# Appendix 18


GAS
WATER
POTENTIAL FUTURE SERVICES
PROJECT IRON BOOMERANG CONTINENTAL RAIL CORRIDOR
OPTIC FIBRE
COMMUNICATIONS
PROJECT
IRON BOOMERANG
east west line parks limited

# **SMaRT Complex** of the Project Iron Boomerang

## Realisation of a Sustainable Industrial and Residential Complex in Queensland, Australia

**Information package**

February, 2013

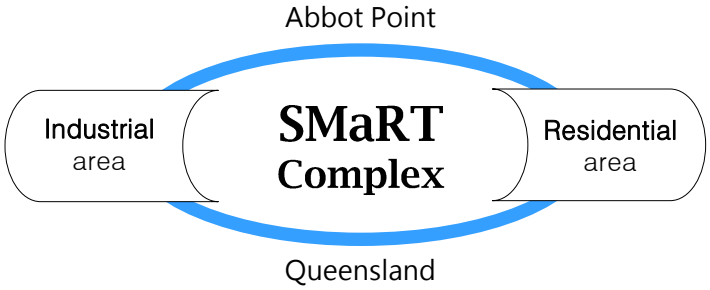
EAST WEST LINE PARKS LIMITED

TATA STEEL CONSULTING

Nomura Research Institute, Ltd.

# Industrial and residential complex in Queensland, Australia

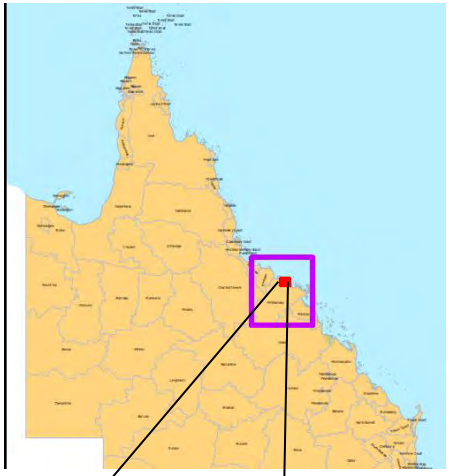
- The aim of the Sustainable Industrial and Residential Complex at Abbot Point is to create the world's first smart and sustainable industrial and residential complex located in Queensland.
- Within the industrial area, products that are manufactured from steel will have a lower carbon foot-print, therefore minimising the impact on the environment. The Industrial Area will produce bio-fuels and bio-plastics which will be sold underneath a unified brand and within a unified marketing strategy to the global market.
- In the residential area, there will be an abundant surplus of heat and energy generated by the industrial area that will be used to provide people's daily needs free of charge. A large proportion of the by-products created by the industrial area will be used for civil and construction work within the residential area.

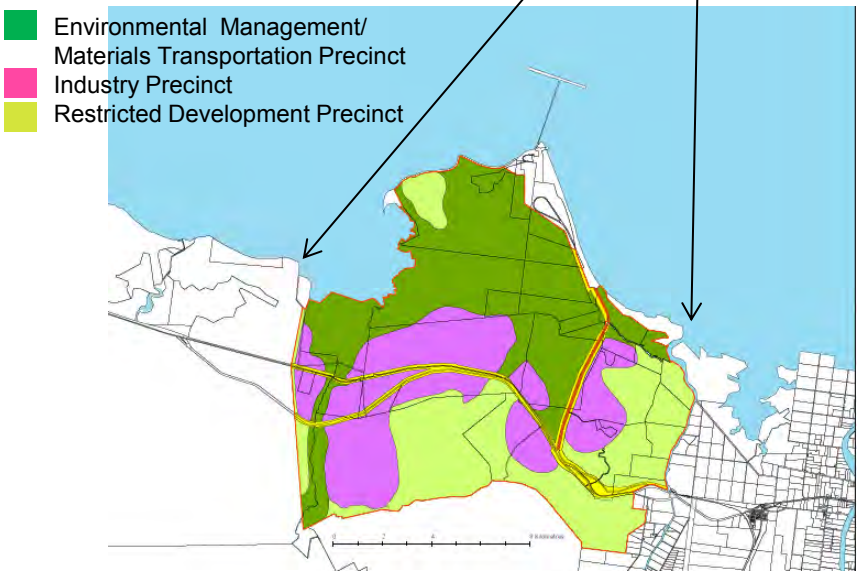



Sustainable Manufacturing and Residential Town

# Location of Abbot Point

- Declared in 2008, the 16,230-hectare Abbot Point State Development Area (SDA) is located approximately 20 kilometres west of Bowen, in North Queensland.
- It was established to facilitate large-scale industrial development of regional, state and national significance.
- The Abbot Point SDA lends itself to industrial development due to its:
  - ✓ Close proximity to the Port of Abbot Point
  - ✓ Easy access to rail and road networks
  - ✓ Considerable distance from urban areas.

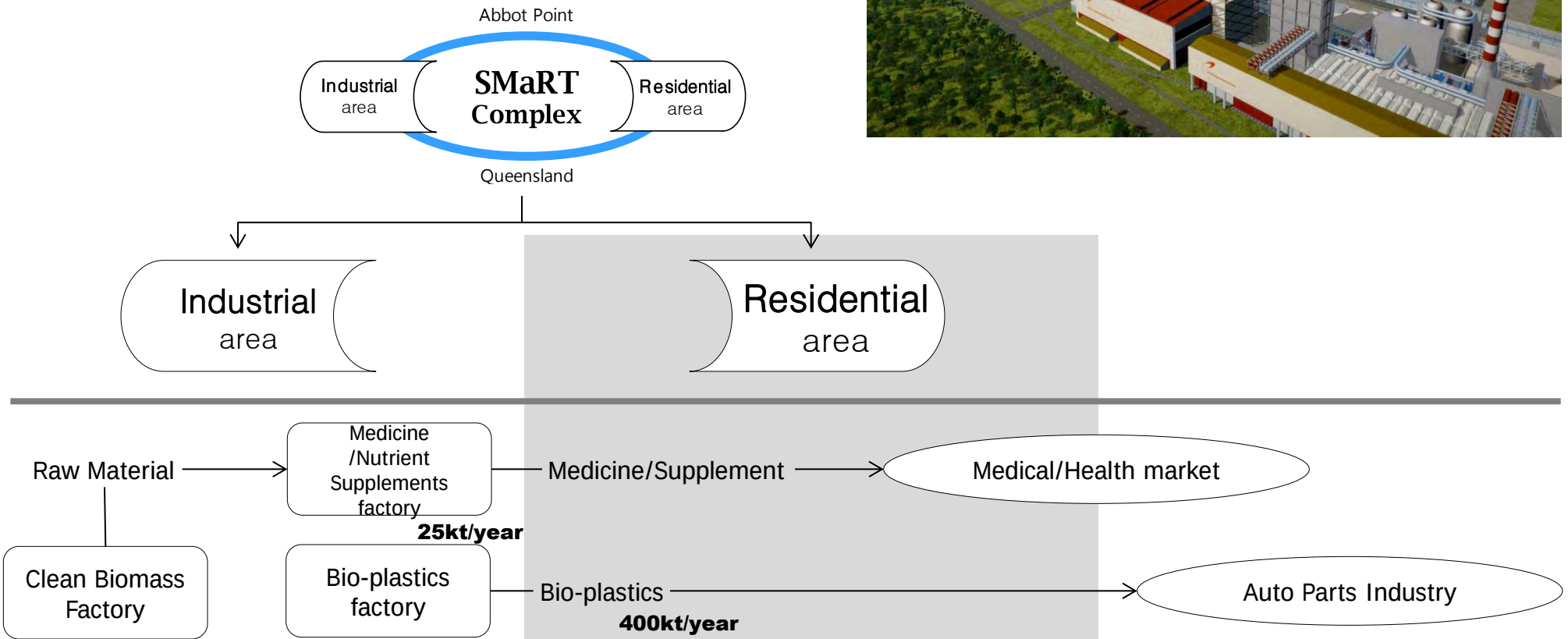


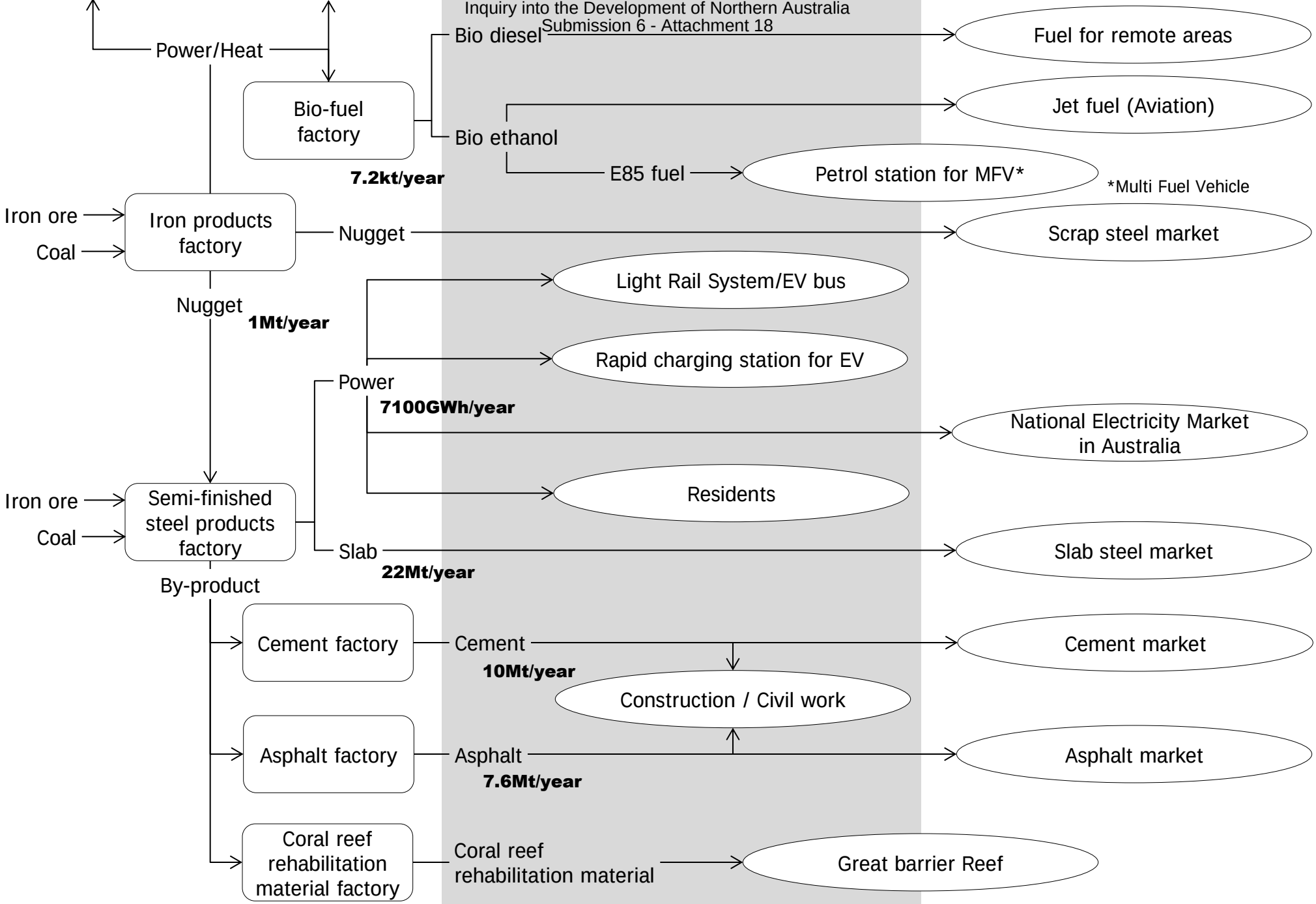



REF: http://www.nqbp.com.au/abbot-point/,http://www.dlg.qld.gov.au/land-for-industry/abbot-point.html

# World's Best Practice for the Next Generation

- The world's lowest carbon foot-print model will be achievable by adopting the most advanced global technology such as :
  - ✓ A cascade usage of materials in the industrial area and
  - ✓ Utilising surplus energy and by-products which will be generated from the industrial area towards the residential area





# Industrial Area

■ Produce "SMART" services and products:

Turnover **US$ 15.9 billion** per annum ( 1,270 billion Yen)

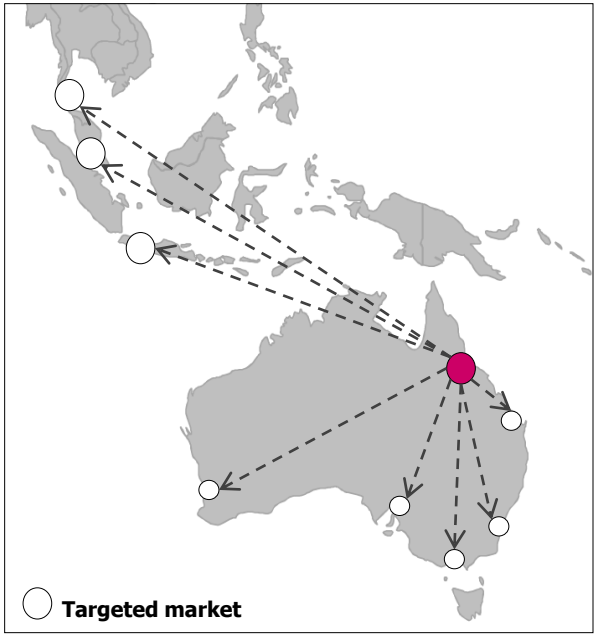
| | | |
|---|---|---|
| ✓ Iron product : | US$ 380 million | 1.0Mt / y |
| ✓ Semi-finished steel product : | US$ 10,000 million | 22.0Mt / y |
| ✓ Cement and Asphalt : | US$ 1,800 million | 17.6Mt / y |
| ✓ Coral reef rehabilitation material : | US$ 1,900 million | 3.8Mt / y |
| ✓ Bio-Plastic and Bio-fuel : | US$ 1,000 million | 400kt / y |
| ✓ Clean Biomass product : | US$ 750 million | 72kt / y |

■ CAPEX : (Semi steel product only) **US$15.3 billion**

■ Size of Area: **2,000 ha**

■ Employees : **20,000 people**

*Figures are indicative.



# Residential area

- The industrial area will be provided with highly motivated employees from a life-rich "SMART" residential area.
- To maximize efficiency, the "SMART" residential area will use surplus energy/materials from the Industrial area
- It will Provide "SMART" infrastructure service such as:

✓ free electricity and chilled/heating services and air conditioning (by using the surplus energy generated from the Industrial area)

✓ potable and non-potable water will be separated (by using the regional water supply for the non-potable water supply)

- Area and Population :

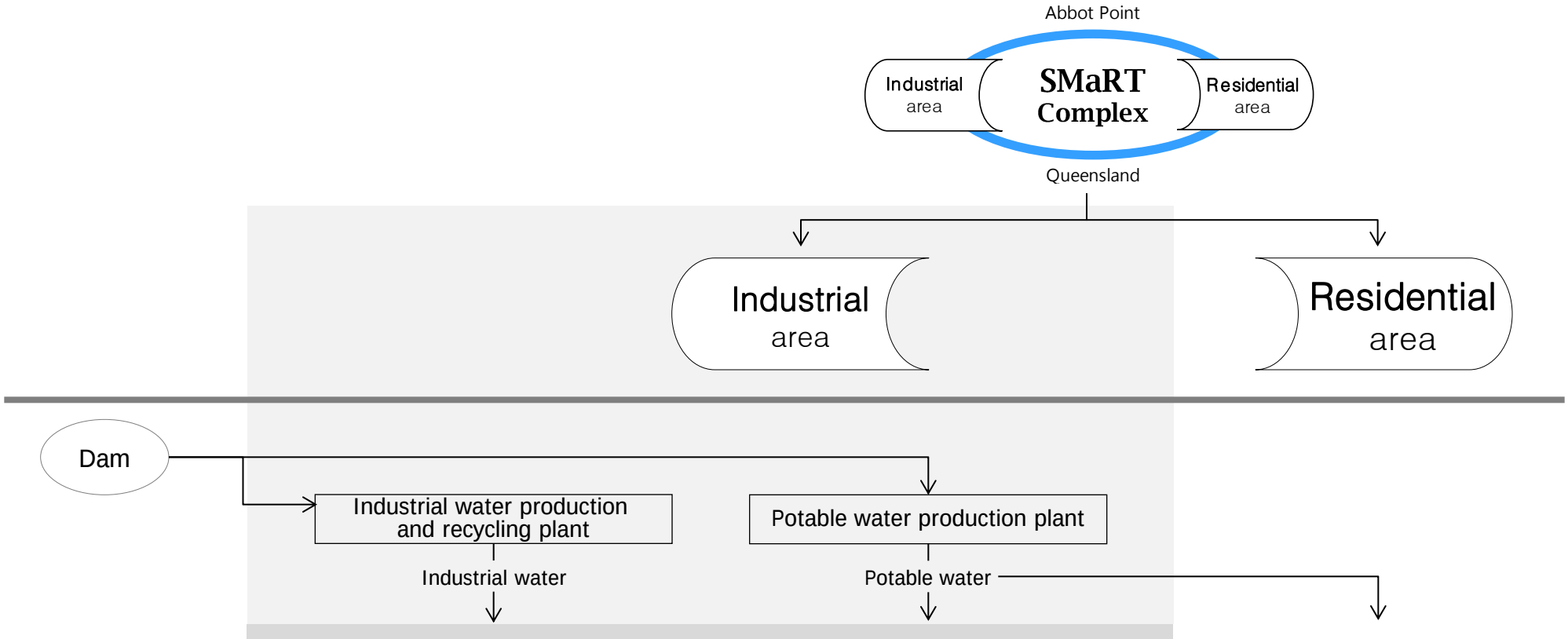
580 ha and

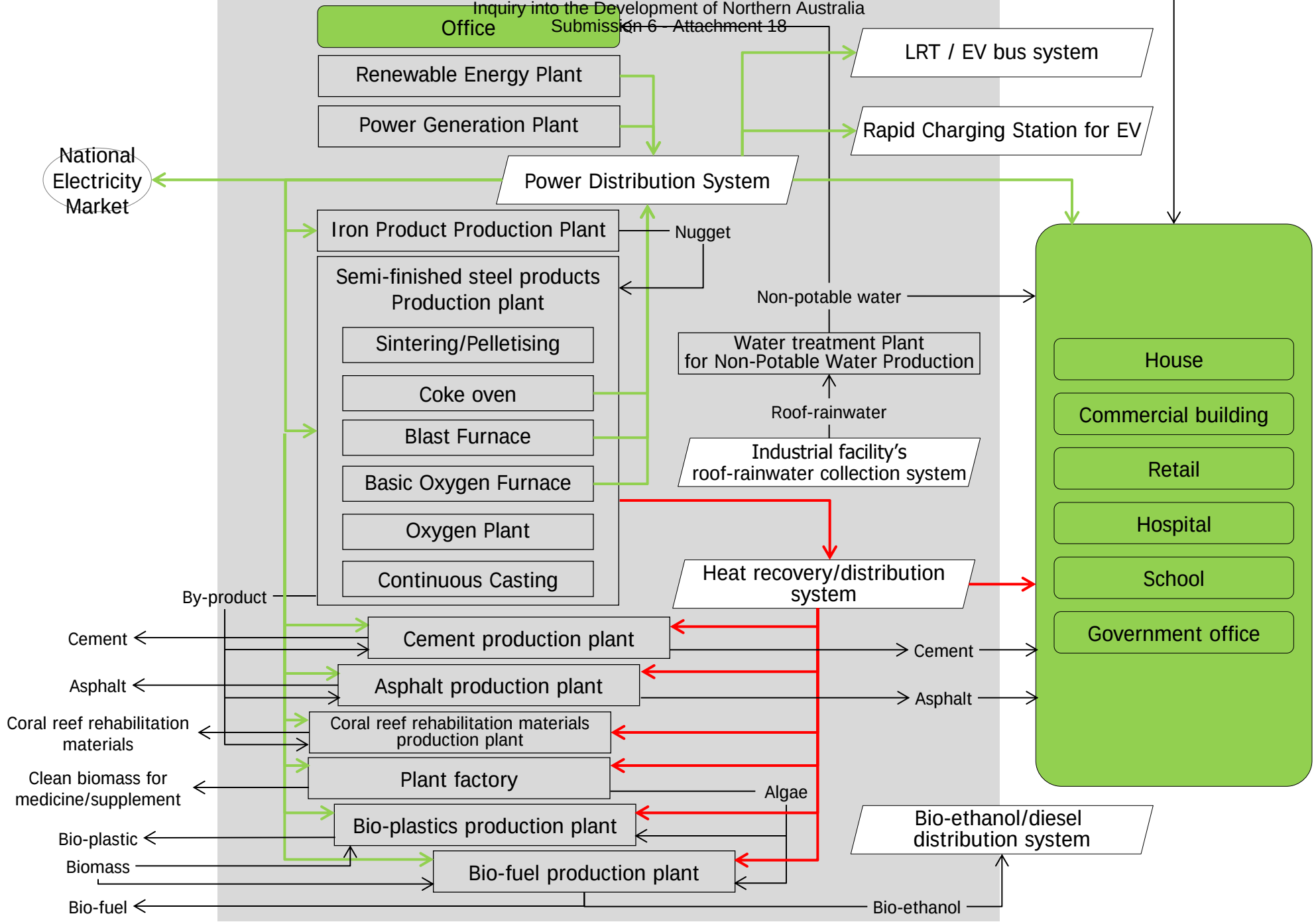
41,000 people

# Infrastructure

- The complex will produce high quality services and products with:
  - ✓ Low carbon footprint
  - ✓ A minimised ecological foot print
  - ✓ Energy and material savings

- Establishment of a unified brand image based on sustainable complex





# Business structures

■ Land Development:

- Land will be developed by EWLP with a support from the Local Government.

■ Infrastructure (Shared facilities):

- A new infra company (holding company) will be established jointly with a number of other companies (a support from the Local Government).

→ Establishing a Holding company (Parent company)

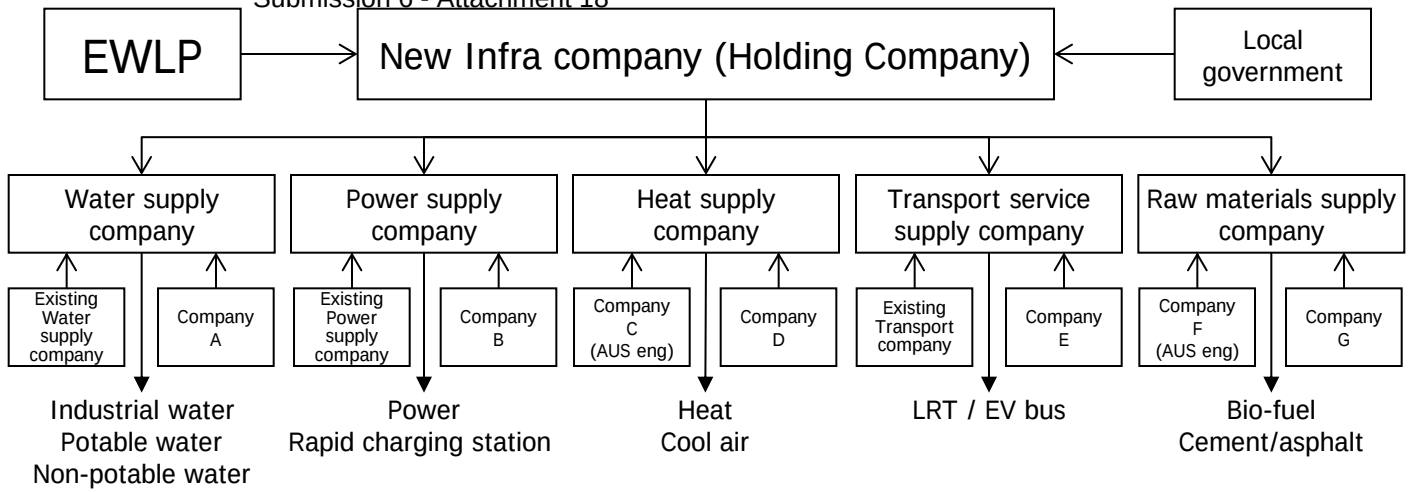
- Required subsidiary companies will be established by the holding company.
- The subsidiary companies will own the licenses and appoint the appropriate companies to operate.

■ Marketing

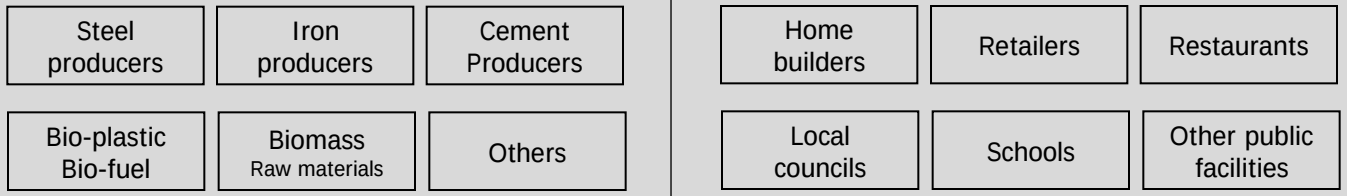
- A new marketing company will be established between EWLP and an existing marketing company.
- The new marketing company will establish and maximise the unified brand image. They will also create the SMaRT Complex based company who will manage a certificate and license of the unified brand image.

| | **Industrial area** | **Residential area** |
|---|---|---|
| **Land development** | EWLP | |

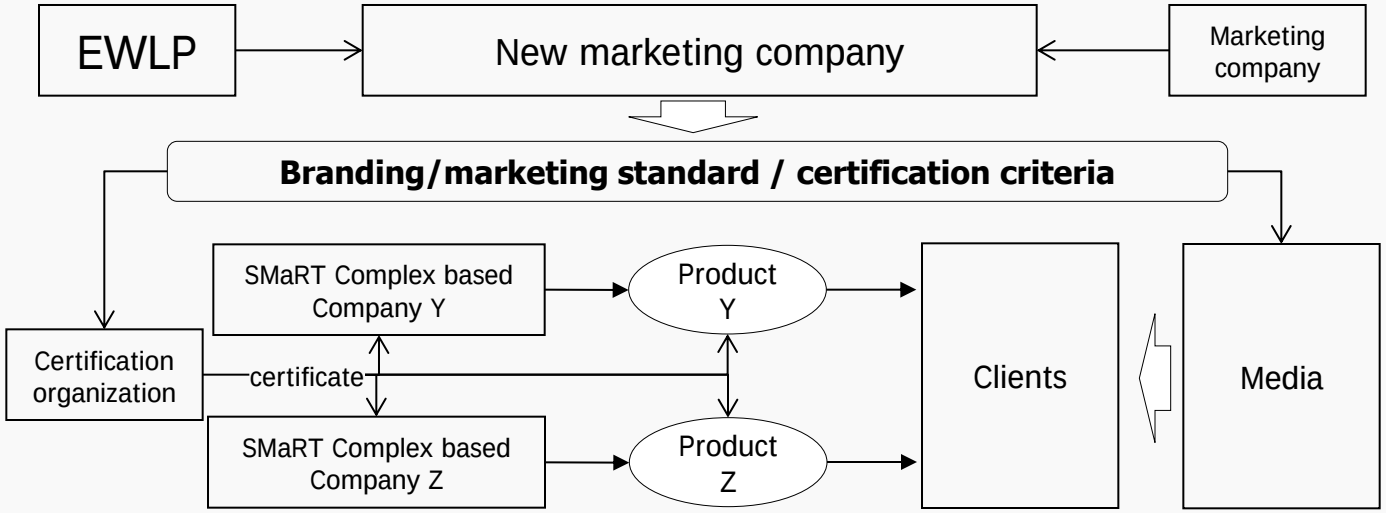
## Infrastructures




## Facilities

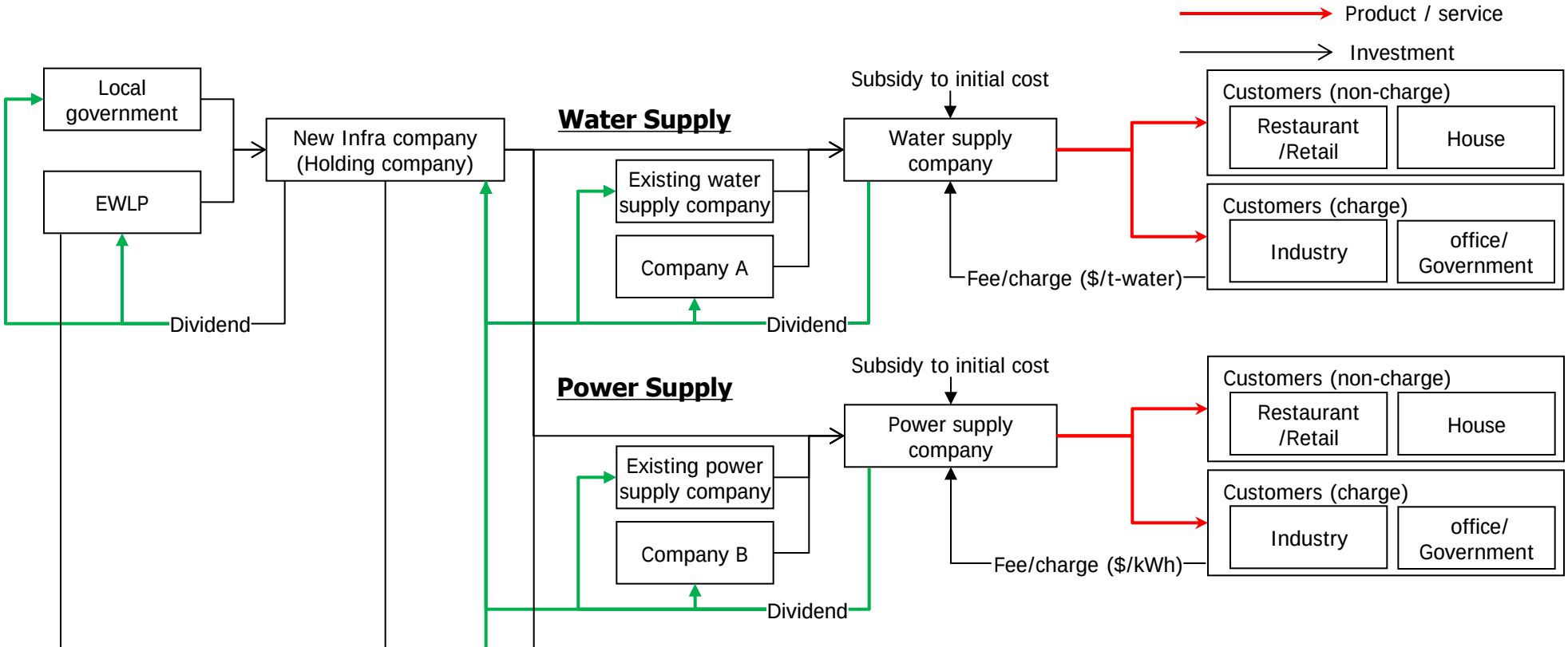


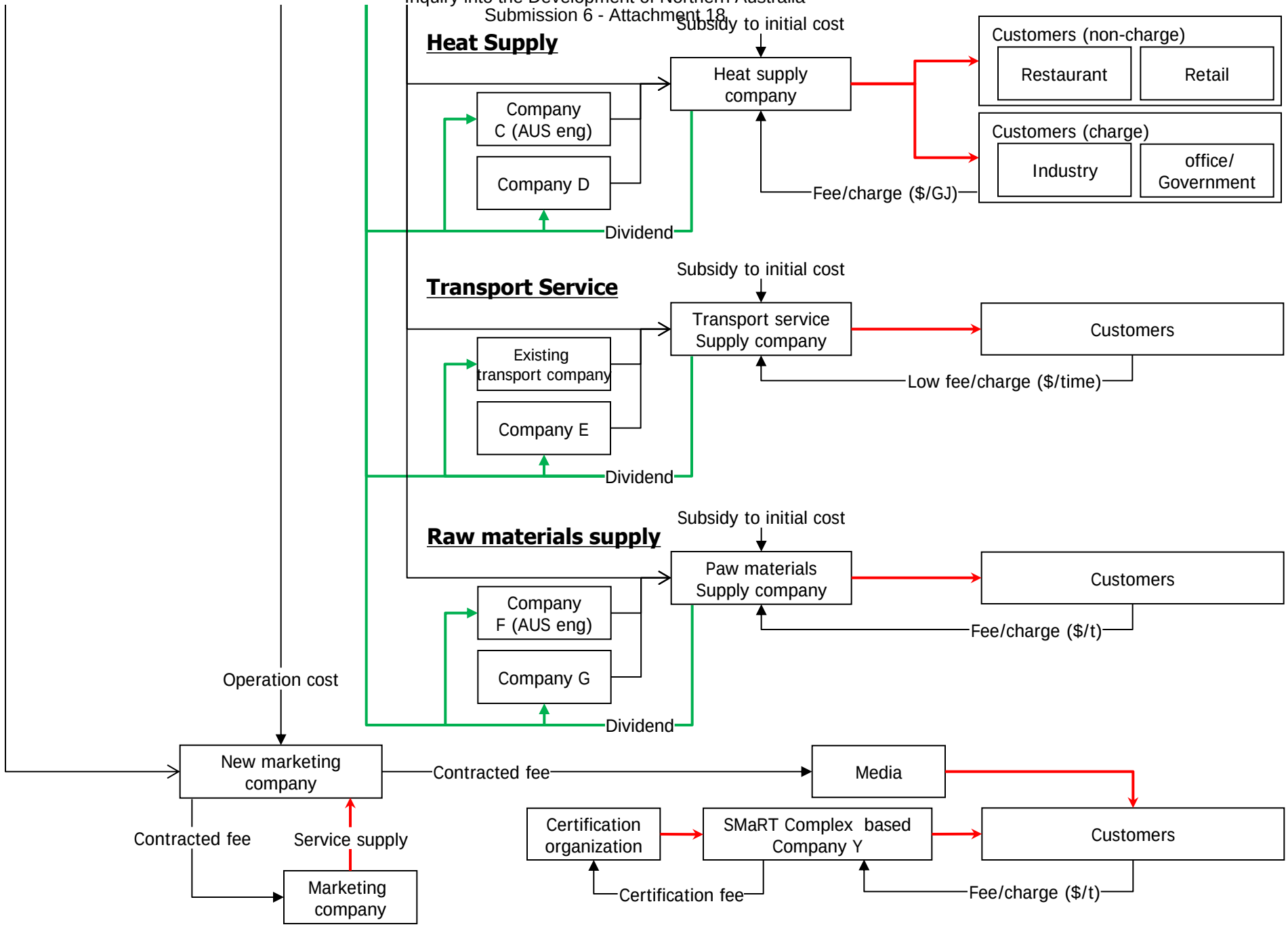

## Marketing of "SMaRT Complex" products



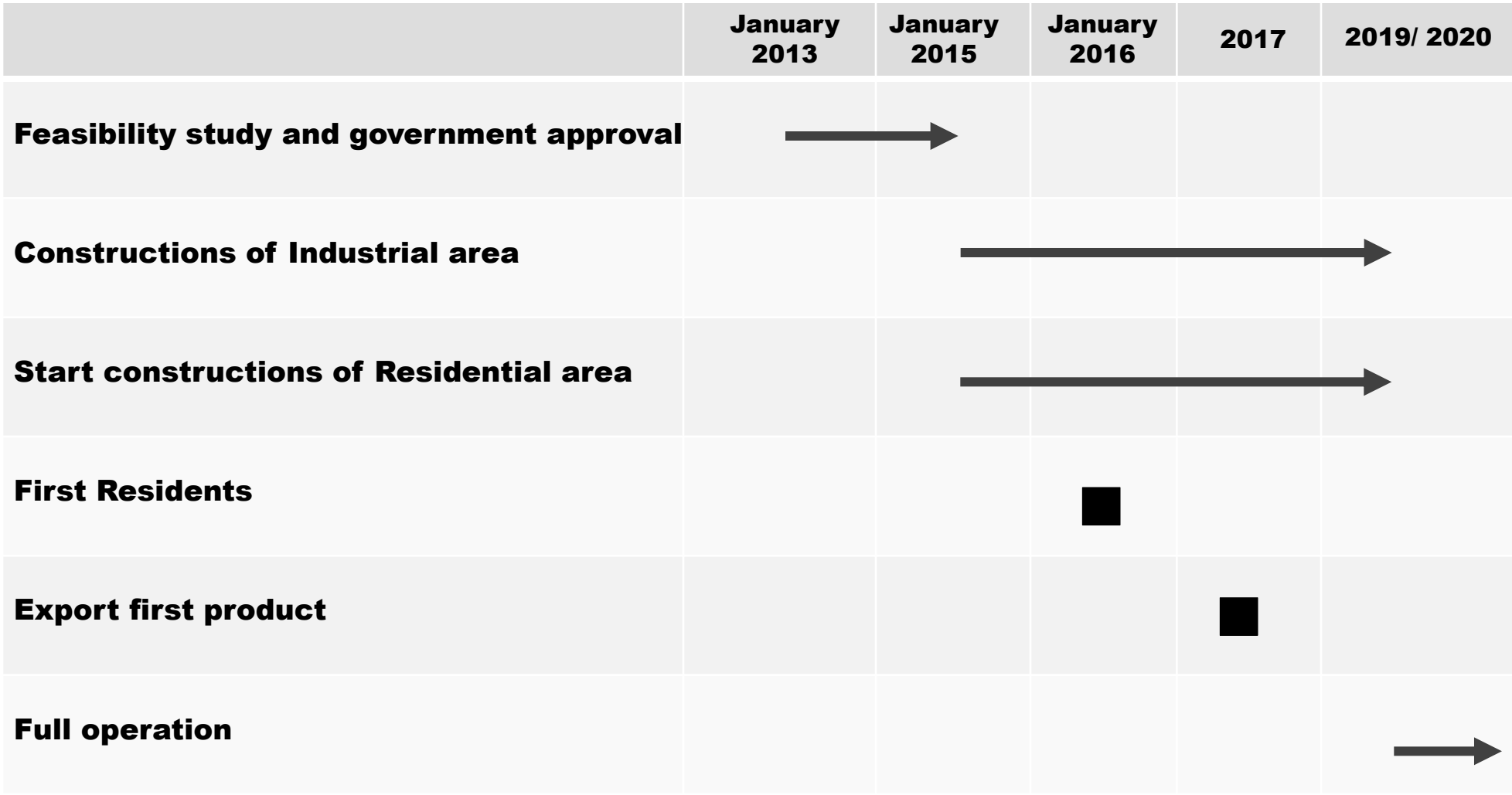
# Business models

- A new infra company ("holding company") will be established by the local government and EWLP.
- The holding company will establish the required subsidiary companies who will build, own and operate the shared facilities with the guidance of the world's best companies who specialise in their selected fields (supplying water, power, etc).
- A new marketing company will be established by EWLP and an existing marketing company who will provide the services to establish and maximise the unified brand image. They will also create the SMaRT Complex based company who will manage a certificate and license of the unified brand image.



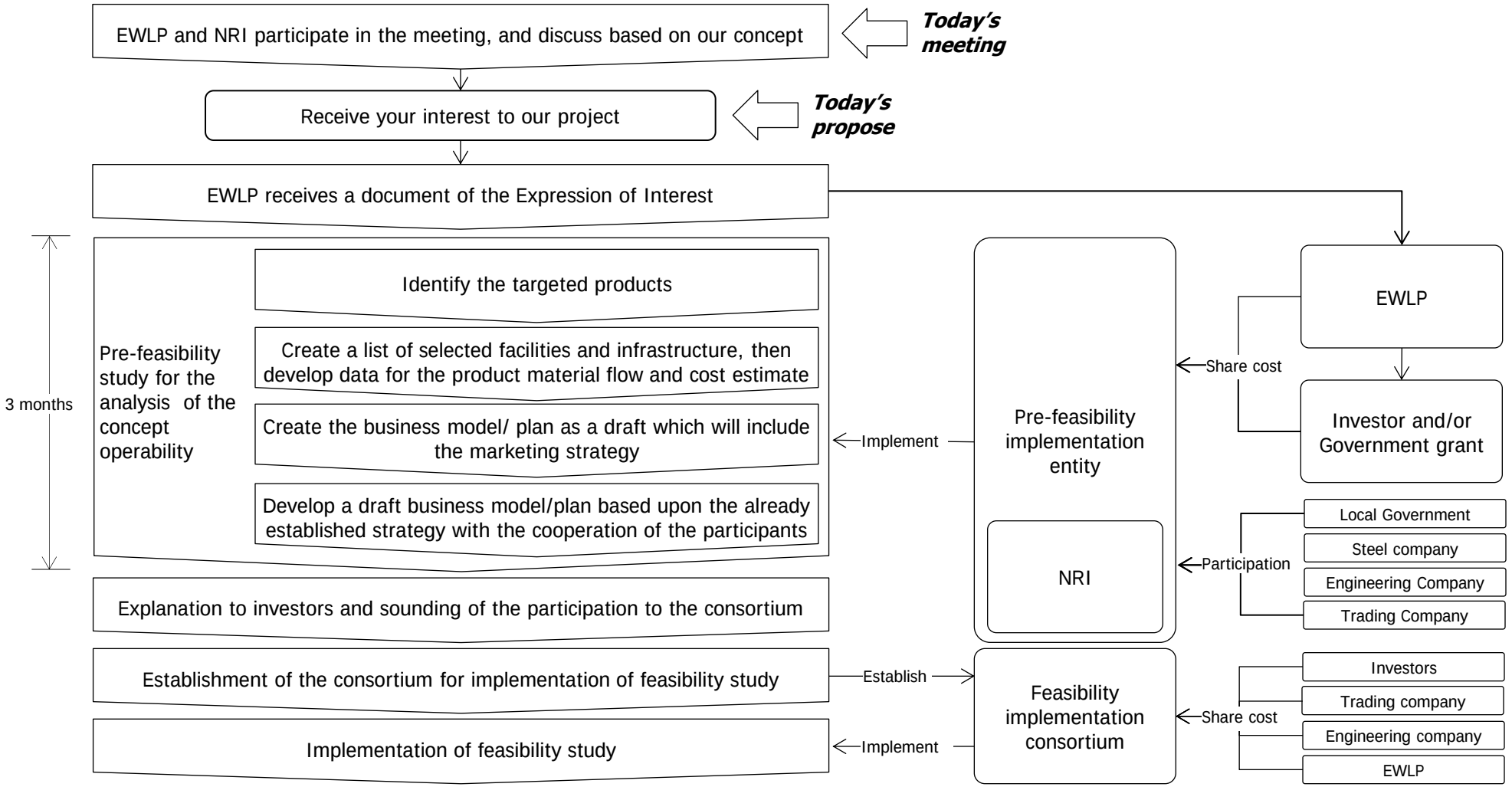


# Schedule



# Next step working with you

■ EWLP proposes implementation of final desktop Pre-feasibility study for analysis of concept operability



# Specifications

: to be discussed with related companies and organisations

## Industrial Complex & Shared Services

| Area | Facilities | Land Area | Capacity (/y) (Supply) | Employment | Demand | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Water (GL/y) | Power (MWh/y) | Heat (GJ/y) | Natural Gas (GJ/y) |
| Industrial Complex | Iron Making | 2,000 ha | 1.0 Mt | 3,917 | 86 | 200,000 | - | 4,600,000 |
| | Iron/Steel Making | | 22.0 Mt | | | 7,533,013 | - | - |
| | Cement Making | | 10.0 Mt | 538 | | 876,000 | 14,500,000 | - |
| | Asphalt Making | | 7.6 Mt | | | | | |
| | Coral reef rehabilitation material making | | 3.8 Mt | | | | | |
| | Bio-plastic Making | | 400,000 t | 55 | | | | |
| | Bio-fuel Production | | 36,000 t | 77 | | | | |
| | Clean biomass production | | 25,000t | 33 | | | | |
| Shared infrastructures | Water supply | | | 244 | | | | |
| | Power supply | | 4,534,532 MWh | | | | | |
| | Heat supply | | 87,210,942 GJ | | | | | |
| | Gas supply | | | | | | | |
| | Recycling | | | | | | | |
| | Shared Stockyard | | | | | | | |
| | Power storage and supply | | | | | | | |
| | Mega solar / thermal | 100ha | 360GWh | | | | | |
| | Community Bus/Light Rail Track System | | | | | | | |
| Public services | School, Shopping Centre, hospital, etc… | 12 ha | | 14,823 | | | 4,410,000 | |

## Residential Area

| Area | Site | Land Area | Numbers | Demand | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Water (GL/y) | | Power (MWh/y) | | Heat (GJ/y) | Natural Gas (GJ/y) |
| | | | | Potable | Non-potable | Daytime | Night time | | |
| Housing Area | Unit Site | 0.1ha | 4,800 rooms | 1.283 | 2.023 | 27,666 | 45,308 | | |
| | | | 480 units | | | | | | |
| | House Site | 477ha | 9,532 houses | | | | | | |
| Park | Sports field, BBQ Area… | 110ha | | | | | | | |