



# Presentation for Manila Meetings – Executive Summary



5P  
for RES



Prague - Project - Portfolio - Planning - Platform  
for Renewable Energy Sources  
Self-Powered Community Business Knowledge Transfer

## Presentation for Manila Meetings – Executive Summary

Specific theme: Self-Powered Communities and Renewable Energy Sources

## SECTION A

SPC Model (Business Model Methodology)


- A.1. Market Model for Rich and Poor
- A.2. Communities in the Current World
- A.3. Synergy and Management of Portfolio of Drivers
- A.4. Why Three Drivers

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### A.1. Market Model for Rich and Poor


Market model for Rich

World population  
4 / 5  
population  
**POOR**



1 / 5  
**RICH**

Business rules for 1/5




Actual social trends:  
From National to Global Industry

Relevant initiatives:  
Comeback to Nature.

Self Sustained Communities (SSC)  
(New Rules)

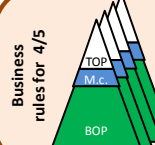
Market model for Poor

World population  
4 / 5  
population  
**POOR**



1 / 5  
**RICH**

Business rules for 4/5



Actual social trends:  
From Nature to National Industry

Relevant initiatives:  
Energy needs.

Self Power Communities (SPC)  
(New Rules)

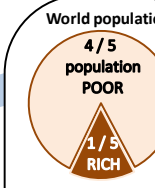
SPC Model

TOP – Top of Economic Pyramid; BOP – Bottom of Economic Pyramid

### A.2. Communities Position of the Current World


Market model for Rich

World population  
4 / 5  
population  
**POOR**



1 / 5  
**RICH**

Business rules for 1/5




Actual social trends:  
From National to Global Industry

Relevant initiatives:  
Comeback to Nature.

Self Sustained Communities (SSC)  
(New Rules)


Market model for Poor

World population  
4 / 5  
population  
**POOR**



1 / 5  
**RICH**

Business rules for 4/5

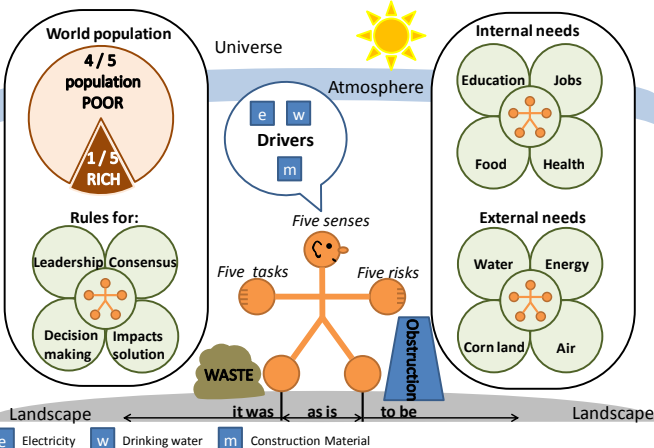


Actual social trends:  
From Nature to National Industry

Relevant initiatives:  
Energy needs.

Self Power Communities (SPC)  
(New Rules)

SPC Model



e Electricity   w Drinking water   m Construction Material

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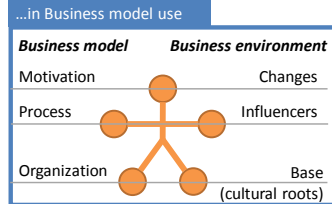
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## A.3. Synergy and Driver's Portfolio Management

**Synergy:** "let two or more things functioning together to produce a result not independently obtainable". Synergy for practical use (e.g.three sisters model)

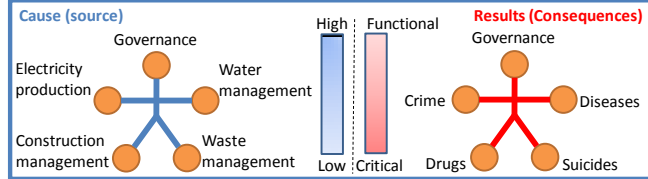
Proposed portfolio drivers:

- e** Electricity (measurable indicator kWh per person)
- w** Drinking water (measurable indicator liters per person per day)
- m** Construction material (for new land planning and architecture)



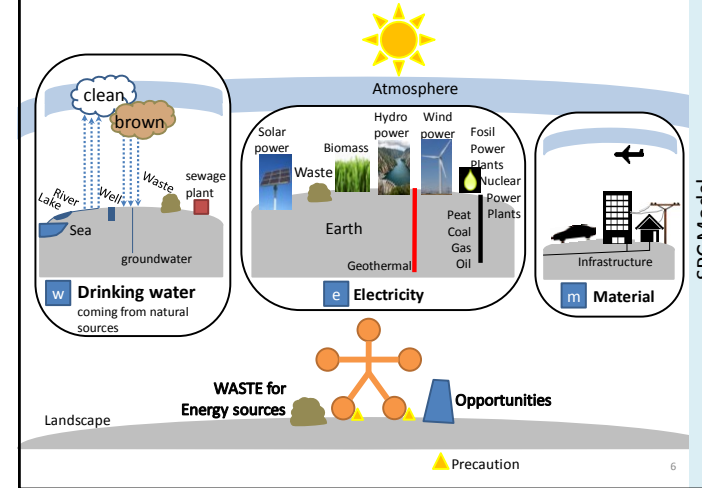
SPCModel

...in any cause and result understanding



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## A.4. Why Three Drivers



SPCModel

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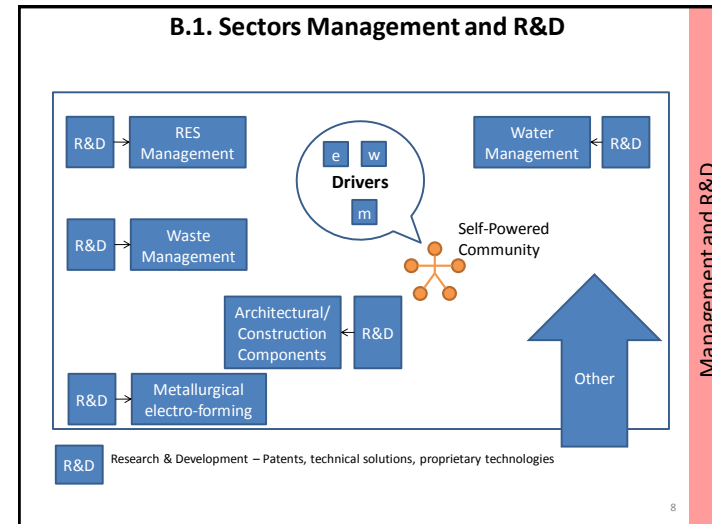
## SECTION B

Management and R&D (Examples of Management of the Key Drivers)

- B.1. Sector Management and R&D
- B.2. RES Management and R&D
- B.3. Water Management, Hydro Energy and R&D
- B.4. Waste Management and R&D
- B.5. Architectural/Construction Materials and Components and R&D

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## B.1. Sectors Management and R&D



Management and R&D

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## B.2. RES Management and R&D

Solar power



Hydro power



Biomass



Waste



Wind power

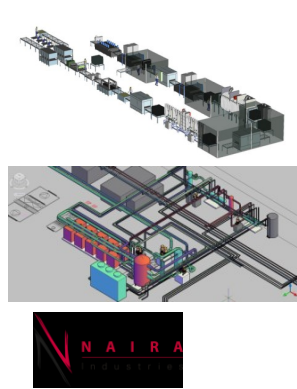


Geothermal power



- Solar
  - PV
  - Thermal
- Hydro power (HP)
  - Micro HP
  - Small HP
- Biomass
  - Production
  - Waste
- Waste
  - Plastic
  - Used tires
  - Batteries
- Wind power
  - Geothermal power

Example of PV Thin Film Technology



Management and R&D

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## B.3. Water Management, Hydro Energy and R&D

### Water Management



- Surface Water
  - rivers, lakes
  - watershed
- Underground Water
  - geological basin
  - water leakages
- Raining, Rainstorm (Typhoon)
  - dams, dikes, weirs
  - floods and water retention
- Hydro-power
  - water power plants
  - pump storage hydro plant
- Water for:
  - municipalities
  - agriculture
  - industry
- Water waste treatment
  - sewage treatment
  - other water treatment
- Cleanup of lakes and rivers
  - removal of sludge and deposits

### Hydro energy example from the Philippines

A small hydro-power plant



**CREA**  
Hydro & Energy

Management and R&D

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## B.4. Waste Management and R&D

### Electric power generation:

Combustion: Steam production for

Gasification: Gas production for

Pyrolysis: Gas production for



### Power Accumulation:

Heat tanks for production

Waste heat for production

Recycling of batteries   
+ storage of electricity

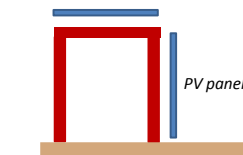


Management and R&D

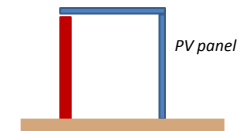
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## B.5. Architectural/Construction Materials and Components and R&D

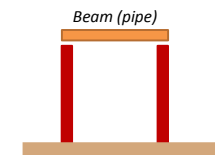
### PV panel as an architectural component



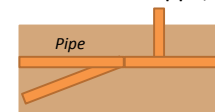
### PV panel as a structural element



### Electroforming: Metal materials as an architectural component for buildings (beams)



### Metal materials for infrastructure: water or waste water pipes, etc.



Management and R&D

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## SECTION C

### SPC Factory Strategy (SPC Industry Specific Unit Proposal)

- C.1. SPC Factory current and future products
- C.2. SPC Factory – virtual concept
- C.3. SPC Factory functions / SPC Factory products
- C.4. SPC Factory products / Technologies
- C.5. Example of a production line for SPC Factory – part 1
- C.6. Example of a production line for SPC Factory – part 2
- C.7. SPC Factory products
- C.8. SPC technologies under development
- C.9. SPC Factory Business Model and Business Plan

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## C.1. SPC Factory: Current and future products

### SPC Factory: The current products

**Operation of a SPC Factory**

Component import

R&D | Engineering | Production Line | Final product Assembly Line

Wholesale System Structure

Retail Control System

### SPC Factory: The future products (details in Sec. D)

**D.1. Metallurgical electroforming**

**D.2. Water-harvest management and thermal insulation**

**D.3. Water management and analytics**

Section C

SPC Factory Strategy

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## C.2. SPC Factory – The Virtual Concept

SPC Factory functions:	Philippines	Pacific	EU (CZ)
R&D	✓	—	✓
Engineering	✓	—	✓
Production Line	✓	—	—
Component Import	✓	✓	✓
Final Products Assembly Line	✓	✓	—
Wholesale System Structure	✓	—	—
Retail Control System	✓	✓	—

SPC Factory Strategy

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## C.3. SPC Factory functions / SPC Factory products

### Operation of a SPC Factory

**Operation of a SPC Factory**

Component import

R&D | Engineering | Production Line | Final product Assembly Line

Wholesale System Structure

Retail Control System

### Examples of products:

- Solar generator system for simple use in building (housing, services, shops)
- Solar PV panel as an architecture element in tropics and sub-tropics construction industry
- Off-grid electricity power generation units for 24/7 operation (rural and peri-urban areas)
- Small power plants (based on RES) selling electricity to the central grid (urban areas)
- Post-harvesting industrial units for food drying and production of drinking water (countryside), biomass (crop ends) for electricity production

SPC Factory Strategy

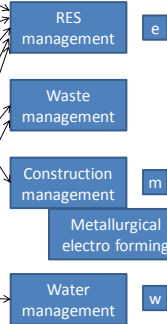
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## C.4. SPC Factory products / Technologies

Examples SPC Factory products:

- Solar generator system for simple use in building (housing, services, shops)
- Solar PV panels as an architectural elements in tropics and sub-tropics construction industry
- Off-grid electricity power generation units for 24/7 operation (rural and peri-urban areas)
- Small power plants (based on RES) selling electricity to the central grid (urban areas)
- Post-harvesting industrial units for food drying and production of drinking water (countryside), biomass (crop ends) for electricity production



SPC Factory Strategy

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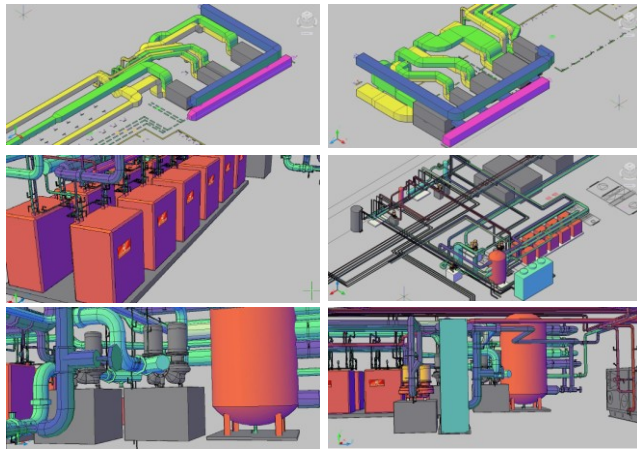
## C.5. Example of a production line for SPC Factory – part 1

(see Section D)



SPC Factory Strategy

## C.6. Example of a production line for SPC Factory – part 2

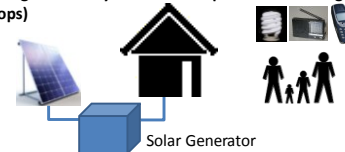


SPC Factory Strategy

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## C.7. SPC Factory products

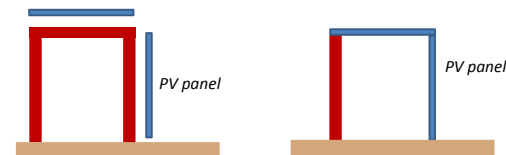
Solar generator system for a simple use in building (housing, services, shops)



Solar panels as architectural or structural elements

PV panels as architectural elements

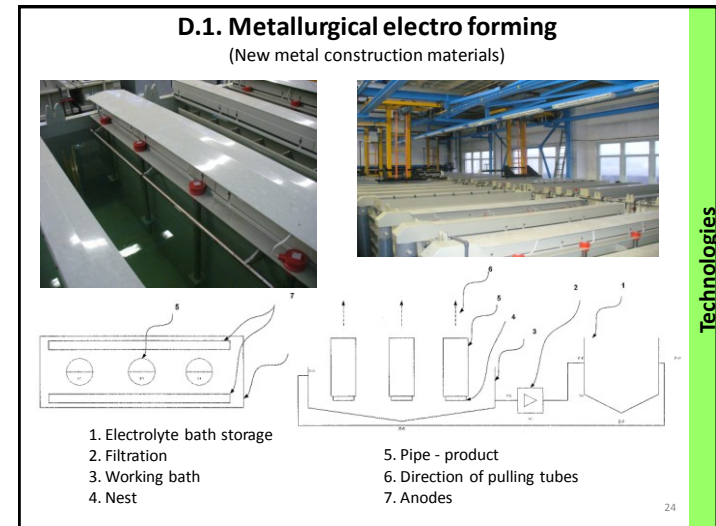
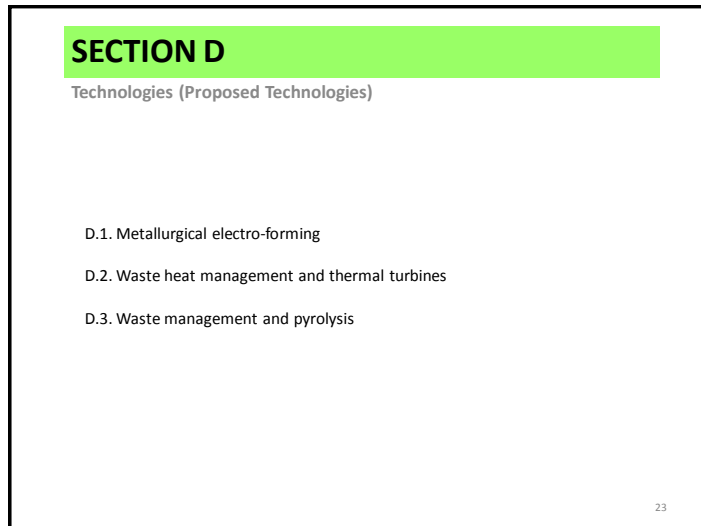
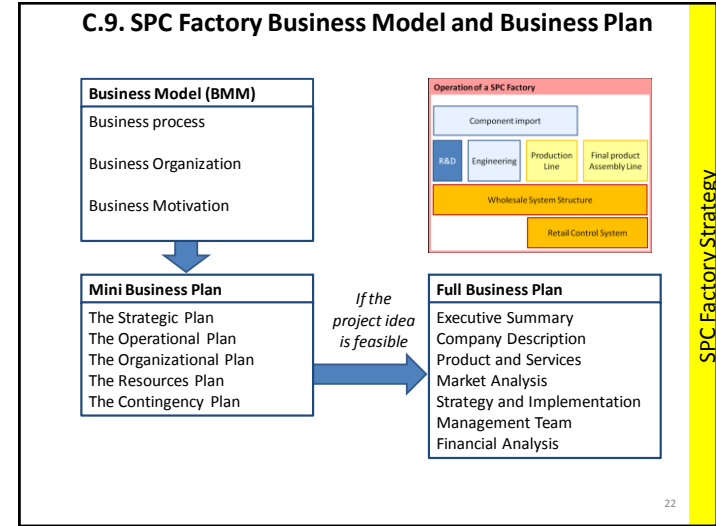
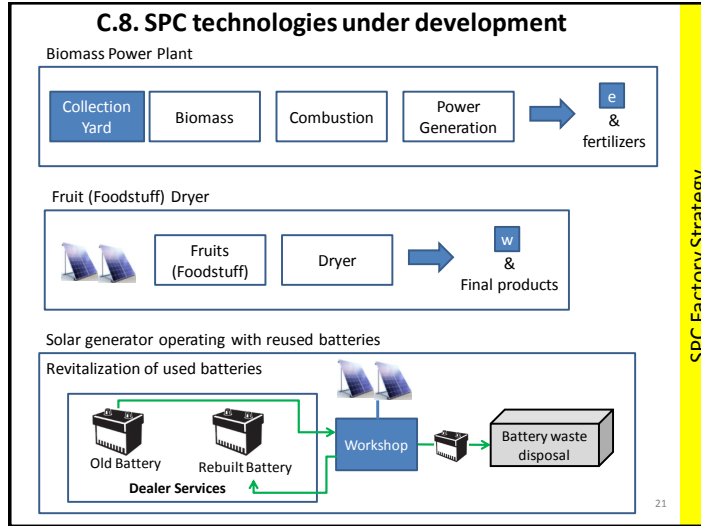
PV panels as a construction element



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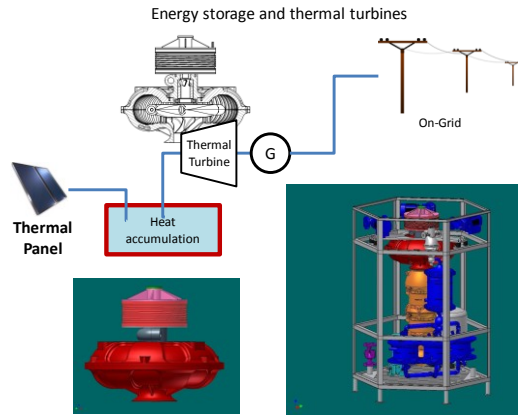
SPC Factory Strategy

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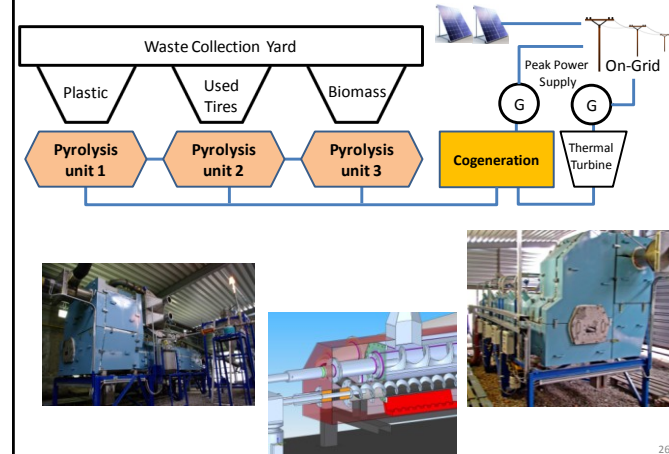
## D.2. Waste heat management and thermal turbines



Technologies

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## D.3. Waste management and pyrolysis



Technologies

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## SECTION E

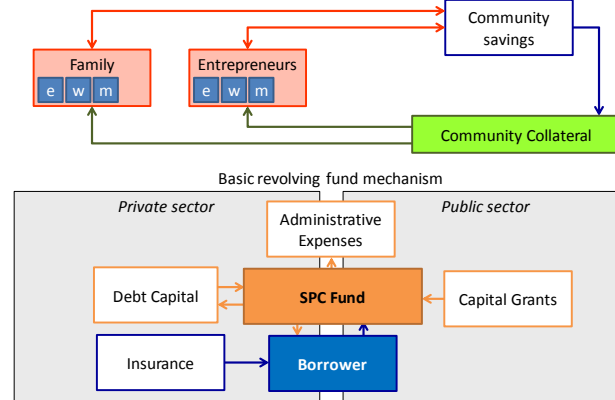
SPC Factory Financing (National Revolving Fund Proposal)

- E.1. Community savings and Revolving Fund system
- E.2. SPC Revolving Fund for communities
- E.3. SPC Revolving Fund and PPP mechanism

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## E.1. Community savings and Revolving Fund system

Current Community saving and collateral mechanism (for SPC Factory in operation)



SPC Factory Financing

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