

# Capitalization Northern Ireland **neuroATLANTIC**

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FINAL REPORT

27 MAY 2022



CLUSTER  
SAÚDE DE  
GALICIA



**Interreg**  
Atlantic Area  
European Regional Development Fund



# CONTENTS

Meeting participants .....	2
Agenda.....	3
Capitalization meeting.....	4
Cluster Saúde de Galicia, CSG.....	4
Healthcare Analytics.....	4
Neurovalens .....	5
Head Diagnostics .....	6
Discussion .....	7
Conclusion .....	8

## MEETING PARTICIPANTS

Entity	Contact
<p><b>Cluster Saúde de Galicia, CSG</b></p>  <p>CLUSTER SAÚDE DE GALICIA</p>	<p><b>Gisela García Álvarez</b> – Managing Director <a href="mailto:gerencia@clustersaude.com">gerencia@clustersaude.com</a></p> <p><b>Rebecca Eckhardt</b> – Business Development <a href="mailto:business@clustersaude.com">business@clustersaude.com</a></p> <p><b>Adrián Dorgambide González</b> – Technician of Internationalization <a href="mailto:internacional@clustersaude.com">internacional@clustersaude.com</a></p>
<p><b>Xunta de Galicia</b></p>  <p>XUNTA DE GALICIA</p>	<p><b>Alberto Fuentes Losada</b> – General Secretary of the Ministry of Health Galicia</p>
<p><b>Medicine Optimisation Innovation Centre (MOIC)</b></p>  <p>moic Medicines Optimisation Innovation Centre</p>	<p><b>Dr Michael Scott</b> – Director</p> <p><b>Anita Hogg</b> – Lead for Pharmaceutical Clinical Effectiveness</p>
<p><b>Invest Northern Ireland</b></p>  <p>Invest Northern Ireland</p>	<p><b>Anne Trainor</b> – Client Executive</p> <p><b>Emma Naismith</b> – Regional Director Southern Europe (online)</p> <p><b>Cheryl Wallace</b> – Client Executive (online)</p>
<p><b>Healthcare Analytics</b></p>  <p>HEALTHCARE ANALYTICS</p>	<p><b>Brendan Crossey</b> – Founder and CEO</p>
<p><b>Neurovalens</b></p> <p><b>NEUROVALENS</b></p>	<p><b>Jason McKeown</b> – CEO</p>
<p><b>Head Diagnostics</b></p>  <p>Head Diagnostics</p>	<p><b>David van Zuydam</b> – CEO</p>
<p><b>University College Cork</b></p>  <p><b>UCC</b> University College Cork, Ireland Coláiste na hOllscoile Corcaigh</p>	<p><b>Christian Waeber</b> – Professor of Pharmacology (online)</p>

# AGENDA

**Friday, 27 May 2022**

**Time: 09.30 – 12.00**

Invest Northern Ireland – Boardroom  
1 Bedford St, Belfast BT2 7ES, United Kingdom

**Welcoming and roundtable introduction**  
Dr Michael Scott – Director MOIC

**Capitalization presentation Cluster Saúde de Galicia**  
Rebecca Eckhardt – Business Developer at CSG

**Presentation Healthcare Analytics**  
Brendan Crossey – Founder and CEO

**Presentation Neurovalens**  
Jason McKeown - CEO

**Presentation Head Diagnostics**  
David van Zuydam - CEO

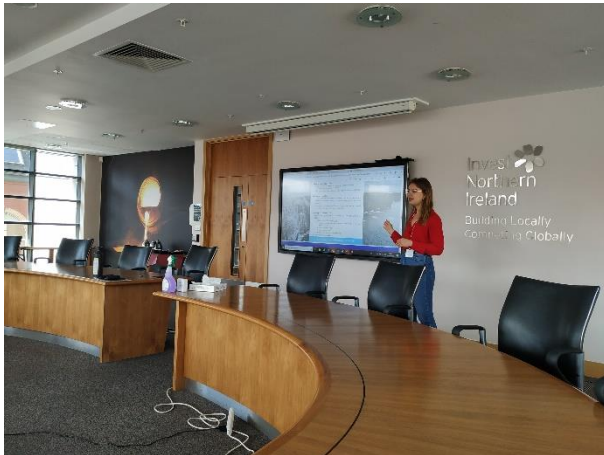
## **Discussion**

*Led by:* Gisela García Álvarez – Managing Director, CSG  
*Participants:* Rebecca Eckhardt – Business Development, CSG  
Adrián Dorgambide González – Technician of Internationalization, CSG  
Alberto Fuentes Losada – General Secretary of the Ministry of Health Galicia  
Dr Michael Scott – Director, MOIC  
Anita Hogg – Lead for Pharmaceutical Clinical Effectiveness, MOIC  
Anne Trainor – Client Executive, Invest Northern Ireland  
Brendan Crossey – Founder and CEO, Healthcare Analytics  
Jason McKeown – CEO, Neurovalens  
David van Zuydam – CEO, Head Diagnostics

## **Closing**

# CAPITALIAZATION MEETING

## Cluster Saúde de Galicia, CSG



As part of the Learning Expedition to Northern Ireland that was organized in collaboration with the Medicine Optimisation Innovation Center (MOIC), the Cluster Saúde de Galicia (CSG) hosted the fourth capitalization meeting for the neuroATLANTIC project. The objective of this meeting was to capitalize the neuroATLANTIC project to the interested stakeholders located in Northern Ireland. To do so, this meeting included the general presentation of the project to transfer the research results and knowledge obtained so far to the meeting participants.

Moreover, the meeting participants were able to present their company, ask questions, and create new connections. This hybrid meeting took place on Friday, May 27<sup>th</sup> at the Invest Northern Ireland building in Belfast and allowed interested participants unable to travel to Belfast to join via Microsoft Teams.

After Dr Michael Scott opened the meeting and all meeting participants introduced themselves during a quick introduction round, Rebecca Eckhardt, the Business Developer at the CSG, presented the neuroATLANTIC project. She explained the reason why the neuroATLANTIC project was created, who the project consortium members are, and what the goals of the project are. She then briefly introduced the CSG by explaining the three pillars it follows:

1. *Collaboration* → the CSG is an active member of multiple international and national networks and has strong established partnerships with multiple organizations globally.
2. *Innovation/Internationalization* → the CSG has established the innovative platform **RIES**, hosts **Learning Expeditions** as its internationalization strategy, and has created the **ITGALL Living Lab** network.
3. *European projects* → the CSG participates in multiple European projects, such as IN4AHA, the New European Bauhaus project, and neuroATLANTIC. Moreover, the CSG will start a new project (Senior Eco'Nect) in June 2022.

Rebecca then moved on to discuss some statistical data about the global and UK neurology field to showcase the importance of addressing neurological diseases with a project such as neuroATLANTIC. From these numbers, it became clear that neurological disorders impose a high burden on the UK healthcare system. As a result, the UK is already implementing different healthcare strategies.

Rebecca ended the presentation by giving a summary of the main research results achieved so far and by stating the advantages of being part of the neuroATLANTIC platform.

## Healthcare Analytics

*Click here for the presentation slides*

Brendan Crosse, who is the CEO of Healthcare Analytics and Nightingale, started his presentation by sketching out the importance of addressing dementia. He explained that dementia is the number one reason for death in the United Kingdom and that to this day there is no standard way of correctly and

timely diagnosing the disease. Therefore, Healthcare Analytics works together with Ulster University and C-TRIC to assist in transforming the diagnosis of dementia.



Nowadays, patients are sometimes given a false-positive result, which has to change. Healthcare Analytics is digitizing 4000 patient records, but collecting, reviewing, and “cleansing” them. The company also develop a digital app for the Realtime collection of assessment data. For this app, the company currently have over 100 data points.

- To further improve the app, they need to add biomarkers in the system → they continually add things to the app, but they do not take anything out of the system.
  - Pilot feedback showed that they need to collect additional information during interviews.
- Some of the features they collect for the app are:
  - Medical and clinical history
  - Family history
  - And more
- They are also developing a machine-learning algorithm to diagnose dementia.

Finally, based on the questions that were asked after the presentation, it became clear that Healthcare Analytics obtained funding via European projects and Invest Northern Ireland. Moreover, Healthcare Analytics is only focused on dementia and has no experience in brain injury.

### Neurovalens

*Click here for the presentation slides*



Jason McKeown, CEO of Neurovalens, started his presentation by introducing himself. He then talked about Neurovalens and explained what they do at the company. They have designed cranial nerve stimulation technology to activate brain neurons accurately and efficiently without using implanted devices.

- Their technology is non-invasive → they have created a head device that is low-risk and stimulates the brainstem and hypothalamus.
  - It “fires” the neurons → the device should be worn 30-60 minutes per day.

Jason then talked about their Modius device range that is focused on three areas: insomnia (doing a study with Ulster University), anxiety, and PTSD.

- With Modius there is a potential to create a closed-loop approach to neurological treatments using AI analysis of sleep architecture changes and autonomic stress response. This AI

analysis helps to automatically adjust the stimulation parameters. The AI assessment can be implemented in all the modius devices.

Moreover, they have a range of non-invasive medical devices that treat significant global problems. These devices can be distributed by doctor prescription, over the counter, or as a consumer product. They are aiming for FDA approval by 2023/2024.

- They are currently operating in the US, but they are trying to bring the devices to the UK and EU markets as well → but first focusing on FDA approval, so they will start with the UK and EU markets in 2024.
- They are currently based in San Diego and Belfast.

In terms of dementia and the device, many people ask if it can directly influence the progress of dementia. Jason explained that they do not have evidence of this, but as the device helps to stimulate the neurons and the hypothalamus, they hope it helps with preventing the special orientational problems (visual aspect).

- The ultimate goal of the company is to help prevent neurodegenerative diseases.

Then the meeting participants asked some questions to Jason. From these questions, it became clear that the headband device can also be used for Parkinson's Disease. Moreover, they hope that their devices could help in slowing down the process of Alzheimer's and Parkinson's if detected early on.

To measure the success of its devices for anxiety, Neurovalens uses the GAD-7 score.

Gisela asked Jason how they would like to further develop. Jason explained that they currently have funding in place but that they are interested in collaborating with other companies that could bring an interesting aspect to their business.

- For the development of the wristwatch to the Modius device range, Neurovalens possibly could be collaborating with Samsung → Brendan suggested another company that could be helpful for this.

## Head Diagnostics

*Click here for the presentation slides*



David van Zuydam, CEO of Head Diagnostics, started his presentation by introducing himself and the device they have been developing at his company, called iTremor. This device is the world's first intrinsic physiological biomarker to diagnose brain disease and injury. It could be seen as a thermometer for the brain.

- It is a non-invasive device that will transform the diagnosis and management of brain diseases, with a special focus on Parkinson's Disease (PD).
  - Although their focus is currently on PD, they have some clinical studies planned for MS, TBI

and Stroke as well.

- Their objective biomarker was developed in collaboration with leading researchers in degenerative disease and brain injury.

- The company is focused on obtaining FDA clearance and CE mark approval → expected to reach this at the end of 2023.

The market of the iTremor is very broad as it can be used in hospitals, nursing homes, by neurologists, doctors, and more. It can also measure if people are reacting well to drugs that are being developed.

- The device will offer a quick diagnosis and is there to improve patient care. Neurologists normally do not work with biomarkers (they look at the patient and make use of different scans, which are very expensive).
- It measures Ocular Microtremor (brainstem function) in three seconds.
  - 80Hz is a health frequency, 35-60Hz is the OMT range for PD, and 20-35Hz is a state of unconsciousness.
- The device is connected to a Neuro Cloud Platform.

Based on the questions that were asked by the meeting participants, it became clear that the iTremor offers great value for the price it is set at. Moreover, since the device is very easy to use, in the future it might be used by patients themselves. Finally, the frequency that is shown on the display of the device is related to the severity of the disease. Thus, the lower the number the worse the prognoses.

### Discussion

Gisela started the discussion by explaining that these European projects are a good way to get to know new companies stakeholders and find possible collaborations. Thus, besides the knowledge transfer and sharing of the research results of the neuroATLANTIC project, this capitalization process also contributes to creating a collaborative neuroATLANTIC platform with different entities operating in the neurology field that will be beneficial for future endeavors.

She then explains that after the first phase of the neuroATLANTIC project, which will end in December 2022, the project consortium is going to apply for a project sequel. This allows for new companies to join the project consortium and a change in project activities. Moreover, as a result of the Next-Gen Funding, Interreg will have four times more budget, which is an interesting factor for companies from France, Ireland, Spain, and Portugal. Due to Brexit, the UK is no longer eligible. Nevertheless, CSG is open to identify other ways of collaborations for research as the CSG can offer several services of interest for SMEs.





## CONCLUSION

On May 27<sup>th</sup>, 2022, the CSG organized in collaboration with MOIC a capitalization meeting for the European Interreg project neuroATLANTIC. This meeting was part of the Learning Expeditions to Northern Ireland and took place at the Invest Northern Ireland building in Belfast. The objective of this meeting was to capitalize the research results obtained by the neuroATLANTIC consortium so far, establish new connections, and allow the meeting participants to identify new collaboration possibilities. Based on feedback provided by the neuroATLANTIC project consortium, this meeting was hybrid and included participants that joined online via Microsoft Teams and in-person.

During the meeting, a lot of information was shared between the participants about the neuroATLANTIC project, the companies that joined the meeting, the CSG, and the global and UK neurology field. After the presentations of the CSG, Healthcare Analytics, Neurovalens, and head Diagnostics, possible collaboration and future steps were explored during a discussion. Some conclusions from this capitalization meeting include:

- Neurological diseases impose a high burden on the national healthcare system of the United Kingdom. Therefore, the country has adopted multiple strategies to address these diseases and improve the care provided to patients.
- The neurological devices market in the UK is very competitive, which results in many big players in the global neurology sector being present in the country.
- Healthcare Analytics is trying to transform the diagnosis of dementia with the creation and development of its app and machine learning algorithm.
- Neurovalens has created a range of devices that replace deep brain surgery with non-invasive devices that stimulate the neurons and hypothalamus.
- Head Diagnostics has developed the world's first intrinsic physiological biomarker device that can diagnose brain disease and injury in three seconds.
- During the capitalization meeting, new connections were established between the meeting participants.
- CSG can offer several services of interest for SMEs such as preparing Learning Expeditions, facilitating B2B, setting public-private consortiums for collaborative projects, etc.