



# SOLUXTEC

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## Solubloc Series

### Off-grid School

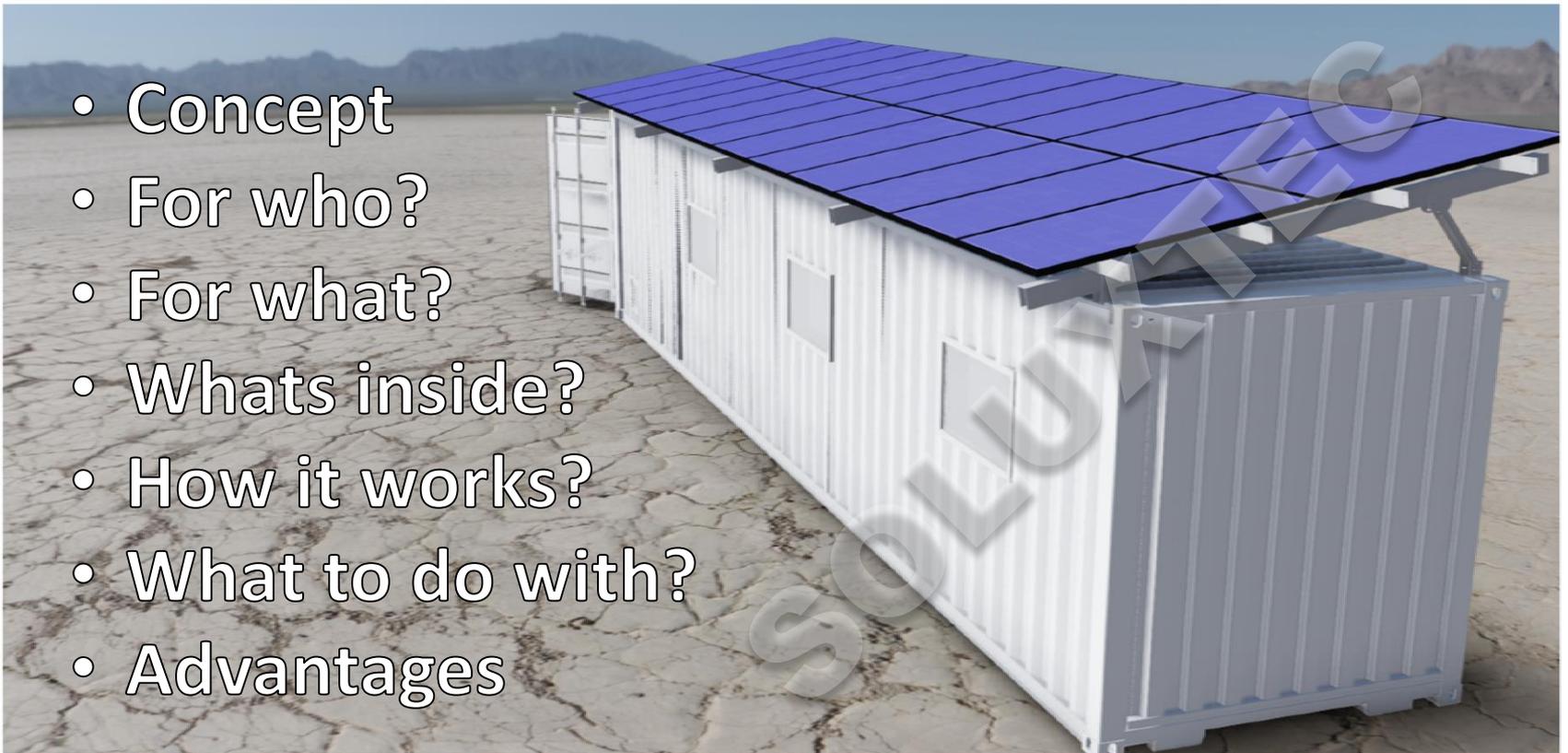
100 % solar energy driven,  
100 % autonomous

[www.soluxtec.eu](http://www.soluxtec.eu)



# Introduction

- Concept
- For who?
- For what?
- Whats inside?
- How it works?
- What to do with?
- Advantages

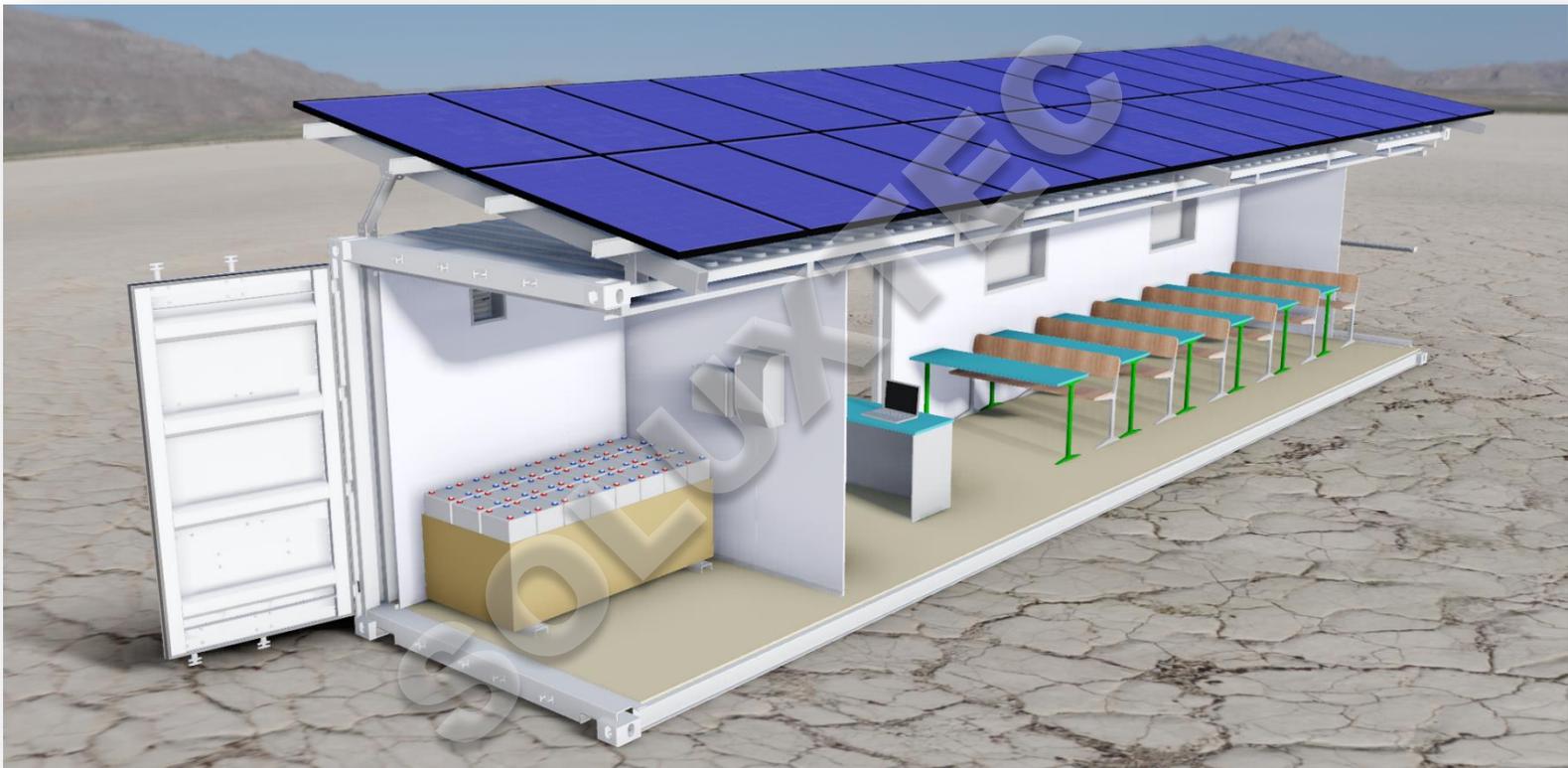




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# Concept

Solubloc = Appliance + power generator





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## For who ?

- Up to 18 people
- Students
- After work courses
- Professional training
- Meeting room
- Audiovisual room





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## For what ?

- Rural villages
- No power grid areas
- Rural school extension
- Local non governmental organisation



# What's inside

- Appliance:
  - Clear and luminous space with white wall
  - School equipments (whiteboard, projector, etc... )
  - All commodities (internet access, air conditioner, printer, power wall socket)





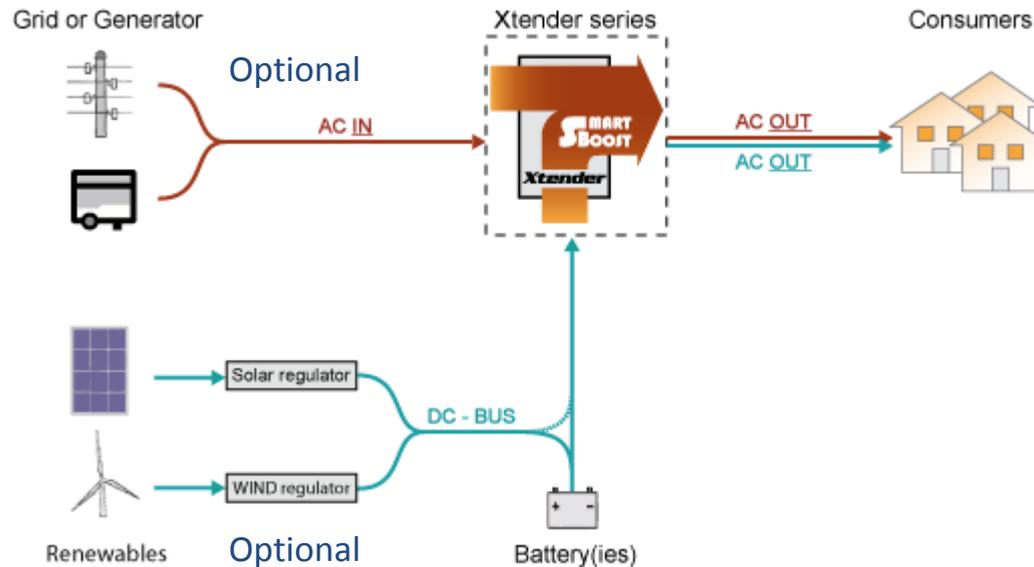
## What's inside

- Power generator: 6000 Wp
  - 24 x PV modules generator Soluxtec (DE)
  - Batteries by EnerSys (FR)
  - Inverters and charge controllers by Studer (CH)
  - Fuse boxes and other technical safety devices





# How it works 1/2



- PV modules and AC converters are connected to a battery bank
- Solar energy power the load and excess is stored into the batteries
- AC converter turns DC energy from the batteries into AC energy to power the loads
- As option, external genset, grid or wind turbine can be connect to the sytem to extend autonomy



## How it works 2/2

### **Day time = PV production**

- PV modules charge the batteries and supply the loads into the Off-grid school
- Normal operation

### **Night time = No PV production**

- Batteries energy release
- The batteries drive the loads in the school platform
- Continuous normal opération (example : for after work courses)



# What to do with?

## Case study

Location => Uganda (Africa)

Autonomy (only with solar PV) => 3 days

Type of load	Power per unit	Quantity	Operating time per day
Fluorescent lamp	15 W	10	3 h
Air conditioner	2500 W	1	8 h
Video projector	160 W	1	8 h
Laptop	160 W	1	8 h
Print	40 W	1	30 min
Wall socket	1000 W	1	1 h
Internet modem	5 W	1	8 h



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# Advantages

- Turn-key solution (all included)
- Easy shipment
- Very fast commissioning
- 100% maintenance free
- Professional solution
- Best price & performance ratio
- High flexibility & deployability
- Designed for hard conditions



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## Thank you for your attention

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