SYMBIONT

Systems Biology Natural Technology Facility:
A fundament for the Bio-based economy
What is SYMBIONT?

SYMBIONT is a facility to design microbiological processes to make fine and bulk chemicals and other products out of plants, algae, micro-organisms and residual organics. For this, a complex large-scale high-throughput microbiological facility will be built in Wageningen and Delft. Microbial reactors will be connected to a network of online analytical tools, in which talented researchers can design new efficient microbial processes. The scientific breakthroughs are new process principles for food, chemical and environmental industries relying on biomass as resource.
Biobased Economy: central role of biomass
HTP Bioconverter
HTP Bioconverter

Biomass Residues
Substrates

Char. LC

Gas

Liquid

Solid

XX modules

Ivium-stat

FTiR - gas

FTiR - Liq

P. flowinj.

LC-IMS

LC-N/S

CH₄-probe

MAF

Reg PCR

GCMS

ANCHAM

Nano PCR

XRD/XRF

SEM

EA

Crystallics and structures

Products

Standard analytics already available
Infrastructure arround new facility
Other professors of WU, DUT, and other universities will be invited to participate, and are (partly) listed in the CV section, Annex 1.
## Business case

Table III: The cost break down for the total program in the first 5 years is shown

<table>
<thead>
<tr>
<th></th>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
<th>YEAR 5</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td><strong>Construction and investment costs</strong></td>
<td></td>
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<tr>
<td>HTP Equipment and HTP platform</td>
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<td>4300</td>
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<td></td>
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<td>Installation</td>
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<td><strong>Running costs</strong></td>
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<tr>
<td>Maintenance</td>
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<td>Upgrades</td>
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<td>Personnel costs</td>
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<td><strong>Decommissioning, not relevant</strong></td>
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<td><strong>Other costs, WU/DUT projects</strong></td>
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<td>3000</td>
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<td>Guest researchers/int. board members</td>
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<td>100</td>
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<td>500</td>
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<td><strong>Total/yr</strong></td>
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In k€
discussion

...........Institutional and industrial interest in participation in SYMBIONT.................