

Smart Delta Resources (SDR)



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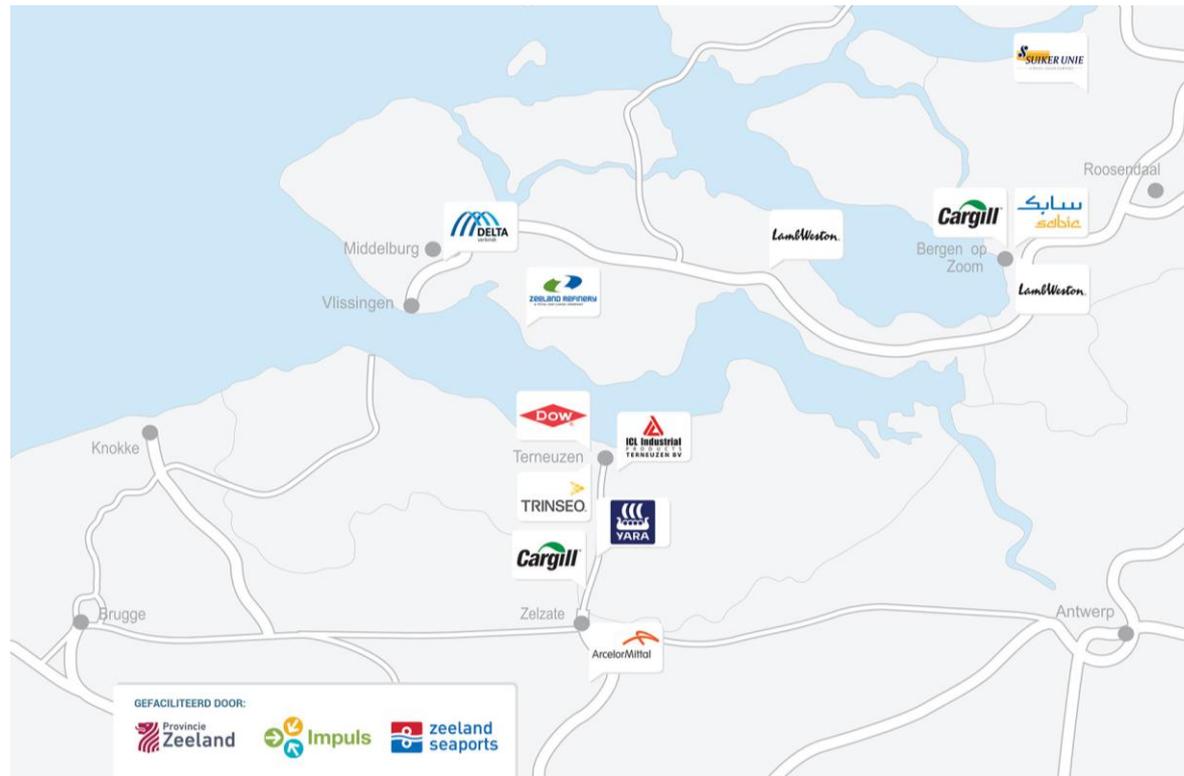


What is SDR?



Industrial Symbiosis

Smart Delta Resources is an industrial initiative by 11 energy & resource intensive industrial companies in the chemical, food, steel and energy sector. SDR is located in the Delta Region in the south west of the Netherlands



Zeeland Seaports, Province of Zeeland and Economische Impuls Zeeland (Regional Development) facilitate & actively support SDR.

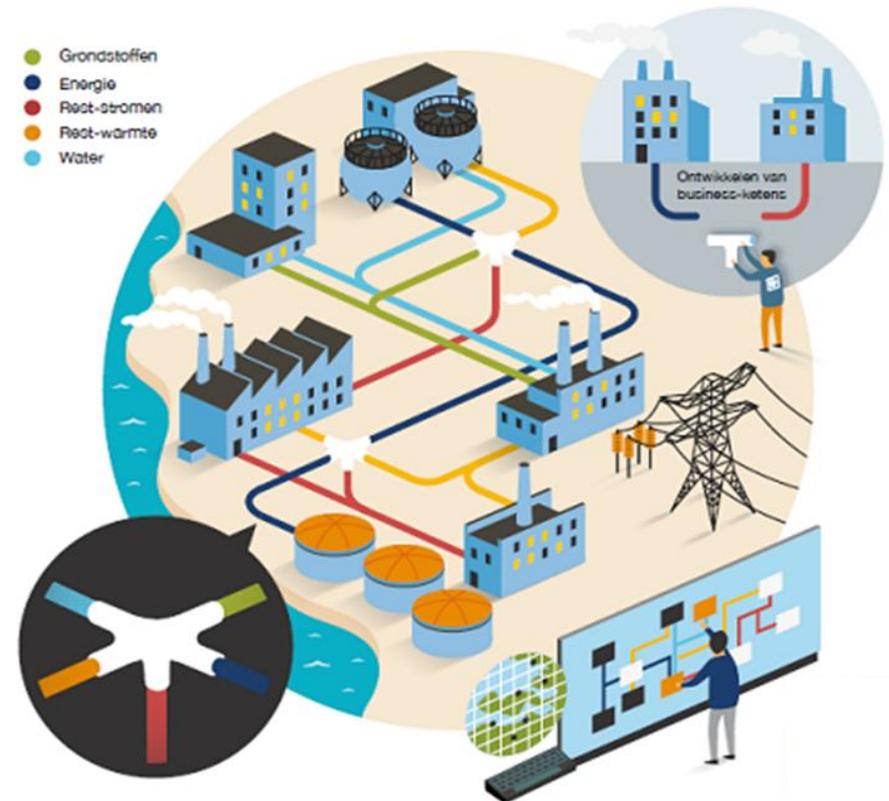
Objective SDR

SDR aims to develop joint business cases for the exchange of energy and resources flows:

Industrial Symbiosis

This:

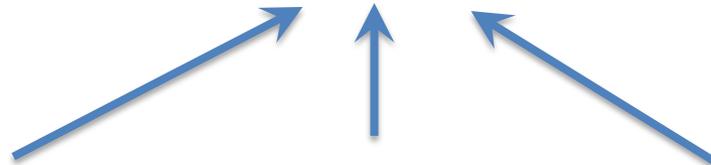
- Improves competitive position of the companies
- Strengthens the region
- Reduces the energy and resource footprint, and thus contributes to the circular economy and climate objectives



SDR Program structure



Business cases



Growth initiatives



Public Affairs



Supporting Initiatives



Growth initiatives



- SDR executes growth initiatives to fill the funnel of project development with new opportunities, leading to new potential business cases
- Currently several growth initiatives are in execution:
 - S4G: publish SDR-members' energy, and resource streams to attract third parties to create new symbiosis projects
 - Expansion of SDR members: expand the member group with energy and resource intensive parties in the area to create new symbiosis between the members and beyond
 - Deepening and broadening the analysis to identify new opportunities:
 - Thematic (e.g. water, heat, hydrogen)
 - Per member company, where relevant
 - Through symbiosis meetings
 - Set up discussions with third parties (e.g. "Silver" approach)



Public Affairs

Public Affairs



- SDR is involved in a broad range of public affairs activities, to create support for the business cases:
 - Influence the public agenda for more support for industrial symbiosis
 - Make use of existing arrangements (subsidies, financing, ...)
 - Communicate the existence and successes of SDR such that the 'license to operate from society' is advanced

- SDR Public Affairs is involved on different levels:
 - EU
 - National government
 - Provincial government
 - Public domain (Communication)



Supportive initiatives

Supportive initiatives



- In the execution of the business cases, the SDR team identified generic issues that could benefit from a generic resolution, such as:
 - Financing models for infrastructure based symbiosis projects
 - Operation and maintenance models for infrastructure projects



Business cases



- Key objective of SDR is to realize, for its members, tangible business cases with a positive impact on profit, people and planet in the area of industrial symbiosis
- The role of the SDR team is to facilitate:
 - The identification of opportunities
 - The start up cooperation between partners
 - With resolving potential roadblocks
 - With finding public support (subsidies, financing, green deals)
- The actual project management, commercial negotiations, decision making and financing is executed by the partners themselves
 - The SDR team monitors progress in the later phases, and supports where relevant



Examples of Business cases



Industrial Symbiosis

- Syngas symbiosis: Combine Blast Furnace Gas and hydrogen to create syngas as feedstock
- Hydrogen symbiosis Dow/Yara/ICL:



Role regional government



- Provincie of Zeeland facilitates the platform, industry in the lead
- Member of the Board together with 11 CEO's
- Relatively small-scale financial support of the platform
- Partner in establishing Green Deals with National Government
- Impuls facilitates the platform with program management and a project team
- Partner in the public affairs program
- Facilitating cross border activities



Smart Delta Resources

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Industrial Symbiosis

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