

| | | | | | | | | | | | | |
|----------------------|-----------------------------------|--------|---------------|---------|------|---------|------|---------|------|---------|--|-------|
| Budget summary | | 5.1.2e | | | | | | | | | | |
| Cost per type | | | 5.1.2e | | | | | | | | | |
| | Personnel | | | | | | | | | | | |
| | Benchfees | | | | | | | | | | | |
| | Materials | | | | | | | | | | | |
| | Travel and accommodation | | 5.1.2b,5.1.2i | | | | | | | | | |
| | Publishing | | | | | | | | | | | |
| | In-kind partners | | | | | | | | | | | |
| | 5.1.2e | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | |
| Co-financing | | | Cash | In-kind | Cash | In-kind | Cash | In-kind | Cash | In-kind | | TOTAL |
| | Company/Institute | | | | | | | | | | | |
| | Alta | | | | | | | | | | | |
| | AquaBattery | | | | | | | | | | | |
| | Avantium | | | | | | | | | | | |
| | AVR | | | | | | | | | | | |
| | EBN | | | | | | | | | | | |
| | Elestor | | | | | | | | | | | |
| | ESD-SIC | | | | | | | | | | | |
| | Fujifilm | | | | | | | | | | | |
| | Gasunie | | | | | | | | | | | |
| | H2GO | | | | | | | | | | | |
| | Hydrogenics | | | | | | | | | | | |
| | Johnson Matthey | | | | | | | | | | | |
| | JP-Energiesystemen | | | | | | | | | | | |
| | Kiwa | | | | | | | | | | | |
| | Nouryon | | | | | | | | | | | |
| | PBL | | | | | | | | | | | |
| | Recoy | | 5.1.2b,5.1.2i | | | | | | | | | |
| | S/Park | | | | | | | | | | | |
| | Shell | | | | | | | | | | | |
| | Smartport | | | | | | | | | | | |
| | Tata Steel | | | | | | | | | | | |
| | Technip | | | | | | | | | | | |
| | TNO | | | | | | | | | | | |
| | Vattenfall | | | | | | | | | | | |
| | Witteveen+Bos | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | |
| | TOTAL Cash + in-kind | | | | | | | | | | | |
| NWO contribution | Cash | | | | | | | | | | | |
| Totals 12e budgets | | | | | | | | | | | | |
| Co-financing % | Cofunding / total budget | | | | | | | | | | | |
| Budget per institute | | | 5.1.2e | | | | | | | | | |
| | Fontys | | | | | | | | | | | |
| | Hanzehogeschool Groningen | | | | | | | | | | | |
| | NHL Stenden | | | | | | | | | | | |
| | Rijksuniversiteit Groningen | | | | | | | | | | | |
| | Saxion | | | | | | | | | | | |
| | Tilburg University | | | | | | | | | | | |
| | Technische Universiteit Delft | | 5.1.2b,5.1.2i | | | | | | | | | |
| | Technische Universiteit Eindhoven | | | | | | | | | | | |
| | Universiteit Leiden | | | | | | | | | | | |
| | Universiteit Twente | | | | | | | | | | | |
| | Universiteit Utrecht | | | | | | | | | | | |

LINE 1: 5.1.2e

Personnel

| | | | | | | | |
|--------|-------------------------------|--|--|---------------|--|------------------|------------|
| 5.1.2e | PhD/PDEng/MD PhD | | | | | PhDs at unis | University |
| | Postdoc | | | | | postdocs at unis | University |
| | | | | | | | |
| | University of applied science | | | 5.1.2b,5.1.2i | | Fontys | HBO |
| | University of applied science | | | | | Lector Fontys | HBO |
| | University of applied science | | | | | Fontys | HBO |
| | | | | | | | |

Benchfees

| | |
|------------------------------|---------------|
| Benchfee for each PhD and PD | 5.1.2b,5.1.2i |
|------------------------------|---------------|

Materials

| | | | | | |
|--------|---|--------|--|--|------------|
| 5.1.2e | membrane stack + consumables | 5.1.2e | | | University |
| | electrochemical setup and consumables | 5.1.2e | | | University |
| | electrochemical benches, membrane-electrode assemblies, consumables | 5.1.2e | | | HBO |
| | in-situ cells, TEM | 5.1.2e | | | University |
| | electrochemical setup and consumables | 5.1.2e | | | University |

Travel and accommodation

| | | | | | |
|-----------|----------------------------|--|--|--|------------|
| 2b,5.1.2e | for each PhD in university | | | | University |
| | for each PD in university | | | | University |
| | for PhD in HBO | | | | HBO |
| | for postdoc in HBO | | | | HBO |

Publishing

| | | | | | |
|------------------------|---------------|--|--|--|------------|
| Open access publishing | 5.1.2b,5.1.2i | | | | University |
| Open access publishing | | | | | HBO |

TOTAL

| | Utrecht | 5.1.2b,5.1.2i | TU/e | Fontys | TOTAL |
|---------|---------------|---------------|------|--------|-------|
| PhD | 5.1.2b,5.1.2i | | | | |
| postdoc | | | | | |

5.1.2b,5.1.2i

RESEARCH LINE 2 5.1.2e

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phd
postdoc

Delft-TNW Delft-TBM Delft-IO Tilburg Saxion NHL TOTAL

Personnel

| | | | | | | | |
|--------|-------------------------------|--|--|--|---------------|------------------|------------|
| 5.1.2e | PhD/PDEng/MD PhD | | | | | PhDs at unis | University |
| | Postdoc | | | | | postdocs at unis | University |
| | | | | | | | |
| | University of applied science | | | | | PhD NHL | HBO |
| | University of applied science | | | | 5.1.2b,5.1.2i | Saxion | HBO |
| | University of applied science | | | | | Saxion | HBO |

Benchfees

| | | |
|------------------------------|---------------|--|
| Benchfee for each PhD and PD | 5.1.2b,5.1.2i | |
|------------------------------|---------------|--|

Materials

| | | | | |
|--------|---|--------|--|------------|
| 5.1.2e | data-sets collection (questionnaires, CBS data) | 5.1.2e | | University |
|--------|---|--------|--|------------|

Travel and accommodation

| | | | |
|-----------|----------------------------|--|------------|
| 2b,5.1.2e | for each PhD in university | | University |
| | for each PD in university | | University |
| | for PhD in HBO | | HBO |
| | for postdoc in HBO | | HBO |

Publishing

| | | | |
|------------------------|---------------|--|------------|
| Open access publishing | 5.1.2b,5.1.2i | | University |
| Open access publishing | | | HBO |

| | | | | | | | |
|---------------|--|--|--|--|--|--|--|
| 5.1.2b,5.1.2i | | | | | | | |
|---------------|--|--|--|--|--|--|--|

RESEARCH LINE 3: 5.1.2e

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Delft-3ME TU/e Hanze RUG TOTAL

Personnel

| | | | | | | | |
|--------|-------------------------------|--|--|--|---------------|------------------|------------|
| 5.1.2e | PhD/PDEng/MD PhD | | | | | PhDs at unis | University |
| | Postdoc | | | | | postdocs at unis | University |
| | University of applied science | | | | 5.1.2b,5.1.2i | Lector Hanze | HBO |
| | University of applied science | | | | | staff Hanze | HBO |
| | | | | | | | |

Benchfees

| | | |
|------------------------------|---------------|--|
| Benchfee for each PhD and PD | 5.1.2b,5.1.2i | |
|------------------------------|---------------|--|

Materials

| | | | | |
|--------|------------------------|--------|--|------------|
| 5.1.2e | consumables, materials | 5.1.2e | | University |
| | consumables, materials | | | University |
| | consumables, materials | | | University |
| | consumables, materials | | | HBO |

Travel and accommodation

| | | | |
|-----------|----------------------------|--|------------|
| 2b,5.1.2e | for each PhD in university | | University |
| | or postdoc in HBO | | HBO |

Publishing

| | | | |
|------------------------|---------------|--|------------|
| Open access publishing | 5.1.2b,5.1.2i | | University |
| Open access publishing | | | HBO |

| | | | | | | | |
|---------------|--|--|--|--|--|--|--|
| 5.1.2b,5.1.2i | | | | | | | |
|---------------|--|--|--|--|--|--|--|

RESEARCH LINE 4: 5.1.2e

phd
postdoc

Delft-3mE TU/e UT Saxion TOTAL

Personnel

| | | | | | | |
|--------|-------------------------------|--|--|---------------|------------------|------------|
| 5.1.2e | PhD/PDEng/MD PhD | | | | PhDs at unis | University |
| | Postdoc | | | | postdocs at unis | University |
| | University of applied science | | | 5.1.2b,5.1.2i | Saxion | HBO |
| | University of applied science | | | | Saxion | HBO |
| | Student HBO | | | | students Saxion | HBO |
| | University of applied science | | | | Saxion | HBO |

Benchfees

| | | |
|------------------------------|---------------|----|
| Benchfee for each PhD and PD | 5.1.2b,5.1.2i | ch |
|------------------------------|---------------|----|

Materials

| | | | | |
|--------|---------------------------------|--------|--|------------|
| 5.1.2e | consumables, chemicals, gases | 5.1.2e | | University |
| | consumables, chemicals, gases | | | University |
| | consumables, chemicals | 5.1.2e | | University |
| | consumables, chemical, gases, (| 5.1.2e | | University |
| | consumables, chemicals | 5.1.2e | | University |

Travel and accommodation

| | | |
|-----------|----------------------------|------------|
| 2b,5.1.2e | for each PhD in university | University |
| | for each PD in university | University |

Publishing

| | | |
|------------------------|---------------|------------|
| Open access publishing | 5.1.2b,5.1.2i | University |
|------------------------|---------------|------------|

5.1.2b,5.1.2i

phd
postdoc

| UT | Delft | TU/e | TOTAL |
|---------------|-------|------|-------|
| 5.1.2b,5.1.2i | | | |

Personnel

| | | | | | | | |
|--------|------------------|--|--|--|--|------------------|------------|
| 5.1.2e | PhD/PDEng/MD PhD | | | | | PhDs at unis | University |
| | Postdoc | | | | | postdocs at unis | University |
| | | | | | | | |

Benchfees

| | | |
|------------------------------|---------------|------|
| Benchfee for each PhD and PD | 5.1.2b,5.1.2e | each |
|------------------------------|---------------|------|

Materials

| | | | |
|--|-----------------------------------|--------|------------|
| 5.1.2e | consumables, membranes, chemicals | 5.1.2e | University |
| | consumables, chemicals, membranes | | University |
| | consumables, membranes, chemicals | | University |
| | consumables, chemical | 5.1.2e | University |
| NOTE: project-related goods and services are further specified in the proposal's WP Tasks indicated in () | | | |

Travel and accommodation

| | | |
|-----------|----------------------------|------------|
| 2b,5.1.2e | for each PhD in university | University |
| | for each PD in university | University |

Publishing

| | | |
|------------------------|---------------|------------|
| Open access publishing | 5.1.2b,5.1.2i | University |
|------------------------|---------------|------------|

Program management

5.1.2e

Utilisation and entrepreneurship

| | |
|--|------------|
| Communication means (website, newsletters (1.2b,5.1.2), policy briefs (1.2b,5.1.2)); 5.1.2e | University |
| Curriculum adaptations; 1.2b,5.1.2 graduation platforms (1.5.1.2b,5.1.2i) or each 5.1.2e | University |
| Educational activities towards professionals; 5.1.2b,5.1.2i for development and execution of 2 modules; 5.1.2e | University |
| Open innovation days (5.1.2b) and open lectures (1.2b,5.1.2i); 5.1.2e | University |
| Build demos on fieldlabs, industry testing, public acceptance; 5.1.2e | University |
| Patent management and protection; 1.2b,5.1.2i per year; 5.1.2e | University |
| Feasibility studies; 1.2b,5.1.2i per RL; 5.1.2e | University |

5.1.2e

Program management

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|--|------------|
| Management team meetings, WP leaders meetings, annual symposia, infrastructure, consumables; 5.1.2b/year; 5.1.2e | University |
| Consumables, support office, data management; 1.2b,5.1.2i/year; 5.1.2e | University |
| Formal project reporting to NWO; 1.2b,5.1.2i/year; 1.2b,5.1.2i in Y3 (midterm) and Y6 (end); 5.1.2e | University |
| Risk monitoring, reporting and contingency budget; 1.2b,5.1.2i/year; 5.1.2e | University |

Total cost

5.1.2b,5.1.2i

| | | | | | | | | | | |
|--|-----------------------------------|--|---------------|--|--|--|--|--|-------|--|
| | | | | | | | | | | |
| | Institute | | 5.1.2e | | | | | | TOTAL | |
| | | | | | | | | | | |
| | Fontys | | 5.1.2b,5.1.2i | | | | | | | |
| | Hanzehogeschool Groningen | | | | | | | | | |
| | NHL Stenden | | | | | | | | | |
| | Rijksuniversiteit Groningen | | | | | | | | | |
| | Saxion | | | | | | | | | |
| | Tilburg University | | | | | | | | | |
| | Technische Universiteit Delft | | | | | | | | | |
| | Technische Universiteit Eindhoven | | | | | | | | | |
| | Universiteit Leiden | | | | | | | | | |
| | Universiteit Twente | | | | | | | | | |
| | Universiteit Utrecht | | | | | | | | | |
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