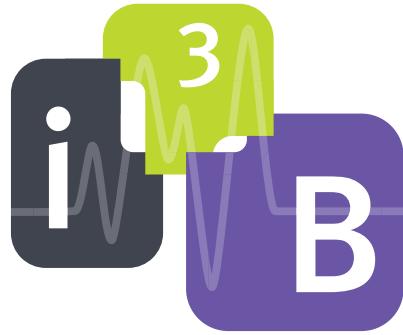


# ICT for Brain, Body & Behavior

## Workplan 2019



# CONTENTS

---

<b>Executive summary</b>	<b>2</b>
<b>1. Introduction</b>	<b>4</b>
1.1 Ambition	4
1.2 Mission	6
1.3 Application domains	6
1.4 Strategy	8
<b>2. Ecosystem</b>	<b>11</b>
2.1 Companies	12
2.2 Knowledge providers	13
2.3 End users	13
2.4 Network and sector organizations, alliances	13
2.5 i3B Lab	13
2.6 Field labs	14
<b>3. Workplan</b>	<b>15</b>
3.1 Connect	15
3.2 Innovate	16
3.3 Promote	18
3.4 Coach	19
3.5 (Field) labs	20
3.6 Network	20
3.7 Results	22
<b>4. Finance</b>	<b>24</b>
<b>5. Governance</b>	<b>27</b>

# EXECUTIVE SUMMARY

---

The i3B innovation network is in a transition period. Per 1 November 2018, Simon Haafs accepted a new job at RVO. We are pleased to welcome Henk Gerards as the new Managing Director per the 1<sup>st</sup> of January 2019. The new MD will focus on expanding the network and on adding value for i3B participants (large companies, SMEs and knowledge institutes). i3B strives for more collaboration and impact with our innovative ICT based solutions on brain, cognition, physiology and behavior. We will focus therefore on specific domains in line with needs of participants, and will collaborate in small groups (SIGs) to reach the required impact. Resulting also in more financial resources for the i3B Foundation, to run the network. The strategy and expected results for 2019 are:

## Strategy 2019

1. **Focus and impact.** i3B will focus her attention to 3 specific domains; Human Factors, Healthy brain, body and lifestyle and Animal behavior & welfare
2. **Organization.** Network meetings, Special Interest Groups (SIGs) and project consortia in these domains form the core of the i3B network. All i3B activities are aligned with SIGs .
3. **Agendas.** SIGs will influence, set innovation agendas on these domains, if possible with help of regional, national and EU networking subsidies.
4. **Projects.** The i3B Foundation will execute the EFRO projects '*Food & Cognition*' and '*x3D Animal monitoring*' and will be more often beneficiary in future projects.
5. **Expansion.** Retain and expand i3B with larger companies and knowledge institutes in line with SIG goals. In 2018, Thales agreed to participate in i3B thanks to the SIG model of collaboration, which gives us confidence for attracting more large participants in the future.
6. **Collaboration.** Look for cross overs, close collaboration with other innovation networks and programmes.

## Activities

1. **Connect.** i3B will organize several SIG meetings and three events.
2. **Innovate.** i3B will be actively engaged/leading in a minimum of four projects in 2019, if possible with i3B as a beneficiary. Besides, i3B will perform project matchmaking for participants.
3. **Promote.** i3B will publish 5 newsletters, 10 posts on LinkedIn groups, and will be present with booth, pitch or side tracks at three events.
4. **Coach.** i3B will investigate the possibility to organize innovation workshops for i3B participants.
5. **(Field) Labs.** Feasibility and application for EFRO field lab application for animal monitoring. No other lab activities.
6. **Expand.** Add large(r) companies, compensate for and retain knowledge institutes in line with SIG strategy and added value partners.

## Result

The activities mentioned above should cause i3B to form a more and more successful innovation system with societal and business impact in the domains of Human Factors, Healthy brain, body and lifestyle, and Animal monitoring & welfare.

I would like to reach out to every single one of you in the i3B network, from student to scientist, entrepreneur, board members and above all participants who will make this inspiring journey in 2019 possible. I am looking forward to connect and innovate.

Enjoy reading,

Henk Gerards  
*Managing Director*

March 2019

## CHAPTER 1

# INTRODUCTION

### 1.1 Ambition

ICT for Brain, Body and Behavior (i3B) aims to be the European project and network organisation of ICT companies and knowledge institutes in the field of brain, cognition, physiology and behavior.

*'Our participants jointly investigate, develop and commercialize software tools and practical solutions for accurate measurement, powerful analysis and meaningful feedback.'*

A selection of ICT solutions out of the i3B network to illustrate the abilities of the network:

#### Human Factors



Flight simulator - NLR



Maritime Simulator - MARIN



Flight simulator - Thales



Dispatch Control Room Training Game - Flavour



fNIRS Device -  
Artinis



Porti for measuring EEG, ECG, EMG, movement, position, etc. - TMSi



Pro 3D Eye Tracker - Smart Eye

## Healthy brain, body & lifestyle



**Food choice simulator** - Noldus IT, WUR, Donders Institute, Artenis and TMSi



**Cognition test** - Noldus IT, WUR, Donders Institute, Artenis and TMSi



**FOVEA Food Advisor** - Noldus IT and WUR.



**Food Experience System** - Noldus IT, WUR, Donders Institute, Artenis and TMSi



**Sport and rehabilitation**

## Animal behavior & welfare



**Laying hen tracking** - WUR



**TrackLab** - Noldus IT



**CowTracker** - SODAQ



**Poultry Result management software and data acquisition software** - FarmResult

## 1.2 Mission

The i3B mission is to connect science and business, Innovate through joint R&D projects, accelerate business and training within the network, facilitated by (field) labs.

## 1.3 Application domains

The i3B participants jointly investigate, develop and commercialize software tools and practical solutions for accurate measurement, powerful analysis and meaningful feedback with societal impact in three domains: Human Factors, Healthy brain, body & lifestyle and Animal behavior & welfare.



The three i3B domains: Human Factors, Healthy brain, body & lifestyle, and Animal behavior & welfare.

All activities in 2019 will be focused on these specific application domains, compare chapter 3.

### 1. Human Factors

Determine cognitive, mental (stress) workload for drivers. Drivers like in cars, trains, boats and airplanes. The need exists for a non-invasive, objective, validated, automatic measurements of cognitive workload. Participants such as Thales, NLR, MARIN, Noldus IT, Eagle-science, Elitac, TNO, Donders Institute, Radboud University and others collaborate in the i3B Special Interest Group Human Factors to set the human factors ambition and develop (R&D) programs to tackle the challenges as stated in the white paper '*Measuring the Cognitive Human*', composed by the SIG (click [here](#) to download the white paper).

In consultation with the SIG members the domain can be broadened towards monitoring workers that risk work related illnesses due to hard mental and/or physical working conditions including ICT for recovery and training to prevent future recurrence of the same work related problems.



Workload monitoring.

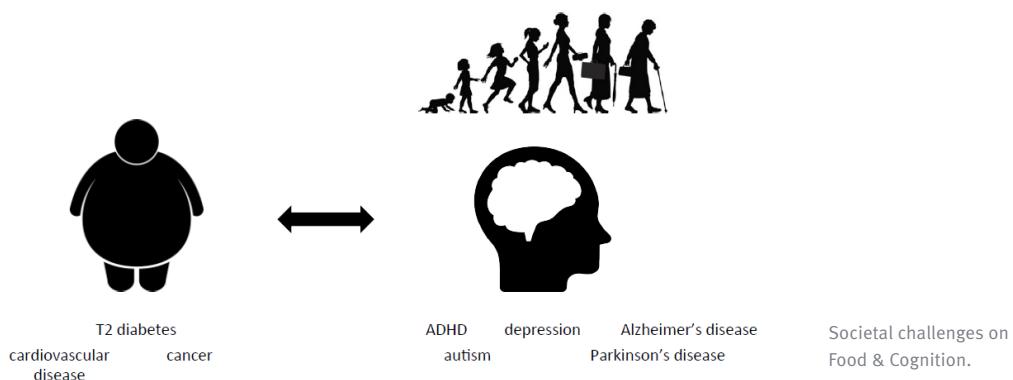
## 2. Healthy brain, body & lifestyle

i3B participants jointly investigate, develop and commercialize software tools and practical solutions for accurate measurement, powerful analysis and meaningful feedback on human behavior. Healthy and personalized food consumption, optimized sports & movement activities, personalized treatments and programmes for mental illnesses will enhance the possibility for individuals to positively influence their healthy way of living themselves. These solutions are supported by advanced and user friendly ICT.



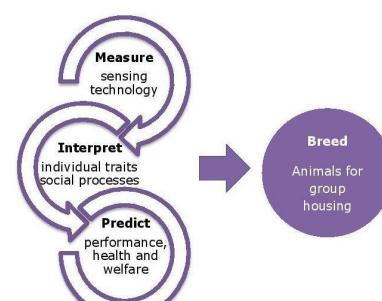
### Food & Cognition

Health and eating behavior are closely linked. Scientists at the Donders Institute for Brain, Cognition and Behavior and various SMEs study the brain processes underlying healthy versus unhealthy food choices as well as how food choices affect brain health. Besides, this recently approved EFRO project focuses on how our social environment influences our eating behavior. i3B will execute the project management for this project. Besides this project is well aligned with and complementary to OnePlanet initiative of IMEC, Radboud University and Wageningen University & Research.



## 3. Animal behavior & welfare

i3B participants jointly investigate, develop and commercialize software tools and practical solutions for accurate measurement, powerful analysis and meaningful feedback on animal behavior. Animal behavior is studied in a wide variety of ways. Wildlife monitoring solutions are key to preserve endangered species. In livestock, pigs, cows and chickens are monitored with sensors and camera images for growth, fertility and health.



Measure, Interpret and Predict animal performance, health and welfare.

The recently approved EFRO x3D project focuses on ICT based solutions to measure, interpret and predict animal behavior and wellbeing. The x3D project initiates, promotes and strengthens cooperation between (SME) business, knowledge institutions and end users. This leads to x3D innovations, resulting in a contribution to the economic and social development of the East Netherlands region. Project activities consist of connecting stakeholders through round tables, inspiration and matchmaking events, developing valorisation outlines, workshops with groups of SME entrepreneurs, and finally the promotion of the x3D cluster.



## 1.4 Strategy

With executive board members i3B executed a SWOT analysis. The SWOT summary is stated hereunder. From the confrontation matrix, also part of the SWOT analyses, i3B derived the strategy for 2018 and 2019, which is described in the six bullet points stated hereunder:

### SWOT

#### Strengths

1. Unique network due to cross-overs ICT, Brain, Body & Behavior.
2. Ability to connect Science and Business.
3. Strong domain focus, scientific values and high quality innovative products.

#### Weaknesses

1. Strong dependence on a few big financiers, mainly Knowledge institutes.
2. Weak financial base, low manpower.
3. Limited track record of projects from which i3B is paid.
4. Few larger companies with impact among i3B participants.

#### Opportunities

1. Global attention for Brain/Body/Behavior, Sensor Technology, Internet or Things and our application domains.
2. Growing need for joint/open innovation and public-private partnerships and urge/coercion from NL government and subsidies towards more public-private partnerships.
3. Grant for i3B by taking part in R&D projects because SMEs do not like business as dissemination.
4. Special Interest Groups.

## **Threats**

1. Slight willingness to pay for i3B services.
2. Increasing competition with other cluster organizations.

## **Strategy 2019**

### **1. Focus & impact**

i3B will focus her attention to more specific domains, in line with needs, activities and domains of our participants; Human Factors, Healthy brain, body & lifestyle and Animal behavior & welfare. Please compare section 1.3 for details. The aim is to achieve more matches between science and business, more joint projects leading to more social and business impact for the i3B network.

### **2. Organization; Special Interest Group model**

i3B established Special Interest Groups (SIGs) on Human Factors and Animal monitoring in 2017. The SIG collaboration model is characterized by a demarcated ambition/innovation agenda, a relatively small group of i3B participants that trust each other, with knowledge and impact in the specific domains and last but not least a mentality of getting things done. The SIG review were for a part positive, but were faced their limitations in its organization. i3B and the newly assigned managing director will take a look at the alignment of the three domains, the SIGs and projects. Please compare chapter 3 (activities) for details.

### **3. Set, influence innovation agendas**

i3B was founded by the National Initiative Brain and Cognition. Herewith i3B is closely connected to the The Hague strategic agendas. i3B would like to set, have however more influence on innovation agendas, leading to more impact for the i3B network. The strategy is that SIGs define their own demarcated ambition/innovation agendas and apply for so called (EU) network subsidies. These subsidies enable parties to prepare innovation agendas and form, expand the SIG network with relevant other partners in the Netherlands and Europe. The innovation agenda forms the umbrella for follow up valorisation projects. When the value of the innovation agenda is recognized and backed up by the relevant partners, the social and business impact can and will be significant.

The status of the innovation agendas and network subsidy applications differ per SIG. The SIG Human Factors prepared a white paper, which has been published in 2018. The SIG Animal monitoring applied for a network subsidy beginning of 2018, which has been granted by EFRO. In the domain Healthy brain, body & lifestyle, i3B applied for a network subsidy on Food & Cognition in 2018, which has also been granted by EFRO.

#### **4. Expand i3B network with larger companies, knowledge institutes**

In recent years the i3B network grew substantially, mainly with knowledge institutes and small companies. Science and business matches and joint projects were however mostly realized with a very limited number of larger SME companies within the i3B network. With these larger parties was a fit with knowledge institutes on innovation roadmap, means, continuity requirements etc. The strategy is to further expand the network with larger companies. It makes matchmaking and establishing joint projects more opportune. The larger companies are merely selected based on added value to realize innovation agendas and valorization projects agreed within SIGs.

#### **5. Expand number of projects in which the i3B Foundation is financed**

In the past i3B performed mainly matchmaking for participants to join (EU) project consortia. The i3B Foundation was first time project partner in 2016 to connect the i3B ICT network with Health and Food innovation networks (C.I.A.L.E. project). Benefits of being a project partner are amongst others; recognition, promotion, influence on innovation agendas, realizing cross overs and herewith strengthening the network and multiplying the financial means contributed by participants.

In 2018, i3B focussed on submitting two network enhancing grants with i3B as main partner: Food & Cognition and x3D Animal monitoring. These two grants have been approved by EFRO. Besides, i3B will execute matchmaking/partner search for projects initiated by other parties. i3B has a limited role in submitting these projects.

#### **6. Look for cross over, close collaboration with other innovation networks**

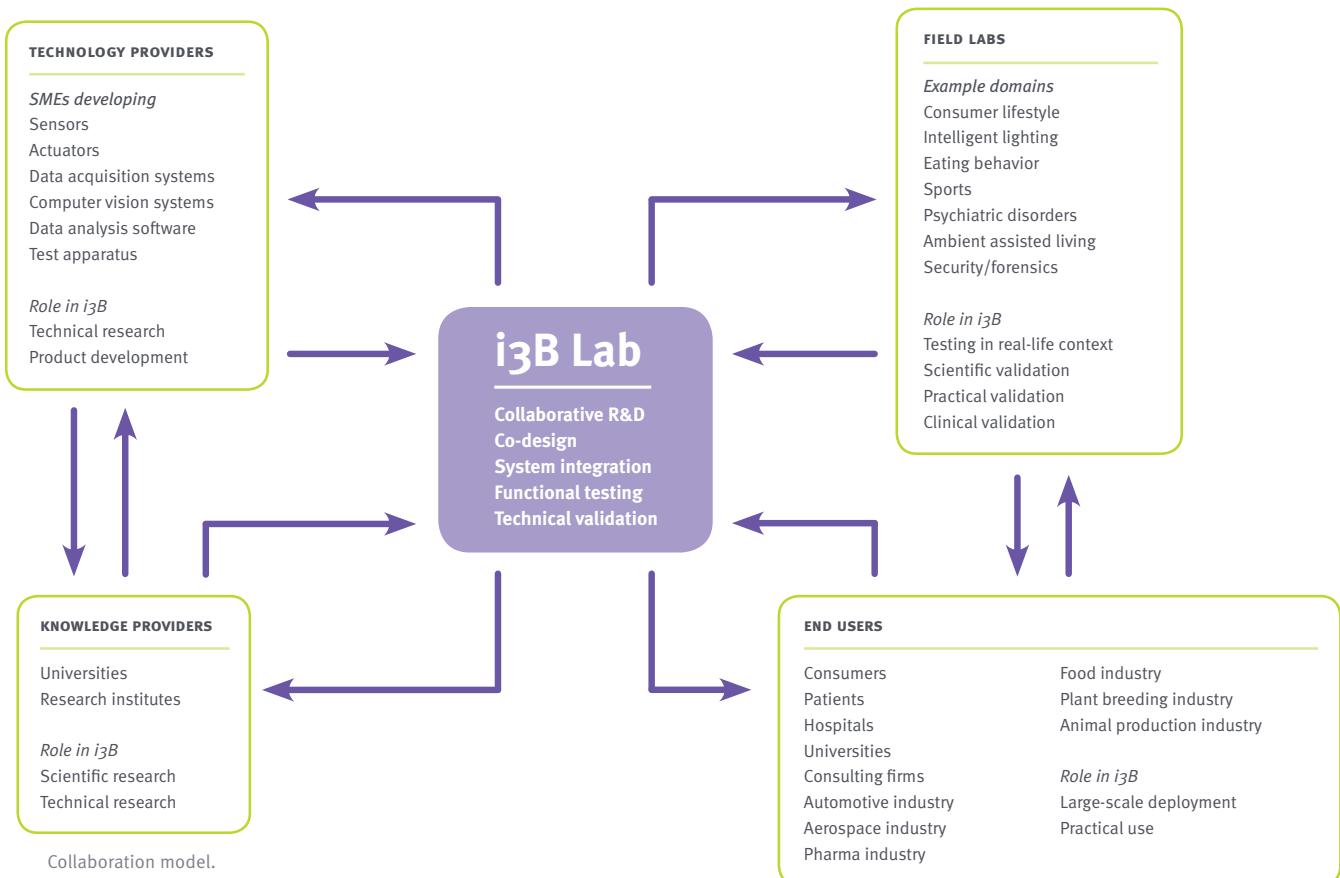
i3B participates in other innovation networks '*with closed wallets*'. i3B works together with other innovation networks in projects to realize cross overs. i3B would like to expand this type of project collaboration. Last but not least, we will investigate even closer types of collaboration with other networks.

These activities should lead that i3B forms a more and more successful innovation system with societal and business impact on animal monitoring, food & cognition and workload.

## CHAPTER 2

# ECOSYSTEM

The diagram below is a schematic representation of the i3B model of collaboration between knowledge institutes, high-tech companies and end users. The collaboration is aimed at joint research, development and commercialization. The i3B network can utilize (field) lab facilities to exchange ideas, develop prototypes, test and finally introduce to the world innovative ICT solutions for brain, body and behavior.



## 2.1 Companies

Technology providers (i.e. businesses) are the participating high-tech companies that develop ICT tools (hardware or software, components or systems) with which specific brain, body and behavior aspects can be measured and analysed. The design of these tools is based on the research conducted by our knowledge providers.



## 2.2 Knowledge providers

Research at universities and institutes (knowledge providers) from different disciplines results in scientific knowledge about brain, cognition, physiology, and behavior, the measurements needed for this and the desired read-out parameters. The knowledge institutes in the i3B network also provide the latest knowledge in sensor technology, computer vision, artificial intelligence, Internet of Things and Big Data analysis.



## 2.3 End users

i3B collaborates closely with end users (user centered design) to develop innovative ICT solutions. Eventually, i3B tools are sold to consumers, hospitals, universities, and companies.

## 2.4 Network and sector organizations, alliances

This category comprises network organizations, platforms and associations that collaborate with i3B to strengthen the innovation capacity in the domains of i3B.



## 2.5 i3B Lab

In the i3B Labs the prototypes of the technology providers are tested in relevant but small-scale lab environments with representative test subjects. The prototypes are technically validated, debugged and iteratively improved. As soon as they are robust enough they are offered to the next link in the chain: field labs.

## **2.6 Field labs**

Field labs are controlled environments, modelled after the real world. In these domain-specific research facilities, the i3B tools are validated in field tests, clinical studies and valorisation with end users before they are launched commercially.

The labs can either be linked to i3B (such as the User Experience Lab capturing human-machine interaction), or they can be independent, such as the Philips Experience Lab for consumer lifestyle, and Sportinnovator Centre Papendal.

## CHAPTER 3

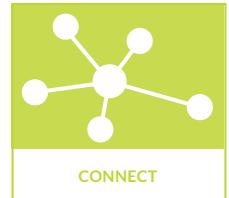
# WORKPLAN

---

The i3B Foundation undertakes a range of activities for the benefit of participants and end users. Every section starts with a definition of the activity, the added value for the network, and finally a provisional but non-exhaustive overview of activities in 2019. The activities concern:

### 3.1 Connect

The network connects science and businesses to exchange ideas, knowledge and trends and to collaborate. i3B organizes events like i3B Café, annual symposium, seminars, symposia, thematic workshops, brainstorms and joint tradeshow presentations.



Added value for the network:

- Collaborate with business, knowledge institutes, end users, government.
- European network. The i3B network comprises companies from the Netherlands, Sweden, the Czech Republic and Poland. Companies from other countries are welcome to join.
- One stop shop to exchange ideas and build trust with partners to collaborate.
- Connect scientific disciplines like computer science, electronic engineering, neuroscience, and psychology.
- Get access to the latest technologies.

#### Workplan 2019

i3B focusses on specific domains; Human Factors, Healthy brain, body and lifestyle and Animal behavior & welfare, compare section 1.3. i3B established Special Interest Groups (SIGs) on Human Factors and Animal monitoring in 2017. The SIG collaboration model is characterized by a demarcated ambition, a relatively small group of i3B participants with knowledge and impact in the specific domains and last but not least a mentality of getting things done. The preparations for a third SIG on Healthy brain, body and behavior have started, aligned with our recently approved EFRO Food & Cognition project. We would like to launch the SIG Healthy brain, body and behavior in 2019. In chapter 5 (Governance) the current SIG members are listed.

In 2019, all activities are aligned with these specific domains and pre-agreed within SIGs. i3B will organize SIG meet ups, approximately two to three times per year per domain. i3B will organize one stand-alone event in 2019: the annual symposium. At the annual symposium, a selection of i3B Scientific Advisory Board members will advise start-ups and SMEs in a '*pitch & brainstorm*' break-out session.

### Results

- i3B will organize a minimum of three Special Interest Group meetings per domain in 2019 and establish more SIGs in the future.
- i3B will organize a minimum of events in 2019:
  - a. Healthy brain, body & lifestyle: Food & Cognition event
  - b. Matchmaking event on Animal behavior & welfare
  - c. Annual symposium (with Scientific Advisory Board brainstorm session for SMEs and start-ups)

All events are pre agreed within our Special Interest Groups.

## 3.2 Innovate

i3B participants become partners in regional, national or European R&D project consortia with financial support from programs such as Horizon 2020, ITEA and INTERREG. The i3B innovation portfolio consists of an R&D project overview with new project ideas, submitted applications and successful and rejected applications.

Depending on the number of i3B participants involved in an R&D project, strengthening the collaboration and impact of the network, i3B can provide support services like:

1. **Partner search.** National and international partner search to complete your R&D consortium.
2. **Consortium building.** Align the visions of knowledge and business partners on the scope of an R&D proposal.  
Examples are the '*IPC*' subsidy application where 20 SMEs of i3B collaborate to develop innovative ICT solutions to monitor Brain, Body and Behavior. Furthermore in an EU funded project C.I.A.L.E. where the full i3B ICT cluster is connected with a Food and Health innovation network to realize cross overs related to healthy lifestyle.
3. **Dissemination.** i3B can write the dissemination plan for an R&D proposal and can carry out dissemination activities in a project: organize workshops and events, write newsletters and spread results through channels like social media.



4. **Valorization and business modelling.** i3B assists with finding new business models for the valorisation of scientific knowledge. A typical example is a European Cooperation in Science and Technology (COST) networking grant recently submitted on ICT and Food.
5. **Other services upon request.**

The added value for the network:

- Expand collaborative research with high-tech companies and knowledge institutes.
- Access to new R&D facilities with unique instrumentation.
- Share (field lab) facilities.
- Increase sales of research products to knowledge institutes.
- Develop jointly integrated ICT solutions.
- New network for knowledge institutes, increase of PhD students and equipment, resulting in new scientific knowledge.
- Companies benefit from their new network contacts, gaining ideas and the possibility to develop innovative ICT solutions for Brain, Body and Behavior.

### **Workplan 2019**

i3B wants to realize (international) network projects in the specific domains Human Factors, Healthy brain, body and behavior and Animal behavior and welfare in 2019. i3B should be a beneficiary in these projects and projects are well aligned with SIG priorities. The focus is first of all on network enhancing projects because it enables the network to connect with relevant parties in the Netherlands and Europe and set, influence innovation agendas. Typical subsidized costs for network projects are for meetings, travelling, setting innovation agenda. Based on the established networks, international consortia are quickly formed for follow up valorisation projects.

The status and approach per domain:

- **Human Factors.** The SIG presented a first version of the workload white paper in 2018. By the end of 2019, the SIG will submit a project application on strengthening the network or a valorization project.
- **Healthy brain, body & lifestyle.** In the recently approved Food & Cognition EFRO network subsidy, i3B will act as project manager. i3B will establish a SIG on Healthy brain, body & lifestyle and executes project activities such as event organization, dissemination, matchmaking.
- **Animal behavior & welfare.** In consultation with the animal SIG, we investigate three network strengthening applications: the EFRO cluster & network subsidy application x3D, which has been approved. Other options are a lecturer platform network subsidy and an EFRO field lab subsidy for the CARUS facilities in Wageningen.

## Results

- i3B will establish a SIG on Healthy brain, body & lifestyle.
- i3B performs project matchmaking for at least eight unique i3B participants.
- i3B will submit a minimum of two subsidy applications with its participants.

### 3.3 Promote

i3B companies develop new ICT products for brain, body and behavior. Typical R&D project results are products such as Drive-Lab and the Virtual Shop. i3B promotes these products in relevant domains and industry sectors, by attending, presenting, or booth sharing at conferences and organizing matchmaking events with end users.



Added value for the network:

- Get exposure of novel products and prototypes to press contacts, prospects and customers.
- Export of expertise, research methods, techniques and tools to emerging markets.
- Receive discounted services for product development and commercialization.
- Share booth solutions at conferences.
- Promote i3B integrated solutions and create the business environment that positions the i3B participants to sell their innovative ICT for brain, body and behavior products.
- Promote i3B participants as subcontractors in R&D projects: SMEs can deliver their ICT products to the project consortium without being a consortium partner in the R&D project.

### Workplan 2019

A strong i3B brand will enhance name recognition, potential member referrals from current i3B participants and international awareness of the network, which will facilitate business development for participants. i3B will publish 5 newsletters, 10 posts on LinkedIn groups and will promote the i3B network with a booth/pitch at three events related to Food & Cognition, Human Factors and Animal behavior & welfare. Besides, more frequent participant communication will be maintained by a minimum of 10 mailings to i3B participants, sharing the latest news, project opportunities, calls, workshops and events.

## Results

- Publish 5 newsletters, 10 posts on LinkedIn groups, present with booth, pitch or side track at three events.
- 10 mailings to participants with latest news, project opportunities, calls, workshops, and events.

## 3.4 Coach

i3B wants to educate and offer learning, coaching courses for participants and end users for example in the use of products and systems, R&D methodologies, certification and entrepreneurship.

Added value for the network:

- Train students, researchers and entrepreneurs at reduced fees.
- Learn with participants you already trust, accelerating the learning process.
- Learn with participants from the same i3B domain, who understand your business and research.
- Learn, coached by other entrepreneurs who were already successful in exploring the path.



Two learning examples:

- Assistance with product certification (e.g. Medical CE, Class 1) for developers of hardware products.
- Assistance with product localization (e.g. Chinese software user interface).

## Workplan 2019

i3B organized a pilot coaching program on innovation in 2018 in close collaboration with innovation networks Health Valley, Food Valley NL and innovation consultancy firm DOON. The i3B staff participated in a '*train the trainer*' course and organized a win a coach competition. The consortium pre-selected 6 applicants who joined the innovation coaching day in 2018. After pitches, the jury selected the two best innovations for coaching support: Bereslim and Biovolt. The companies Bereslim and Biovolt received coaching in 2018, as well as participants Artinis and Orikami. The pilot will be evaluated in 2019. The aim is to preserve the training knowledge for the i3B network. i3B would like to organize a coaching '*canvas*' session for all entrepreneurs from the i3B network mid-2019, again with above mentioned partners. Last but not least, in 2019 i3B will investigate the possibilities to offer workshop activities such as business model canvas, value proposition canvas, agile and lean start-up to participants

## Result

- Evaluate pilot innovation program.
- Investigate possibilities to offer workshop activities such as business model canvas, value proposition canvas, agile and lean start-up to participants.

## 3.5 (Field) labs

The i3B network can utilize i3B (field) lab facilities to exchange ideas, develop prototypes, test and finally introduce innovative ICT solutions for Brain, Body and Behavior to the world.

Added value for the network:

- Testing your product in new application areas, like sports.
- Design, management and exploitation of joint laboratory facilities.
- Usability testing services for product developers.



### Workplan 2019

- i3B will investigate the expansion of the CARUS Animal Monitoring lab in Wageningen by an EFRO field lab subsidy, as stated in section 3.2. Besides this project, i3B will not organize any other activities for the i3B lab or other field labs.

## Results

- Feasibility check and if feasible application of EFRO field lab application for animal monitoring lab (as stated in section 3.2). No other activities for the i3B lab or field labs in 2019.

## 3.6 Network

i3B expands the international network with participants that add value to the network. i3B also promotes the network with a higher brand awareness with end users and participants.



Added value of a large and coherent network:

- Larger (societal) impact of the i3B agenda.
- Attract funding for R&D projects.
- Attract more end users for business creation.
- Attract (European) participants that add value to the network.
- Receive higher discounts for joint purchase.

i3B wants to expand the network with:

- European based companies to be able to form European R&D project consortia. In European programs like Horizon 2020, as a rule of thumb, a '*maximum*' of three SMEs per European country can participate.
- SMEs with large R&D personnel capacity to collaborate, besides the SMEs with main interest to utilize i3B as a platform to sell their products. By doing this, i3B can connect relevant networks and build strong R&D consortia.
- SMEs that add value to the network to be able to develop and promote the best ICT solutions for Brain, Body and Behavior. i3B wants to attract participants that bring new technology, new know-how, new measuring and influencing behavior solutions and participants that enable new market access opportunities for the network.
- Large companies and knowledge institutes to participate.
- Participants active in domains Human Factors, Healthy brain, body & lifestyle and Animal behavior & welfare.

### Workplan 2019

- In recent years the i3B network grew substantially, mainly with knowledge institutes and small companies. Science and business matches and joint projects were mostly realized, however with a limited number of larger SME companies in the i3B network. There was a fit between these participants on innovation roadmap, means, continuity, and impact. A few knowledge institutes participants decided not to continue the participation due to the limited number of matches and joint projects.
- i3B decided end 2016 to hire a business developer for two days a week with the goal to expand the network, realize extra projects. i3B was not able to find the right candidate. Instead i3B gave two project development assignments to consultants;
  1. Review COST application, and
  2. Develop project '*bronst detection*' with SIG consent.i3B still awaits the COST application result. The '*bronst detection*' assignment did not lead to a project yet.
- i3B opened the network for large companies 1,5 years ago. i3B is proud to announce that mainly due to the new SIG organizational approach the first agreement with a large company, Thales, to participate in i3B is a fact.
- The strategy for 2019 is to further expand the network with larger companies, to retain current and compensate for the loss of with new knowledge institutes. The selection and approach of new participants will be completely based on added value to realize the Special Interest Groups goals. In this transition period towards the Special Interest Group organization of the network, the aim for 2019 is to realize a participants fees revenues of 100.000 euro.

## Result

- Add large(r) companies.
- Compensate for and retain knowledge institutes.
- All acquisition in line with Special Interest Group ambitions.
- Realize participants fees of 100.000 euro.

## 3.7 Results

Ambition	Results by 31 <sup>th</sup> December 2019
Connect	<ul style="list-style-type: none"><li>— i3B will organize a minimum of three Special Interest Group meetings per domain in 2019 and establish more SIGs in the future.</li><li>— i3B will investigate the establishment of a '<i>participant only</i>' portal on the i3B website, where participants will find each other's contact details and where i3B will share subsidy calls and project opportunities.</li><li>— i3B will organize a minimum of events in 2019:<ol style="list-style-type: none"><li>a. Food &amp; Cognition event</li><li>b. Matchmaking event on animal monitoring</li><li>c. Annual symposium (with Scientific Advisory Board brain-storm session for SMEs and start-ups)</li></ol>All events are pre agreed within our Special Interest Groups.</li></ul>
Innovate	<ul style="list-style-type: none"><li>— i3B will establish a SIG on Healthy brain, body &amp; lifestyle. Start project Food &amp; Cognition as first project</li><li>— i3B performs project matchmaking for at least eight unique i3B participants.</li><li>— i3B will submit a minimum of two subsidy applications with its participants.</li></ul>
Promote	<ul style="list-style-type: none"><li>— Publish 5 newsletters, 10 posts on LinkedIn groups, present with booth/pitch at 3 events.</li><li>— 10 mailings to participants with latest news, project opportunities, calls, workshops, and events.</li></ul>
Coach	<ul style="list-style-type: none"><li>— Evaluate pilot innovation program.</li><li>— Possibly offer workshop activities such as business model canvas, value proposition canvas, agile and lean start-up to participants.</li></ul>

---

<b>(Field) labs</b>	<ul style="list-style-type: none"><li>■ Feasibility check and if feasible application of EFRO field lab application for animal monitoring lab (as stated in section 3.2). No other activities for the i3B lab or field labs in 2019.</li></ul>
<b>Network</b>	<ul style="list-style-type: none"><li>■ Add large(r) companies.</li><li>■ Compensate for and retain knowledge institutes.</li><li>■ All acquisition in line with Special Interest Group ambitions.</li><li>■ Realize participants fees of 100.000 euro.</li></ul>

---

# CHAPTER 4

# FINANCE

---

The table below gives an overview of the i3B Foundation budget: past, current and future.

	2012	2013	2014	2015	2016	2017	2018	2018	2019
<b>REVENUES</b>							Budget	Prognosis	Budget
Participant fees <sup>1</sup>	0	74,500	79,750	100,303	92,410	117,613	100,000	106,794	100,000
Services	0	0	0	0	0	0	8,000		5,000
Subsidies <sup>2</sup>	40,000	40,000	0	0	20,326	39,309	42,000	42,000	70,000
<b>Total in euro</b>	<b>40,000</b>	<b>114,500</b>	<b>79,750</b>	<b>100,303</b>	<b>112,736</b>	<b>156,922</b>	<b>150,000</b>	<b>148,794</b>	<b>175,000</b>
<b>EXPENSES</b>									
Personnel <sup>3</sup>	37	78,137	39,340	102,962	105,962	122,490	115,000	123,794	151,500
Sales <sup>4</sup>	0	2,975	2,764	10,369	9,514	5,836	15,000	15,000	6,500
Office <sup>5</sup>	0	3,500	5,650	10,641	-27	398	0	0	0
General <sup>6</sup>	6,174	15,381	13,714	9,113	9,463	22,894	10,000	10,000	10,000
Project costs <sup>7</sup>							10,000	0	7,000
<b>Total in euro</b>	<b>6,211</b>	<b>99,993</b>	<b>61,468</b>	<b>133,085</b>	<b>124,912</b>	<b>151,618</b>	<b>150,000</b>	<b>148,794</b>	<b>175,000</b>
<b>Result in euro</b>	<b>33,789</b>	<b>14,507</b>	<b>18,282</b>	<b>-32,782</b>	<b>-12,176</b>	<b>5,304</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Equity in euro</b>	<b>33,789</b>	<b>48,296</b>	<b>66,578</b>	<b>33,796</b>	<b>21,620</b>	<b>26,924</b>	<b>26,924</b>	<b>26,924</b>	<b>26,924</b>

<sup>1</sup> Participation fees by companies and knowledge institutes.

<sup>2</sup> Subsidy revenues, project management of R&D projects.

<sup>3</sup> Personnel - director, secretary, marketing (includes freelancers), business developers.

<sup>4</sup> Sales - Symposia visits, stands, gifts for speakers.

<sup>5</sup> Office - accommodation, office supplies.

<sup>6</sup> General - accountant, advice.

<sup>7</sup> Project costs are part of EFRO subsidy.

## Explanatory notes

### — *Financial statements 2012-2017*

Financial statement figures based on approved accountants report.

### — *Prognosis 2018 (31-12-2018)*

#### — Revenues

- Participants. The revenue was set for € 150.000 for 2018. With the revenues from the two recently approved EFRO subsidies and the CIALE project, we expect revenues of €148.794
- Subsidy. The approved European C.I.A.L.E. subsidy is €92,000 for 2,5 years, started in May 2016. The revenue prognosis for 2017 is €40,000. For the recently approved x3D and Food & Cognition project, the subsidy in 2019 will be €70.000

- Expenses
  - In the course of the year, i3B decided to hire two business developers on project basis instead of a business developer on the payroll (12K). The primary goal for the new business developers was to realize projects. The idea was that once a project was successful, new parties would join i3B or pay success fee.
  - Project costs. i3B hired an innovation coach in line with C.I.A.L.E. project plan (10K).
  - i3B hired a consultant to assist with financials (3K), partly also lowering accountant costs.
- Expected equity

€26,934 per 31 December 2018.

#### ***Budget 2019***

- Revenues
  - Participants. In 2018 four SMEs unfortunately ended their participation, worth €3,500. i3B thanks these companies for their support in the last years. The ambition for 2019 is set at €100,000.
  - Services. i3B submitted a COST application in 2018. i3B will charge a success fee to non i3B participants who joined proposal, if proposal is a success. Total value €3,000 euro. i3B would like to expand on this service in the future. i3B made an introduction fee arrangement with innovation consultancy firm DOON. Anticipated total value of €5,000 for 2018 based on agreed assignments with Noldus IT and VISIO.
  - Subsidy. €35,000 revenues of the approved C.I.A.L.E. subsidy allocated to 2018 + €7,000 anticipated of already submitted applications, MIND project in Horizon 2020 and the submitted COST application with results expected in January 2019. i3B also secured €70,000 per year for the next three years with the recently approved EFRO applications x3D and Food & Cognition, similar to C.I.A.L.E. project
- Expected result

Break-even.

Based on recent years i3B doesn't expect large growth in participant revenues. The limited growth is based on anticipated new participants who add value to Special Interest Groups. This should also compensate for partners that leave outside the Special Interest Groups span. i3B expect and would like to expand revenues from services, mainly the success fees for initiated projects. i3B will closely monitor the budget to enable to take measures swiftly!!!

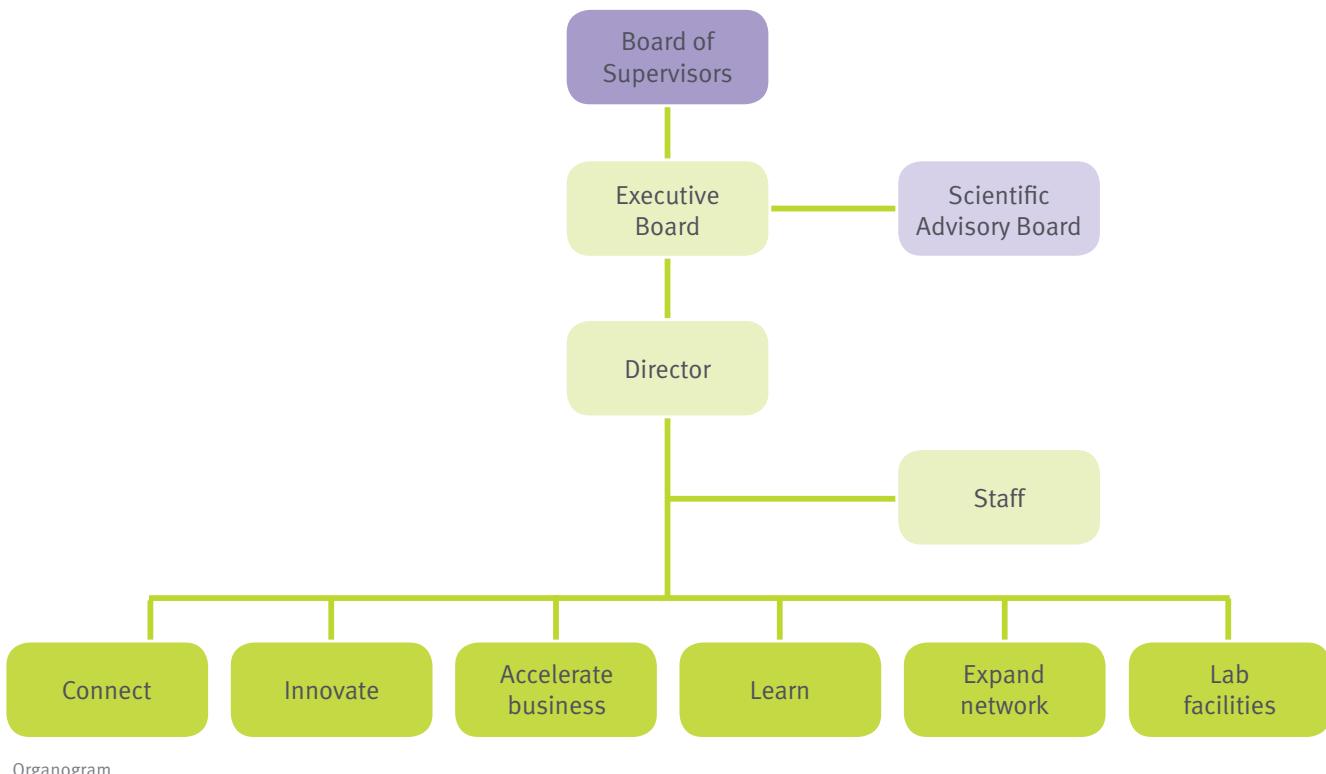
## *Prognosis 2020 and further*

- Revenues
  - Participants. The assumption is that current participants will continue to participate in the network with a minimal growth of the network.
  - Services. i3B wants to expand on the success fee revenues from non i3B participants joining projects initiated by i3B, or where i3B did matchmaking for projects initiated by others.
  - Subsidy. Subsidy project revenues will grow, up to the same level as participant revenues. i3B will also continuously investigate more structural financing from the National Initiative Brain & Cognition and municipality of Wageningen.
- Expenses
  - The personnel ambition is to expand the staff members to 1,8 fte and if it is possible on a financially also find a part time business developer to expand the network and projects in the domain of Animal behavior & welfare.
  - Other expenses are extrapolated.

## CHAPTER 5

# GOVERNANCE

i3B is a foundation with a not-for-profit organization. The i3B governance is shown in the organogram below. The green blocks at the bottom are the six activity lines.



### Staff

Henk Gerards, *Managing Director*

Jan-Pieter Meijering, *Communications Associate*

Business developer/manager Animal monitoring & welfare (*vacancy, start 2019*)

## **Executive Board**

Lucas Noldus, Noldus Information Technology, *chairman*  
Ron van Rossum, Amsterdam Economic Board, *treasurer*  
Jan van Erp, TNO, *secretary*  
Nico Delleman, Sport Innovation Support & Network, *member*  
Marc Grootjen, Eaglscience, *member*

## **Board of Supervisors**

Leon Kenemans, University Utrecht, *chairman*  
Menno van Manen, Wageningen UR, *member*  
Hans Abbink, Almende BV, *member*  
Marieke van den Hoeve, Philips Research, *member*

## **Scientific Advisory Board**

Egon van den Broek  
Toon Cillessen  
Matt Coler  
Peter Desain  
Bert Don  
Vanessa Evers  
Rainer Goebel  
Kees de Graaf  
Jaap Harlaar  
Leo den Hartog  
Paul Havinga  
Frans van der Helm  
Hermie Hermens  
Dirk Heylen  
Bob van Hilten  
Ralph Jaspers  
Mina Johnson  
Pieter Jonker  
Hans Korteling  
Ben Kröse  
John-Jules Meyer  
Kees Nieuwenhuis  
John van Opstal  
Herbert Prins  
Nick Ramsey  
Jacomine Ravensbergen

Maarten van Sinderen  
Monique Smeets  
Jacques Terken  
Jan Theeuwes  
Hans van Trijp  
Peter Veltink  
Remco Veltkamp  
Bart van de Warrenburg  
Willem Verwey  
Richard Wezel  
Carolina Weerth

**Special Interest Group i3D – ICT voor Diergedrag, Diergezondheid, Dierenwelzijn**

Kees Lokhorst, WUR  
Lenny van Erp, HAS Den Bosch  
Hans Hopster, WUR  
Kathalijne Visser, Aeres  
Andrew Spink, Noldus IT  
Gerard van Essen, i3B  
Richard ten Cate, FarmResult  
Jan-Willem Smeenk, SODAQ  
Bas Rodenburg, Utrecht University

**Special Interest Group – Human Factors**

Emily Jacometti, Flavour  
Andrew Spink, Noldus IT  
Marc Grootjen, Eaglescience  
Lucas Noldus, Noldus IT  
Rolf Zon, NLR  
Johan de Heer, Thales  
Kees Nieuwenhuis, Thales  
Leo Hoogendoorn, TMSi  
Jos van Doorn, MARIN  
Merijn Klarenbeek, Elitac  
Jan van Erp, TNO  
Pieter Medendorp, Donders Institute  
Colin Guiking, MARIN

**i3B Foundation**  
Nieuwe Kanaal 5  
6709 PA Wageningen  
The Netherlands

Phone: +31 6 1711 7654  
E-mail: [info@i3b.org](mailto:info@i3b.org)

© 2019 i3B Foundation. All rights reserved.