for release by:

ITM Green Energy Team

February 11, 2019

January 21, 2021

Gerald Demeules,  
Global ICT Advisor

# UNDP Mission and ITM/CIAS Vision

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## *UNDP MISSION*

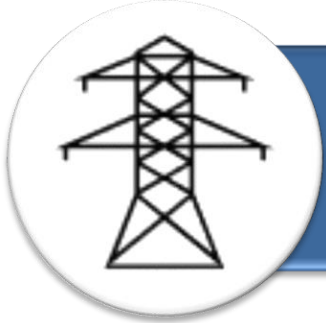
*"On the ground in about 170 countries and territories, UNDP works to eradicate poverty while protecting the planet. We help countries develop strong policies, skills, partnerships and institutions so they can sustain their progress".*

## *ITM/CIAS VISION*

*"Creating Smart Facilities to build local capacity and inspire a movement".*

# Challenges Being Addressed

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Unreliable Grid



Generator as sole supply of electricity  
Oversized Generators



Lack of Awareness



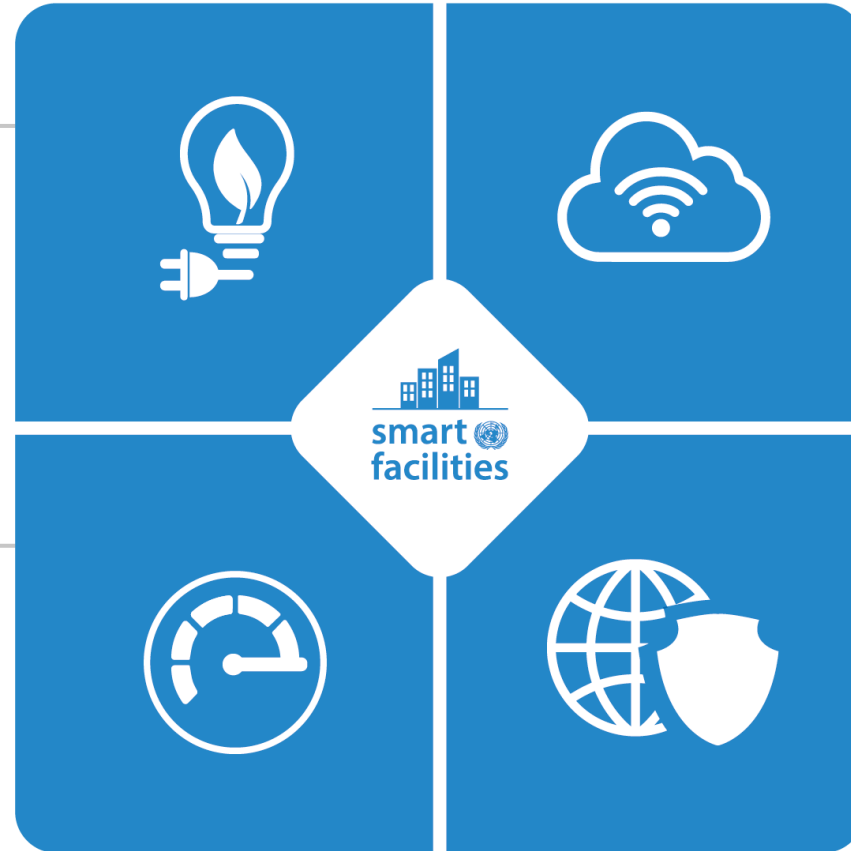
# How We Solve | Smart Facility Model

## ENERGY & MOBILITY

- Renewable Energy
- Electric Vehicles
- Vehicle-to-Grid
- Energy Storage (Li-ion)

## BIG DATA & INTERNET OF THINGS

- Satellite Imagery
- Drones
- Energy Efficiency
- Energy Consumption & Environmental Monitoring



## ICT, BUSINESS INTELLIGENCE & AI

- Atlas (ERP)
- Digital Workspace
- Cloud Computing
- OneICTbox
- Satellite Communications

## SECURITY

- Cyber Security
- Identity & Access
- Solar Street Lamps
- CCTV Cameras

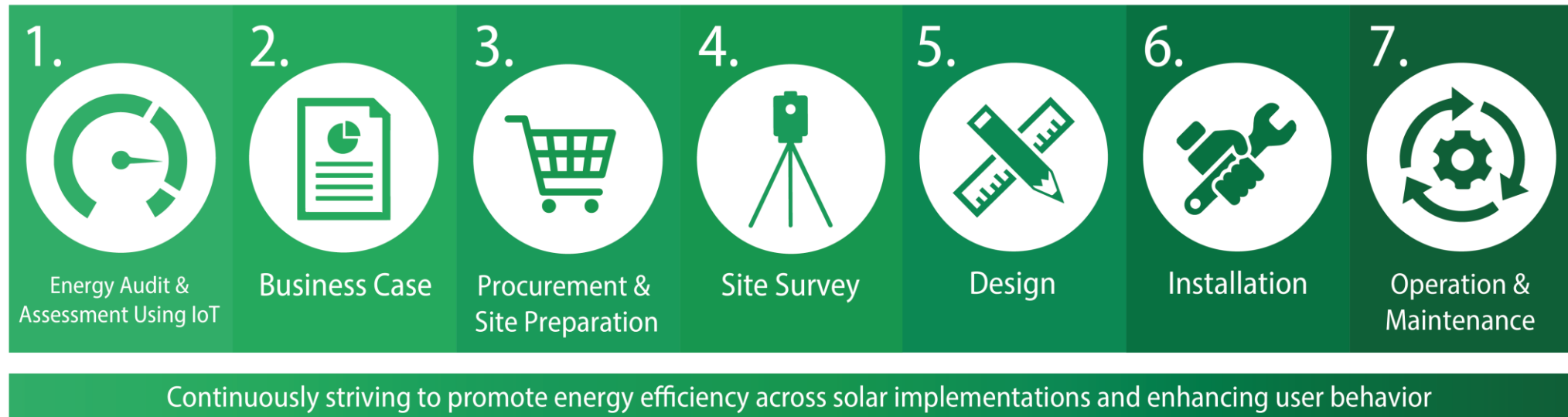
*"The whole is greater than the sum of its parts." - Aristotle*

*Interconnecting Smart Technologies and People in the pursuit of Economic and Social Development*

# 7 Step Green Energy Solution



## 7 STEP GREEN ENERGY SOLUTION

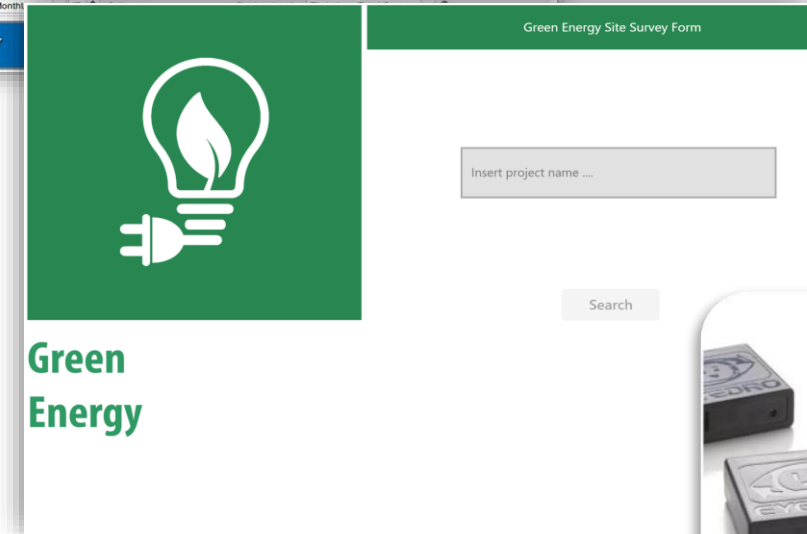


Recognized best practice by UNDG for Solar implementation

# Step 1 – Energy Audit & Assessment Using IoT

## Key aspects

1. **IoT devices** for energy consumption and site-specific data
2. **Preliminary Site Survey Application**
3. **Assess** the current situation and **build a load profile**

Green Energy Site Survey Form

Insert project name ....

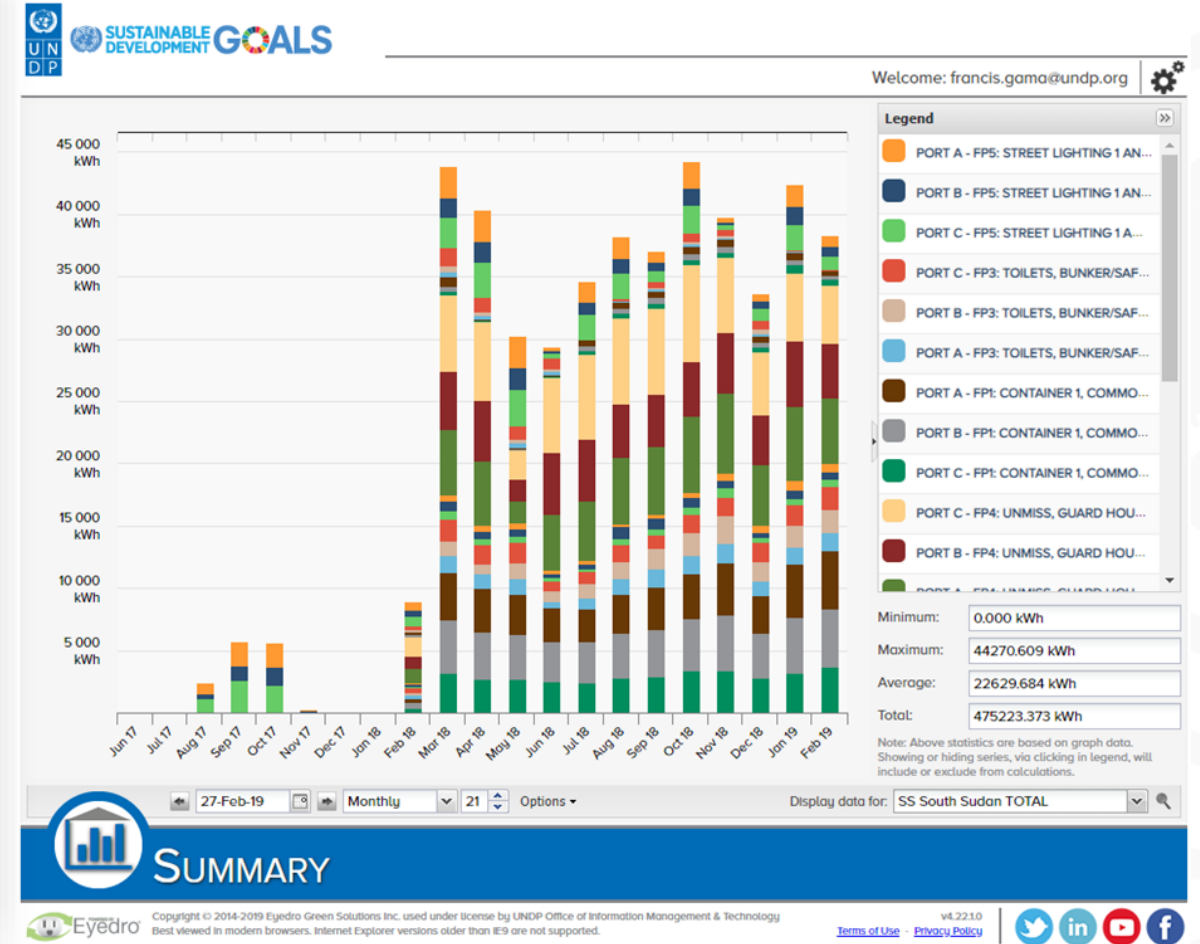
Search



# Step 1 – IoT for Energy Efficiency Case

## Energy Efficiency Case

1. IoT devices installed on several lines, enabling the possibility to see how the load is divided in the office.
2. Isolate high energy consuming objects
3. Suggest energy efficiency measures





# Step 1 – Energy Audit & Assessment Using IoT

## IoT for Generator Monitoring

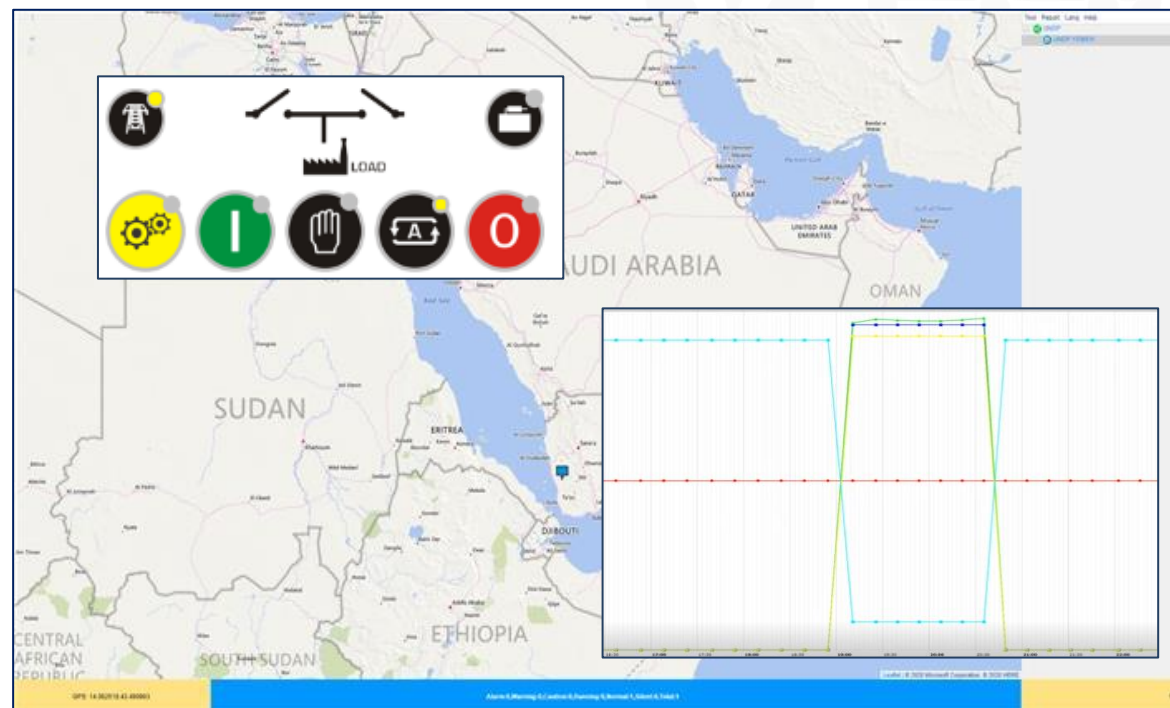
- i. Generator use
- ii. Frequency
- iii. Active Power
- iv. Alarms

## Drones

- i. Site Survey
- ii. Communications

## Other IoT

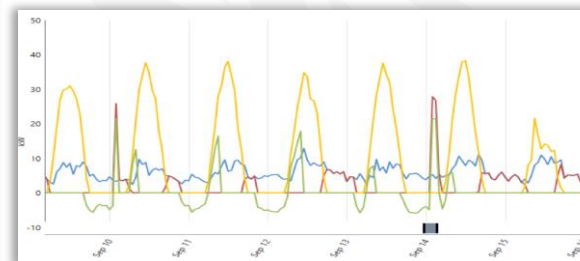
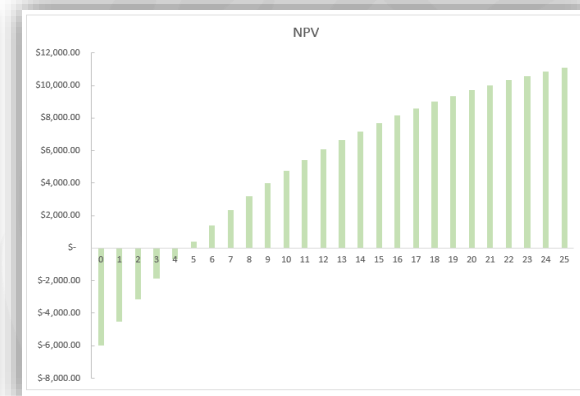
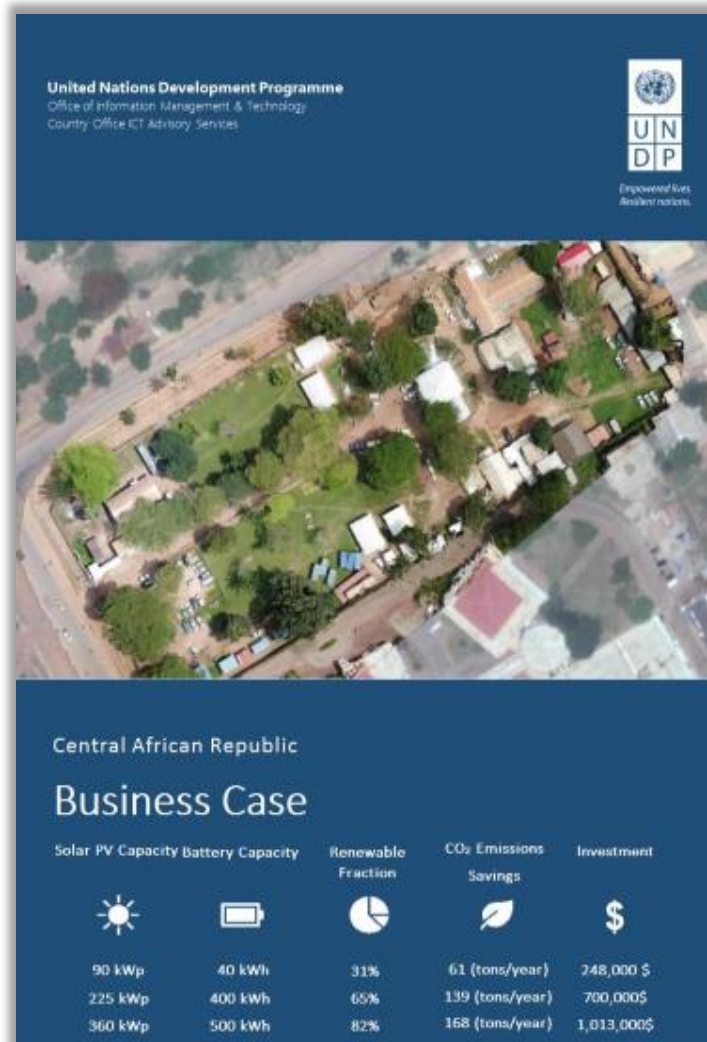
- i. Power Analyzers
- ii. Grid quality analyzer
- iii. AC and Motion Sensors



# Step 2 – Business Case

## Key Aspects

1. Technical, economic, and environmental analysis.
2. Business Case gives essential information for decision-making.
3. Data collected from Step 1: Software for system modeling and in-house developed tools




# Step 3 – Procurement

## Key aspects


1. Collaboration with UNDP PSU
2. Existing **LTA**s with vendors providing **international standard** installations
3. Secondary bidding process
4. RfQ published among LTA holders
5. Local partner - Development of local capacity

United Nations Development Programme  
Office of Information Management & Technology  
Country Office ICT Advisory Services



Empowered lives.  
Resilient nations.

UN South Sudan Country Office (CO)



**Terms of Reference: Solar Hybrid System**

Smart Solar Hybrid System for UN South Sudan Country Office (CO), contributing to Create Smart UNDP Facilities Powered by Renewable Energy

Solar PV Capacity (kWp)	Battery Capacity (kWh)	Renewable Fraction (%)	CO2 Emissions Reductions (tons/year)
162	200	39.2	357.3



Photo: Training to CO during installation in Nigeria Sub-office





# Step 4 – Site Survey

## Key Aspects

1. Vendor carries out a **detailed site survey**
2. Vendor submits the **Site Survey Report** to ITM and PSU



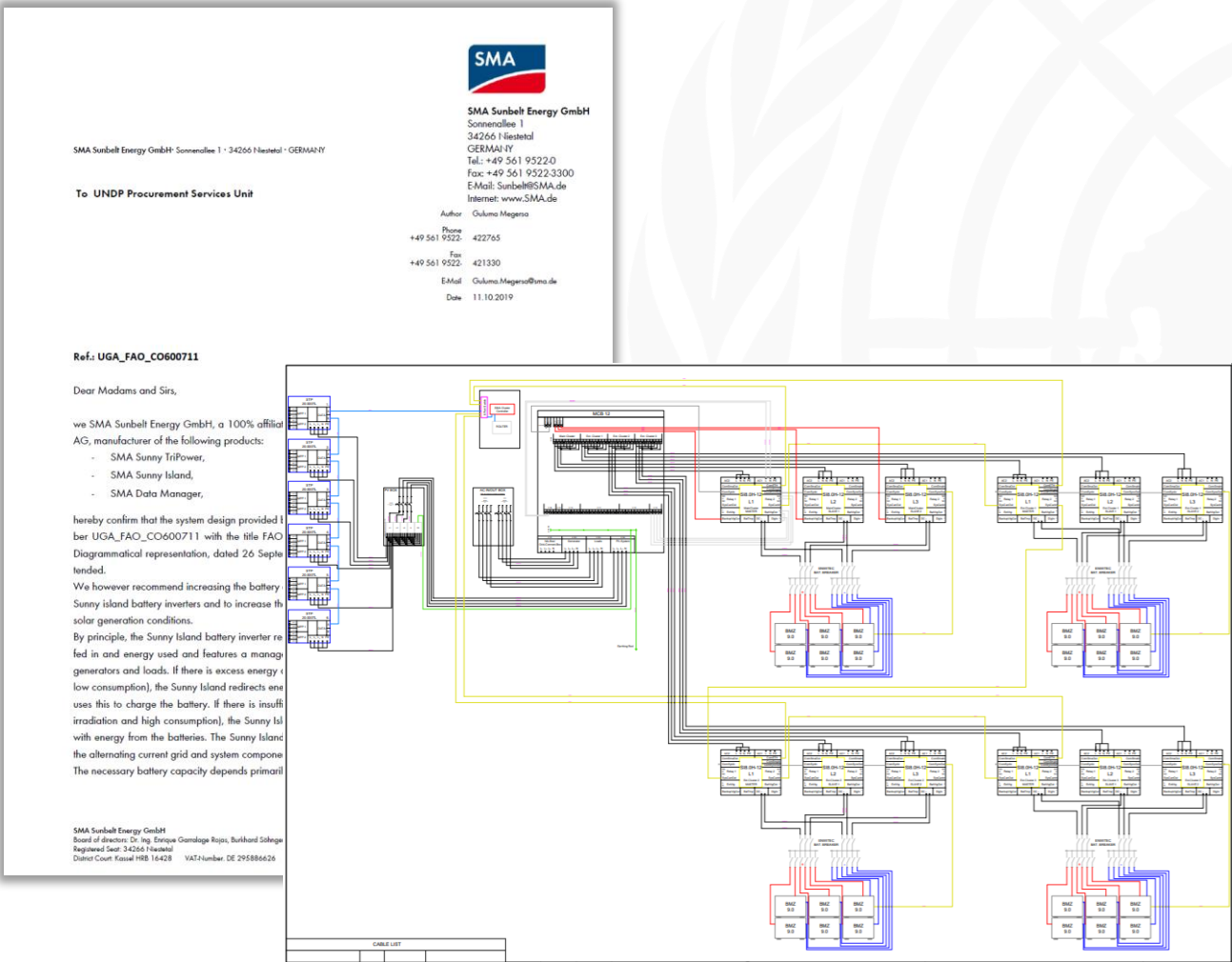


# Step 5 – Design



## Key Aspects

1. Vendor prepares the final technical design
2. Vendor submits **technology certificates** which are issued by manufacturers

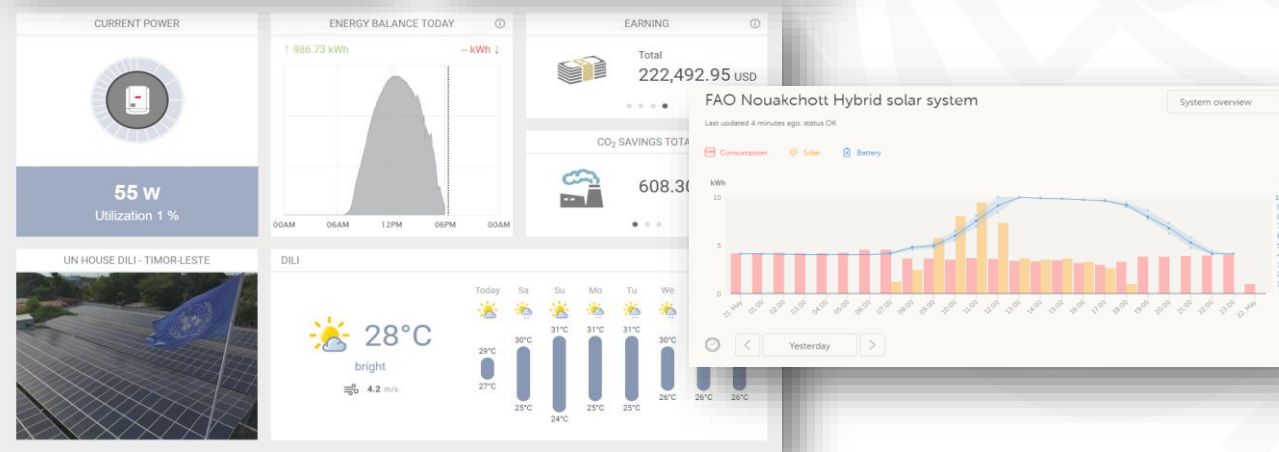


# Step 6 - Installation

## Key Aspects

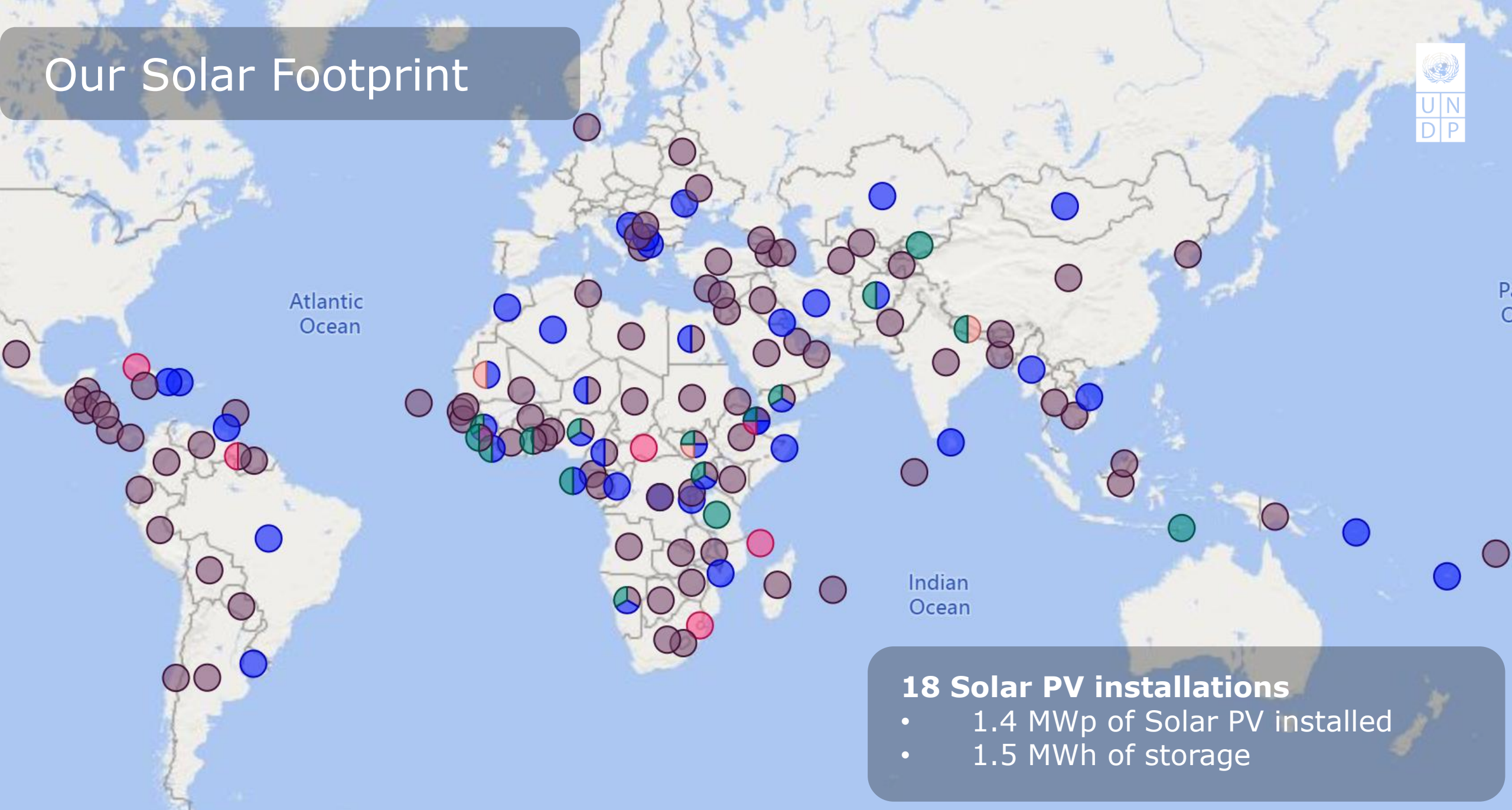
1. The installation is clearly outlined in the project plan, with management, milestones, risk etc. covered
2. Step 6 is concluded by commissioning of the systems and training of on-site staff
3. Communication efforts







# Our Solar Footprint

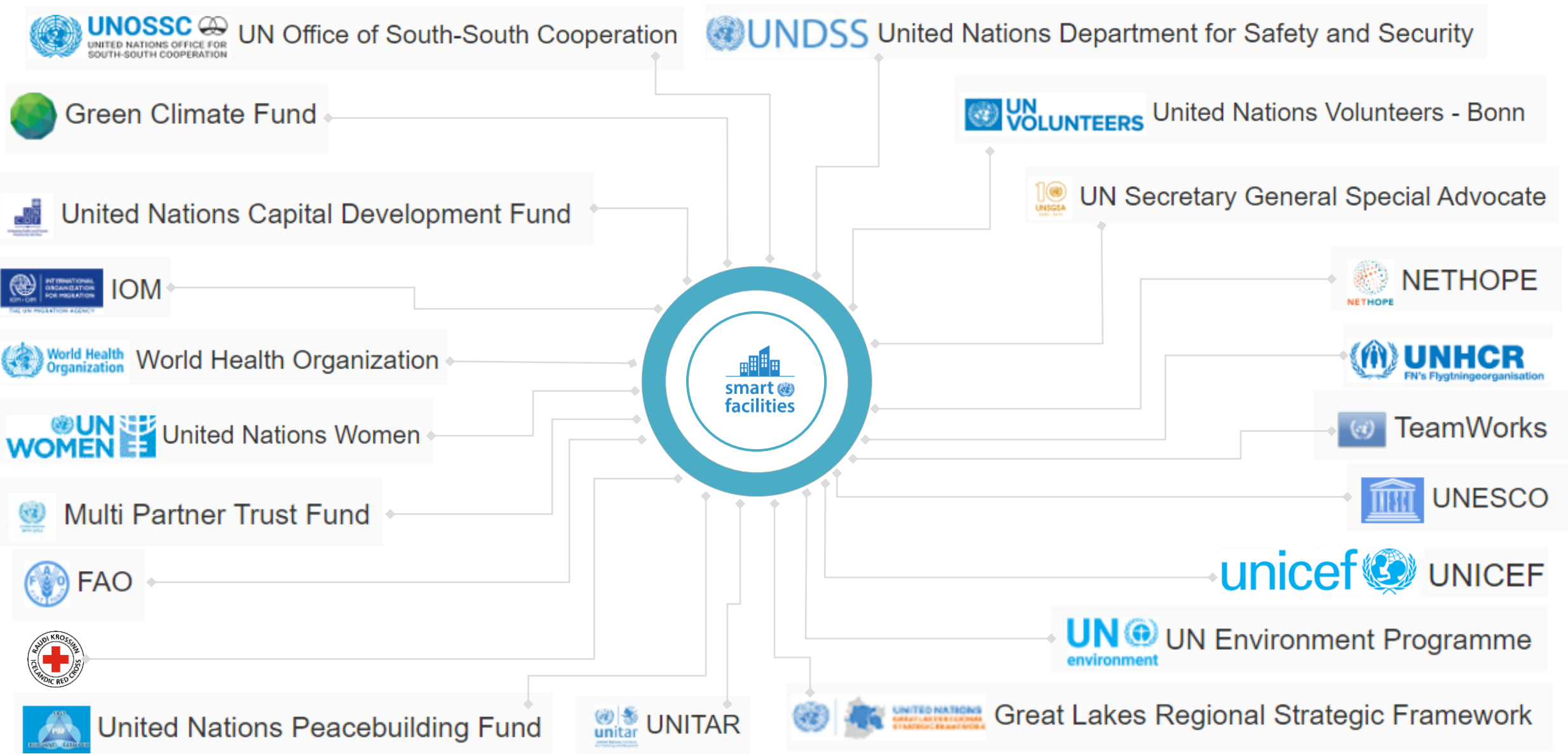


## 18 Solar PV installations

- 1.4 MWp of Solar PV installed
- 1.5 MWh of storage



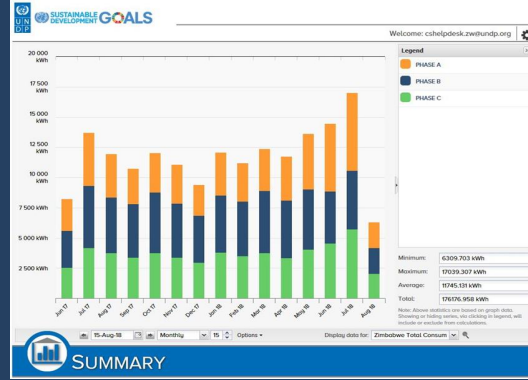
# ITM Smart Facilities Collaboration



# Green Energy Services and Products – Summary



Photo: GE Training Mission UNDP Niger/2019



IoT Monitoring portal

## Green Energy Services

1. Energy Consumption Measuring and Monitoring (ECMM)
  - a. IoT for Energy Efficiency
2. Green Energy Mission
  - a. Energy Audit and Assessment
  - b. Training and Capacity Building
3. Green Energy Solutions
  - a. Solar Installations
  - b. Solar Street Lamps
  - c. Solar Home Kits for Staff or Field Missions



Photo: Smart Facilities Mission UNDP South Sudan/2018

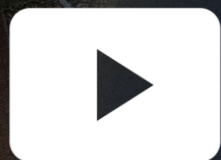


Photo: Solar Street Lamps - UNDP South Sudan





# UN House Namibia



Video [here](#)

Photo: Solar project UN House Namibia/2017





Photo: Sao Tome UN House

Please contact [itm.green.energy@undp.org](mailto:itm.green.energy@undp.org) or [helpdesk.green.energy@undp.org](mailto:helpdesk.green.energy@undp.org) with your requests and we'll be happy to provide any clarification and arrange a **kick-off meeting** for future engagement.

**THANK YOU!**

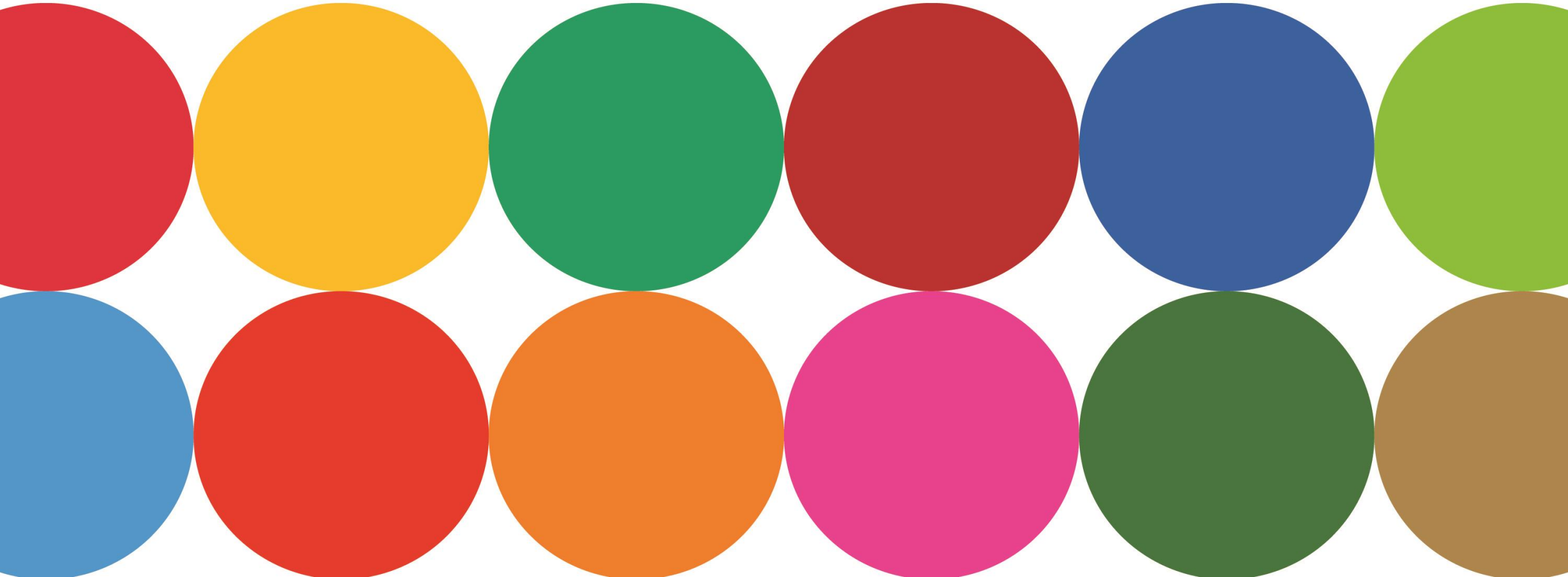




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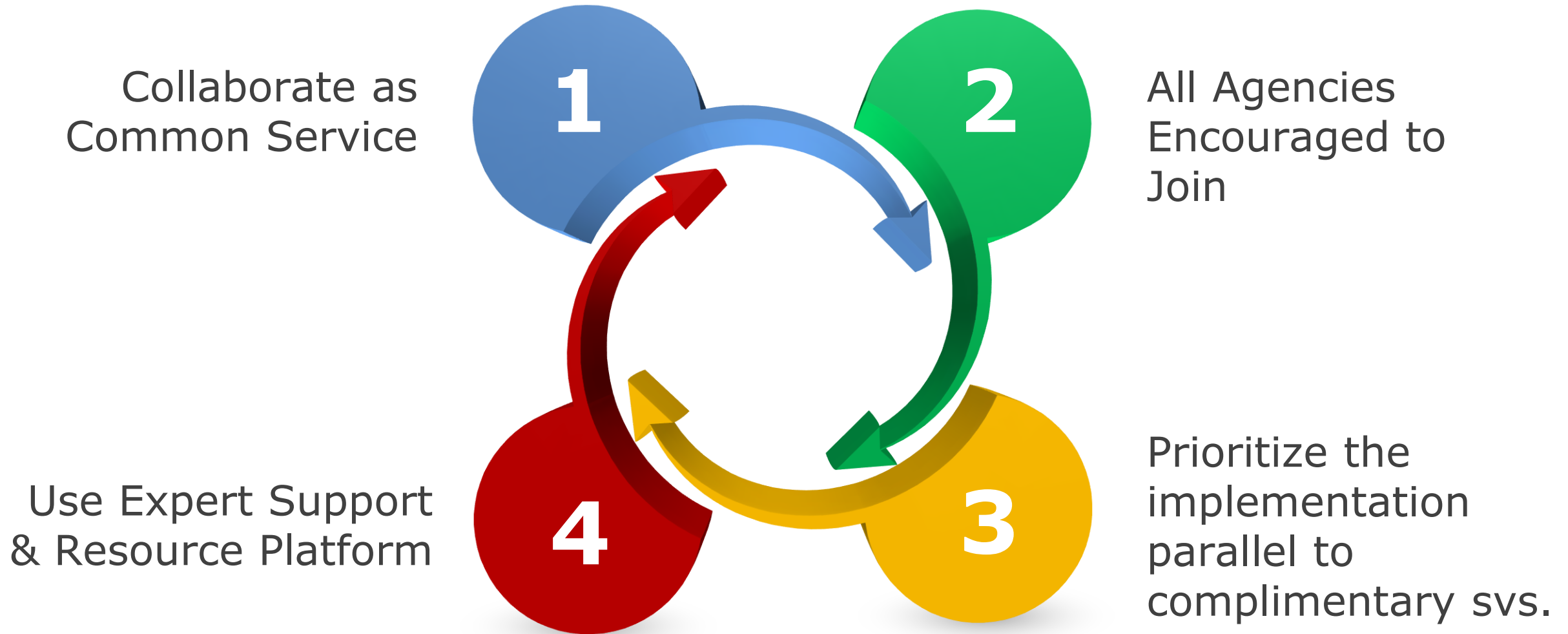
# ROLL-OUT & WAY FORWARD

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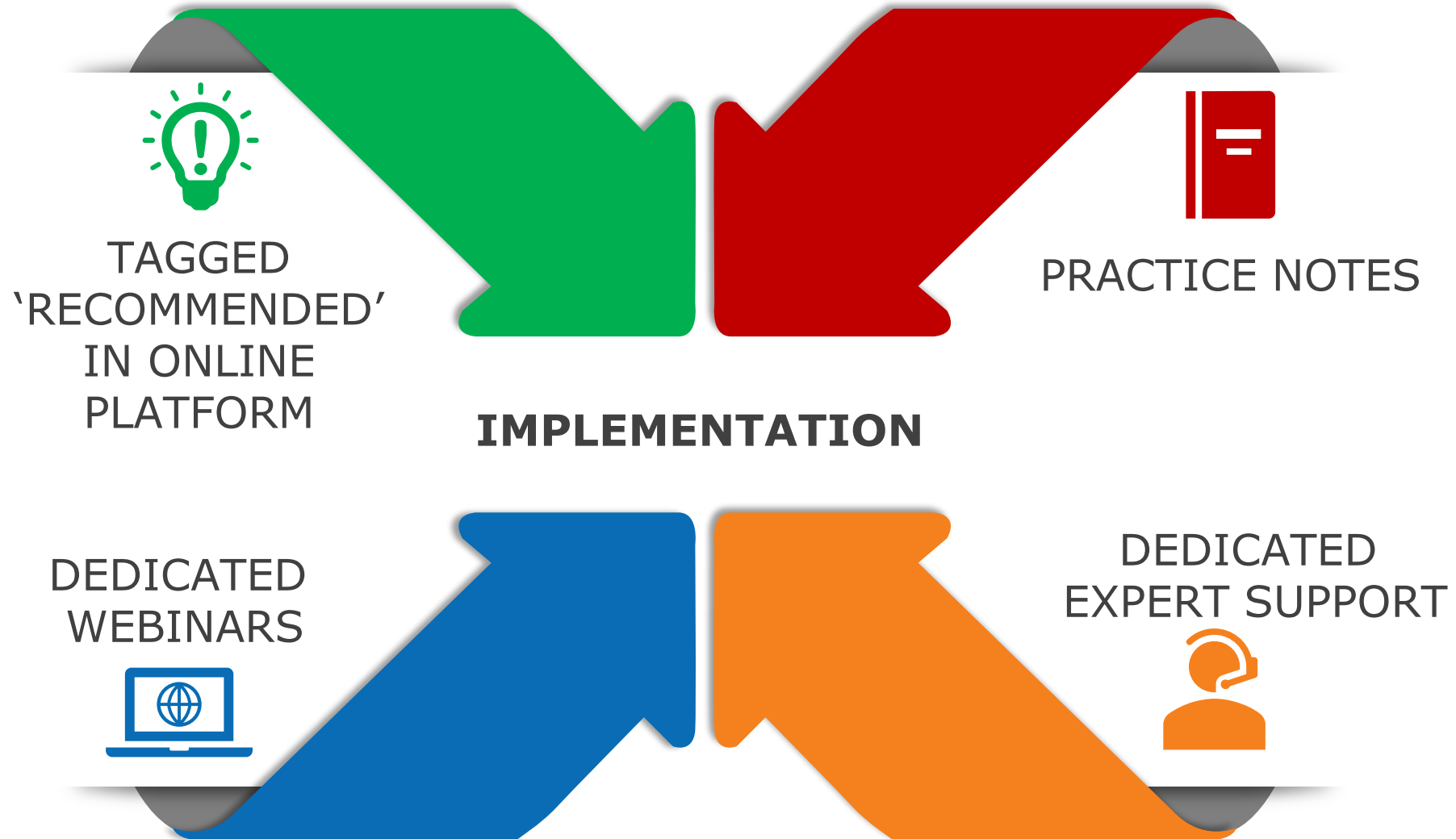
## WHAT DOES IT MEAN FOR OMTs

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# HIGH-IMPACT SERVICES ROLLOUT

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# WAY FORWARD

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**IF YOUR BOS IS IN  
DEVELOPMENT**



**INCLUDE IN  
YOUR BOS  
NOW**



**IF YOUR BOS IS  
COMPLETED**



**INCLUDE IN  
BOS REVIEW**



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# Q&A & FUTURE COLLABORATIONS

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UNITED NATIONS  
SUSTAINABLE  
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GROUP





# HIGH-IMPACT COMMON SERVICES

## High-Impact & SDG Services

Tue, Jan 19, 8:00 am NY

## UN Humanitarian Booking Hub

Thur, Jan 21, 9:00 am NY

Tue, Feb 2, 7:00 am NY

## Gender Responsive Procurement

Tue, Jan 26, 10:00 am NY

## Disability Inclusion

Wed, Jan 27, 7:00 am NY

## Green Energy Services

Thur, Jan 28, 7:00 am NY

## Sustainable Cafeteria

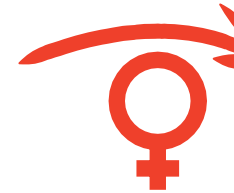
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Selection of High Cost-Avoidance & SDG related CS



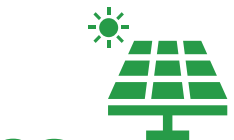
Innovative Digital Services for Fleet, Clinic, & UN Accommodations Management



Include gender sensitive criteria for procurement advancing SDG 5: Gender Equality



Disability Inclusive Services in 3 areas: Physical Premises, Inclusive HR, & Inclusive Digital Services



Solar & Renewable energy & Internet of Things solutions



Solar & Renewable energy & Internet of Things solutions

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**Thank you for your participation**  
**Development Coordination Office**  
**Country Business Strategy**

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