



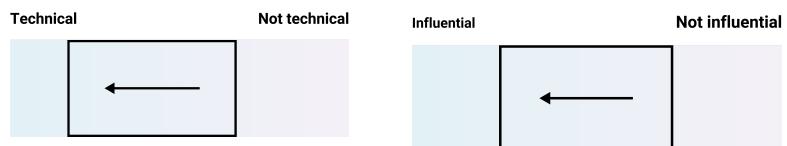
Noel, the «Neuroscientist»

≡ Occupation	PhD, Neuroscientist
≡ Tagline	«Does it work and how well does it work?»
↗ Related to Overview (Column)	
↗ Related to User Story Database (1) (Personas)	<p><u>As a new user I want to be able to set up a new account and receive a message that my account has been created and set up correctly.</u>, <u>As an existing user I would like to log into my account. If I am not registered or if I forget my login credentials, I would like to be registered or have my details recovered.</u>, <u>As a registered user, I would like to see my registration information and if a device is connected to my account.</u>, <u>As a new user, I would like to register my device as soon as possible to get online and start playing around with it.</u>, <u>I would like to get access to raw data and run my experiment setup outside of the platform and sync what is happening in the experiment and the data stream.</u> Sync over LSL. For example <u>PsycoPy</u>, <u>Matlab</u>, <u>Python</u>, <u>OpenVibe</u>., <u>If the impedance is off, I need suggestions on what to do to improve the signal quality.</u> Clean ears, different ear tip size, video explanation - Education module., <u>I would</u></p>

like to check impedance - see the actual value, and know what “good impedance” is for the system as compared to conventional EEG systems I know from the past., As an expert user I would go directly to a live-stream and look at the data: create artifacts and see what they look like and validate that the device is working correctly. I would like to know what was done to the signal, and the scaling of the signal with the ability to change the X axis, test if auto scaling and window size makes sense. Would like to change the default window size, 10 sec, 30 sec, depends on the screen size as well, would like to type in size., As a new user, I would like to register my device as soon as possible to get online and start playing around with it., When logging in, I would like to connect my device if needed to the platform., When logging in, I would like to see the connection status of my device., When my device is connected I would like to see its stats, health and be assured that it is operating correctly., When the device is running I would like to see the streaming data from the device (pre-processed), and processed data (FFT, freq bands),, When the device is running I would like to know that the signal quality is good, and if not I'd like to know what to do to improve it.



Noel works within large and small organizations to **build innovations based on neuroscience and technologies into future products** with an outlook of 5+ years. Noel leads a team or group and informs innovation managers such as **Alex** about new neurotech products and how they may provide new value to customers. Noel has to get approval to start new projects and obtain budgets for larger initiatives. Noel informs key stakeholders in the organization and is supported in decision making by colleagues in R&D, engineering teams, and innovation scouting.





Overview



Our Impact

Provide Noel with great signal quality and electrodes that are reliable, making a BCI look like something that can be an everyday product.
Provide reliability and validation to the gold-standard.



Motivations

- Neuroscience holds amazing promise to impact the world.



Goals

- Bring neuroscience into consumer products.
- Support Alex in strategic neurotech decisions.



Needs

- Reliable signal quality.
- To trust the device and platform.
- To see validation of in-ear EEG against gold-standard biomarkers.
- To understand how in-ear EEG sits in the neuroscience landscape.



Fears

- BCI's can not be integrated in consumer tech.
- Signal will not be stable enough for desired application areas.



Expectations

- Stable EEG signal.
- Trust in device quality and platform.
- System reliability is high enough to evaluate the technology in the lab.
- If reliable, the tech can transition to a product.



Frustrations

- Artefacts in EEG signals.
- Poor reproducibility in neuroscience test results.

Background

Experience

- PhD/MSc in Neuroscience
- Publication record in Academic journals, presents at conferences, on patents, knows what an EEG signal should look like.

Tools

- MS Suite
- Matlab (EEGLAB)
- Python (MNE) and Jupyter Notebooks
- R

Demographics

- 35 years old
- No children