

# CATALISTI

## Yearly Report 2017

### 1. Introduction

As of the beginning of 2017, CATALISTI is acknowledged by the Flemish government as Spearhead Cluster (SPC). This acknowledgement is formalised by a “Steunovereenkomst” with the administration, VLAIO, and a Clusterpact, which is a formal agreement with the Government, settling expectations and deliverables from the regional Government. Both agreements are mandatory to receive funding for the “basiswerking”, operational functioning at a maximum of 500k€/year upon the same amount of private income.

On top of this, the SPC can apply for “earmarked budget” for executing innovation projects. For 2017 there was no dedicated budget for CATALISTI. A budget of 50mio€ was available to share with other SPC’s and clusters.

### 2. Activity report

#### A. Governance:

##### I. **Changed articles:**

In BoD of February 22<sup>nd</sup> 2017 changes to the articles, related to the switch from the FISCH-organisation to CATALISTI, are approved and implemented. As of this date all members are “new” CATALISTI members and the BoD is represented according to the present Article. As such former Board members had to resign and some were installed. the present BoD consists of 16 companies, 5 universities, VITO, Centexbel and BBEPP.

“The Board of Directors approves the resignation of the following directors:

- Observers: EWI, AO, IWT (Tom Tournicourt, Bernard de Potter, Leo Van de Loock), BBL
- 
- managers appointed by the Government (Hugo Geerts, Wim Adriaens, Danielle Raspoet)
- Companies: Ecosynth, Tessengerlo Chemie, P&G

The Board of Directors approves the nomination of the following directors:

- VLAIO: observers (represented here by Bernard de Potter, Annie Renders, Corien Struyck: tbd ad hoc)
- KI: BBE-PP (Wim Soetaert)
- Companies:
  - Samsonite (represented here by Rik Hillaert) Beaulieu (represented here by Guy Verrue), Cargill (represented here by Geert Maesmans), Oleon (represented here by Dirk Packet), Havenbedrijf Antwerpen (represented here by Michel Leyseele), Borealis (represented here by Markus Schopf/Lieven Stalmans, ad hoc); Chemstream (represented here by Frank Devoeight) “

## II. Settlement of Flanders Plastic Vision (vereffening):

At the 30<sup>th</sup> of October 2017, the settlement of FPV, initialised upon the integration in FISCH in 2015, was officially finalised with a positive financial benefit to CATALISTI (see financials). As indicated in the Articles, a dedicated governance Steering Group continues the focus on Plastics and Plasticsconversion. The Chairman of this Steering Group is always an industrial member. At this moment, Stefan Tielen is elected as Chairman and as such is representing the Plastics industry in the BoD. He is also an active member of the Operational Daily Board. The Plastics Steering Group (PSG) has set the goal to support the target niche in becoming more innovative by supporting them in the process to identify the required skills and needs and also to support them in their go to market with “non traditional” solutions or products. To discuss and to define the new strategy, the PST gathered 4 times

## III. Approval of “Internal Procedure”.

As indicated in BoD of May 24<sup>th</sup>, 2017, the internal procedures are approved.

## IV. Official meetings

- Daily Board

The operational management is steered by the DB, as indicated in the articles, with an intentional monthly frequency. The DB joined 9 times in 2017 (18/01, 15/02, 15/03, 19/04, 17/05, 21/06, 12/07, 20/09, 18/10 and 06/12). Reports are distributed to the DB-members, as well as to the BoD members. At the start of CATALISTI, the DB members of FISCH continued as CATALISTI DB-members. Dirk Van Dyck (UAntwerpen retired and is replaced by Silvia Lenaerts, UAntwerpen and Ronny Vercauteren, Cargill, joined the DB to complete the value chain representation in DB. The present members are:

- a. Frans Dieryck: independent, Chairman BoD
- b. Jan Van Havenbergh: managing director, presiding DB
- c. Rudy Dams, 3M
- d. Thierry Collard, Solvay,
- e. Erik Moerman, Indaver
- f. Geert Van der Vorst, Janssen
- g. Ronny Vercauteren, Cargill
- h. Frank Beckx, essenscia
- i. Kristof Moonen, Eastman
- j. Bert Bouwman, Vito also representing BBE-PP and Centexbel
- k. Koen Debackere (delegated by Bert Lagrain when occupied), KULeuven, also representing UGent
- l. Sylvia Lenaerts, UAntwerpen also representing UHasselt and VUB

- Industrial Advisory Board:

A separate meeting among the industrial partners, upon their request, was organised in December 13<sup>th</sup>, 2017. Report is available on request. This meeting, gathering industrial core members of CATALISTI revisited and revaluated

CATALISTI innovation themes and strategic topics. The conclusion is that the present strategy is confirmed with a more pronounced focus on Process intensification and optimisation

## V. **Members:**

In 2017 we had a total of 94 members.

## B. Staff:

CATALISTI has deliberately chosen for staff partially consisting of employees directly on the CATALISTI payroll and experts hired-in from experienced organisations. These CATALISTI team members are hired through a long term agreement with the parent organisation, guaranteeing independency of this parent organisation. The present organisation is as follows;

- I. Jan Van Havenbergh, 100% Payroll, managing director
- II. Nick Verdonck, hired 15/03/2017, 100% payroll, management assistant
- III. Leentje Croes, former FISCH, 100% Payroll, catalyst
- IV. Karen Van Wesenbeeck, former FISCH, 100% Payroll, catalyst
- V. Wannes Libbrecht, hired 15/04/2017, 100% Payroll, catalyst
- VI. Johan De Houwer, hired 01/06/2017, 100% Payroll, catalyst
- VII. Luc Van Ginneken, seconded from VITO, 80%, catalyst
- VIII. Linsey Garcia-Gonzales, seconded from VITO, 80%, catalyst
- IX. Tine Schaerlaekens, seconded from essenscia, 50%, catalyst
- X. Els D'Hondt, during the first 5 months of 2017, Els and Linsey did split the workload of 80% FTE. Since June 2017, Els is no longer working for CATALISTI

## C. Project activity:

According to CATALISTI's strategy and following the approved procedure, innovation projects are exclusively industry driven, originated from or inspired by the 4 Innovation Theme's (Renewable Chemicals, Valorisation of Side Streams, Process optimisation and intensification and Advanced sustainable product). Mandatory at least 3 industrial partners have to be in the project, often along the value chain. The aim of each project is to realize tangible valorisation potential. This can, depending on the complexity and specificity of the project require either research support or development and upscaling support. The CATALISTI team is active in creating and finding the opportunities, the right industrial partners and to complete the total project file. If required, upon joint evaluation with the industrial partners, according to a proven procedure, the right non-industrial partners are identified and integrated in the project.

In 2017, the administration added an extra complexity due to three unexpected late calls for funding: one in the framework of EFRO for spreading technologies with the purpose of valorization and

commercialization within the Cluster policy, one for intercluster projects (between Spearheadclusters - SPC's or together with Innovative Business Networks - IBN's) and transition projects in a number of the Flemish transition priorities.

## I. **Intercluster:**

Late June a public call was announced, with limited tangible procedures and information, to enable research and development projects, either cooperative (3-5 companies) or collective (>8 companies). SPC's had to be involved as a supporting agent with guaranteed alignment with the Clusters strategy. Although all resourced were required to develop professional "propriety" CATALISTI projects, CATALISTI was able to endorse 5 projects, of which 2 were submitted in December on the 2018 budget year and as such not explicitly listed below (FutureProofRail and CORSET, respectively with IBN-Composites and SIM)

## II. **EFRO-call:**

End of MAY 2017, a call was launched to enable demonstration of technologies, with a mandatory endorsement of cluster organisations. CATALISTI proactively contacted all potential interested actors, being companies and knowledge institutes. Based on an objective semi-quantitative evaluation, 7 out of 10 submitted proposals were endorsed. 2 proposals got an extra positive note due to a full fit and alignment with the CATALISTI strategy and priorities. In total Flanders approved 8 projects of which 4 from CATALISTI, being 2 more "public/collective" initiatives and 2 more private/industrial projects.

## III. **Transition projects:**

Project related to energy, Industry 4.0 and circular economy

In view of our sustainability goals, most of CATALISTI projects can be qualified under the transition themes Circular Economy (renewables and valorisation of side streams). Nevertheless, we identified on top of that 3 projects in the Transition Call (open call).

Digichem is a project aimed to identify and to translate the hype on Industry 4.0 into tangible solutions for chemical and plastics industry. RECYCOAT is a Circular economy project tackling the important challenge on recycling and recyclability of coated materials.

CO2PERATE is a (strategic) research (SBO) project mapping and benchmarking the existing local expertise on CCU and was submitted as a transition project in circular economy.

#### IV. “Regular” projects:

CATALISTI brokered projects, with multiple companies and if required knowledge institutes, are funded from the Cluster budget”. Parallel companies can and do apply for project funding in the regular (regulier) VLAIO channel. In addition, one project with multiple companies was not accepted for submission in the cluster channel and was therefore redesigned and submitted and approved in the “reguliere” channel.

It should also be clear that due to our operational approach, CATALISTI is responsible for multiple regular uni- or bilateral industrial project applications. Every CATALISTI member has an individual Account Manager who is the single point of contact for this company regarding innovation support. This exceeds the CATALISTI focus and starting from the joint evaluation of the company’s strategic roadmap this often ends in support of research and development plans towards one or one or bilateral projects/contracts, brokered by the account manager.

In parallel the CATALISTI way of working triggers academic study in alignment with the CATALISTI strategy. At least 2 closely related projects; PWO on Sugar (SugarFLOW) and SBO on wood sidestreams (BIOWOOD), were initiated and granted. a first exercise made by KULeuven shows that there is much more leverage beyond this easy proven direct linked projects. It was shown that the topics identified and driven by industry, generating CATALISTI projects, initiated in KULeuven side projects derived from these projects, bilateral cooperation (incl Baekelandt) and grants fundamental research. Within the extended CATALISTI team, this exercise is also done by all other institutions and results will be bundled in a well-documented paper by end 2017.

#### V. Investment projects:

As the result of previous CATALISTI projects some companies apply for Strategic Innovation support (see Spaas)

#### VI. CATALISTI projects:

Projects under full control and brokerage of the CATALISTI team, according to the procedures on partner selection and project quality, scope, alignment with strategy and valorisation potential. These projects are funded out of the shared Cluster project budget. In 2017, CATALISTI brokered 9 projects of which 8 have been approved and the 9th is shifted to 2018 due to administrative complications.

In total we involved 22 different companies in the CATALISTI

|                         |          |                   |                  |
|-------------------------|----------|-------------------|------------------|
| Process Intensification | PIF      | HBC.2017.0<br>442 | ICON             |
| Sidestream Valorisation | SUMEMS   | HBC.2017.0<br>443 | ICON             |
| Sidestream Valorisation | CAPRA    | HBC.2017.0<br>440 | ICON             |
| Renewable Chemicals     | SweetEst | HBC.2017.0<br>598 | ICON             |
| Renewable Chemicals     | ATOL     | HBC.2017.0<br>596 | ICON             |
| Renewable Chemicals     | SPICY    | HBC.2017.0<br>597 | iSBO             |
| Renewable Chemicals     | BAFTA    | HBC.2017.0<br>599 | VIS project      |
| Renewable Chemicals     | TESPA    | HBC.2017.0<br>619 | COOP<br>regulier |

projects, of which 9 (41%) SME. This can be regarded as a huge success. In total CATALISTI got an approved funding budget of 9.7mio€. We want to stress that the high success rate of CATALISTI projects is due to the high upfront selectivity, the selective and restrictive approach of the broker involved and the in depth steering and guidance during the project description phase. The intense follow up of the team, in joining and organising the follow up of the proceedings, in evaluating the status (and advising VLAIO on renumeration) but also in taking corrective measures to all type of partners, guarantees also a good success rate of the initiated and funded projects.

In 2017 the former project instruments, offered by VLAIO were still used. The process of implementing new project types unfortunately created confusion and misunderstanding, but in the end together with the constructive cooperation of VLAIO this could be managed. For the start of 2018, new project instruments will be in place, mainly in line with the “regular” instruments with some extra constraints. 2018 will be used to evaluate this Spearheadcluster “toolbox”.

In parallel in 2017, the first test were implemented to realize a joint evaluating effort between VLAIO and the clusterteam. At first, CATALISTI assisted in identifying the appropriate objective evaluating experts, next an observer joined the oral evaluation procedure. It was the initial goal that the final evaluation advice, provided to the deciding Hermes committee was written as a joint effort, but in practice this process still has to be improved and fine-tuned. However, both VLAIO and CATALISTI are pleased and positive on this new procedure and want to continue on this cooperation.



The ad hoc, unannounced pop up of Transition, Intercluster and EFRO-call, in spite of the positive contribution, jeopardize a good cluster working. These projects did not follow the meticulous developed and proven CATALISTI-procedures and as such a lot of resources had to be spent to adapt project propositions, explain non CATALISTI partners our procedures, restrictions and quality rules. We do not want to lower our high quality standards. In the short time frame, induced by the late ad hoc announcement of these calls, this has been a resource consuming challenge and burden.

CATALISTI is not focussing on SBO projects and is more taking advantage of the combination of SBO and company research offered in the ICON project type. At the end of these projects, a quick implementation in industry is guaranteed, as experienced in demo and pilot infrastructure, under application in 2018. However, we selected one strategic topic in 2017, being sugar chemistry, on request of the industry and after an in-depth study executed by the CATALISTI team.

| <b>Titel/omschrijving</b>            | <b>betrokken actoren<sup>(2)</sup></b>                        | <b>Type activiteit<sup>(3)</sup></b> | <b>Oorsprong Middelen<sup>(4)</sup></b> | <b>Middelen (EUR)<sup>(6)</sup></b> |
|--------------------------------------|---|--------------------------------------|---|-------------------------------------|
| APPLISURF (HBC.2017.0704)            | Aanvrager FBBV, Uitvoerders BBEPP, UGent, Flamac, Thomas More | VIS-project                          | Intercluster project                    | 624 817                             |
| CORONA (HBC.2017.0683)               | Aanvrager en uitvoerder BIL                                   | VIS-project                          | Intercluster project                    | 310 352                             |
| Voedingsverpakkingen van de toekomst | Aanvrager FF, uitvoerder Pack4Food, FF & VIL                  | VIS-studie                           | Intercluster project                    | 124 803                             |
| RECYCOAT (HBC.2017.0686)             | Aanvrager en uitvoerder Centexbel                             | VIS project                          | Transitie project                       | 422 311                             |
| CO2Perate (HBC.2017.0692)            | Aanvrager Ugent, andere partners UA, KUL, VITO, BBEUPP        | SBO                                  | Transitie project                       | 2 612 101                           |
| DIGICHEM (HBC.2017.0689)             | Aanvrager Catalisti, uitvoerders Centexbel en Sirris          | VIS-studie                           | Transitie project                       | 124 944                             |

|                       |   |   |                |            |
|-----------------------|---|---|----------------|------------|
| TESPA (HBC.2017.0619) | B4Plastics -<br>Beaulieu, i-Coats,<br>Lawter, Nyobe | O&O COOP                                | Regulier VLAIO | 1 297 826  |
| BIOWOOD<br>(S003518N) | KULeuven, UA,<br>VITO                               | SBO                                     | FWO            | 2 233 473  |
| SUGARFLOW             | UCLL  | PWO                                     | UCLL           |            |
| STS Spaas Kaarsen     | Spaas Kaarsen<br>NV                                 | Strategische<br>Transformati<br>e Steun | VLAIO          | >8 000 000 |
| Upscaling Biowax      | Govi  | Intern project                          | Intern         |            |
| Zijtrack Carboleum    | Eastman   | Intern project                          | Intern         |            |
| DUVAL                 | AGFA  | EFRO                                    | Hermes/EFRO    |            |
| inQbet                | P&G   | EFRO                                    | Hermes/EFRO    |            |
| LignoValue Pilot      | VITO  | EFRO                                    | Hermes/EFRO    |            |
| Bio Base Flow         | BBEUPP  | EFRO                                    | Hermes/EFRO    |            |
|                       |   |   |                |            |

## D. Internationalisation activities:

The internationalisation strategy of Catalisti consists of two parts. In the first, we make the link with Interregional and European innovation support systems in order to expand the international cooperation of our member companies in R&D projects. In the second, we support our members with the internationalisation of their business in collaboration with FIT. Some key activities on internationalisation performed in 2017 are:

- I. Advocacy for European innovation roadmaps in line with our Flemish Innovation Agenda through Suschem Belgium and Cefic
- II. Supporting our member companies in attracting European subsidies by selection and communication of interesting calls, providing information on European information and matchmaking sessions and active support by account managers.
- III. Supporting FIT: According to the Clusterpact and the one on one agreement with FIT, CATALISTI is supporting FIT in its in- and outbound activities. In 2017, CATALISTI was participating in the round tables to identify and develop FIT's marketing strategy. The outcome is that sustainable chemistry, in the broadest definition became one of Flanders' flagships and will be positioned as such in the in 2018 developed marketing campaign "Vlaanderen Versnelt". Next we gave advice and support in companies or technologies with interest in investing in Flanders. We also joined and co-developed in FIT-supported exhibitions like EFIB.



- IV. CATALISTI has been invited by EWI to participate in the NRW initiative on trilateral cooperation in chemical industry between NRW, the Netherlands and Flanders. Together with essenscia, the Port of Antwerp and VITO, CATALISTI has actively participated in the PROGNOSE “pre-study” and consecutively is involved in the implementation of the outcome and in the workshops and roadmap exercises made in 2018.
- I. Participation as coordinating Flemish partner in The running initiative BIG Cluster, (BioInnovation Growth Mega-Cluster) has been continued.
- II. Ongoing efforts are made to be able to set up and execute cross bordering projects. Together with VLAIO we are trying to formalise project opportunities with Walloon and Brussels Region, in cooperation with DG06 and Greenwin. Contacts with Innoviris are planned.

## E. Front office activities:

During 2017, VLAIO imposed the SPC's to act as front office for VLAIO towards our “ecosystem”, independent of the engagement in the cluster. For the members of CATALISTI we are already actively providing this service, as indicated earlier. For the broader ecosystem we will have to evaluate during 2018 how this will impact the workload of the team.

## F. Communication activities

CATALISTI has the strategy to communicate at multiple levels:

- I. **Innovating and project interested members:** related to the Innovation Themes, content related topics, suggestions, studies and ideas are “pitched” at the so called “open consortium” meetings (OCM). Every Innovation theme has a dedicated OCM, somethings combined with another IT. In 2017 all 4 Innovation themes had their OCM.
- II. **Informational:** CATALISTI is committed to inform its members, either on own initiatives in research and development, as well as in “ecosystem related” topics, news or opportunities. As such we have a quarterly newsletter and a lively website, twitter and linkedin page Parallel we use the OCM to inform/educate our members on eg European project opportunities or legal/legislation aspects.  
CATALISTI has built a tradition of organising an informative and attracting Annual event, this year with a visionary talk of Sven Mastbooms.

- III. **CATALISTI has a strong direct contact strategy:** open approach and contacts with members and non-members, promoting and explaining CATALISTI's operational function
- IV. In 2017, in agreement with the Steering Group "Plastics" we actively participated in the Kunststoffbeurs. This regional event in Veldhoven (NL) attracts plastics converters from Holland, Belgium and Germany and is the reference event in this niche. CATALISTI had a booth and organised a plenary meeting and presentation moment over lunch during the 2 days of the event. This lunch event had a high amount of visitors and resulted in multiple CATALISTI contacts and even more bilateral contacts among the business visitors.
- V. We organised, together with BE-Basic and CLIB2021, the BIG C stakeholders meeting.

## G. Transition activities

regarding the circular economy transition (Vlaanderen Circulaire VC), CATALISTI has an active communication with the VC team, resulting in 5 proposed circular projects, of which 2 are actively being used in the communication plan of VC. On top of this, 2 Transition projects were approved (see above). Related to the transition VC, CATALISTI has regularly meetings with Go4Circle to align activities and to initiate initiatives.

Regarding Industry 4.0, Jan Van Havenbergh is requested to participate in his own name in the Key team Industry 4.0, representing Chemistry and Plastics. As such he is also monitoring all activities regarding Innovation and in relation with CATALISTI. This resulted in a dedicated I4.0 project (see DIGICHEM)

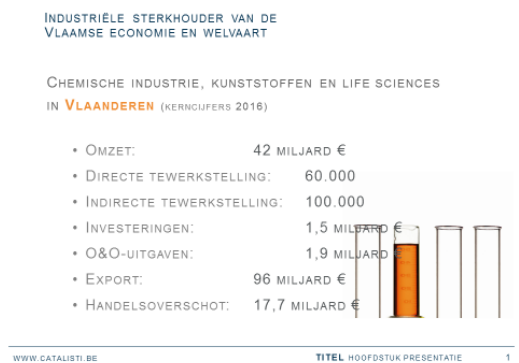
## H. Miscellanea

CATALISTI has a role as innovation "center point". As such CATALISTI is asked to be part of the Board of directors of Bluechem, the incubator focusing on sustainable chemistry by his managing director. He is also contacted to fulfil a similar role in the Ghent initiative CAPTURE. Parallel CATALISTI support activities in the knowledge institutes on regular base (presentations and talks eg Centrum for Sustainable Chemistry Ghent, open innovation lectures, Kékulé, ...)

### 3. Leverage

Innovation is by definition aimed to realise economical added value. Part of the base agreement between government and the industry, CATALISTI's activity has to create added value, the so called "leverage". It should be clear that due to the spread in activities, from active research and development support to communication and support in "go to market", quantification is hard to achieve, especially on large industry like ours with a high economic importance for Flanders (see fig 1 & 2).

However, the next 2 slides indicate that with 17 projects initiated and supported by CATALISTI, the projected return for Flanders is significant, expressed in created FTE (labour), investment and sales. Projected over the next 10 years, 1 euro invested by the government is expected to generate 25 private euros

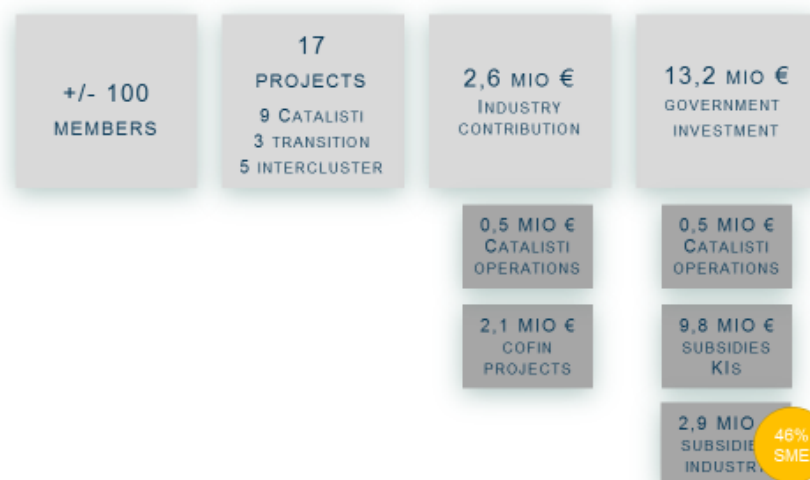


SECTOR IN VOLLE GROEI

|                    | Aandeel in verwerkende industrie | Groei sinds 2010 |   |
|--------------------|----------------------------------|------------------|---|
| Jobs               | 1/5                              | +1,3%            | ↗ |
| Toegevoegde waarde | 1/3                              | +9%              | ↗ |
| Export             | 1/3                              | +11%             | ↗ |
| Omzet              | 1/4                              | +16%             | ↗ |
| Investerings       | 1/3                              | +56%             | ↗ |
| Aantal patenten    | 1/3                              | +60%             | ↗ |
| O&O-uitgaven       | 2/3                              | +63%             | ↗ |

Bron: RSZ, AD Statistiek, NBB, EPO, essenscia analyse Statistiek 2016, behalve toegevoegde waarde (2015), S&D (aantal) en jobs (2017)

### 2017 FIGURED OUT



## 2017 FIGURED OUT



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At present multiple examples of succesfull projects already are visible:

- the opening of the pilot plant at Recticel as a result of the Alfibond project early 2018
- opening of the new application lab at Eastman as a result of the proven open communication and innovation strength in Flanders
- opening of the training lab at 3M, May 2018 as an indirect result of the proven open communication and innovation strength in Flanders
- multi million investment plan in Zwijndrecht for production technology as direct outcome of ATOM and Biovertol and lead plant for other 3M sites

## 4. Financial reporting

|  | 31.12.2017          | Budget 2018           |
|--|---------------------|-----------------------|
| <b>Bedrijfsopbrengsten</b>                       | <b>0,00</b>         | <b>1.123.333,00</b>   |
| Inkomsten  | 17.900,00           | 23.333,00             |
| Schenkeningen                                    | 32.858,43           | 0,00                  |
| Lidgeden   | 629.683,15          | 600.000,00            |
| Subsidies  | 481.926,03          | 500.000,00            |
| Gerecupereerde kosten                            | 13.070,09           | 0,00                  |
| <b>Bedrijfskosten</b>                            | <b>(883.418,71)</b> | <b>(1.104.871,00)</b> |
| Kosten projecten                                 | 0,00                | (101.667,00)          |
| Diensten en diverse goederen                     | (424.999,05)        | (459.700,00)          |
| Bezoldigingen en sociale lasten                  | (451.530,96)        | (542.029,00)          |
| Afschrijvingen                                   | (2.626,77)          | (1.225,00)            |
| Andere bedrijfskosten                            | (4.261,93)          | (250,00)              |
| <b>Bedrijfsresultaat</b>                         | <b>(883.418,71)</b> | <b>18.462,00</b>      |
| Financiële opbrengsten                           | 0,01                | 0,00                  |
| Financiële kosten                                | (370,98)            | (500,00)              |
| <b>Resultaat uit gewone bedrijfsuitoefening</b>  | <b>(883.789,68)</b> | <b>17.962,00</b>      |
| Uitzonderlijke opbrengsten                       | 0,00                | 0,00                  |
| Uitzonderlijke kosten                            | 0,00                | 0,00                  |
| <b>Resultaat van het boekjaar vóór belasting</b> | <b>(883.789,68)</b> | <b>17.962,00</b>      |
| Belastingen op het resultaat                     | (1.314,78)          | (1.305,00)            |
| <b>Over te dragen naar volgende boekjaren</b>    | <b>(885.104,46)</b> | <b>16.657,00</b>      |

With the full team engaged, the personnel cost is higher than last year, as expected since the full FTE-year has to be financed. Operational cost is higher due to the engagement taken in last years projects BAFTA and DIGICHEM, where CATALISTI bears part of the cofinancing cost. We also expect and agreed in the BoD that CATALISTI should be able to invest in non-fundable studies. Due to the full team on track, the working cost is also estimated to be higher. We are also asked to participate in the SUPERNOVA event, organised by the government.. Private income, mainly member fee and project participation cost is stable.

## 5. Conclusion and outlook

The start of CATALISTI has been a success. Due to the preliminary work done in getting the Spearheadcluster officially approved, the industrial enthusiasm was (and is) high which resulted in lots of good industrial projects and initiatives. Together with an open and constructive cooperation of all involved partners, being knowledge partners and VLAIO, a high rate of qualitative projects have been submitted and approved.

However, it has to be clear that due to the limited resources (FTE) and the intense work on all type of activities in 2017, own projects, EFRO, Intercluster and Transition projects, in combination with internationalisation and communication efforts, the project pipeline for 2018 looks good but still immature since most of the innovation projects in CATALISTI, bringing multiple companies and knowledge partners together, takes at least 9 months before resulting in a final project proposal.

Budgeting in a calendar year, with a full process of project work out, file finalisation and final approval (taking at least 3 months in VLAIO-process) as requested by VLAIO is, as for all SPC's, extremely difficult.

Regarding project instruments, we do think we have a workable portfolio. In general, Spearheadclusters instruments are those accessible for regular project for companies, extended with the earlier described ICON-project type, which is extremely useful for a research and innovation intensive cluster like ours. The alignment with the regular portfolio creates clarity but, a well performing Cluster organisation cannot completely take away all burden and complexity of an open innovation, multi company research and development project. In view of the potential gain for Flanders of companies working together, building up knowhow and developing new products out of their comfort zone with high risk is requiring a high and complex effort and follow up which is not enough awarded by incentives in the present project toolkit.

The new instrument for demo and pilot was long expected. For 2018 we have multiple single company proposals, resulting from earlier CATALISTI projects and potential cluster opportunities. These first applications will be the proof of the concept.