

EU-funded research project

“**B-Q Minded**” is an EU-funded (H2020 MSCA ETN) research project aiming to develop breakthrough methodologies for quantitative magnetic resonance imaging (Q-MRI).

“**B-Q Minded**” involves 5 academic and 5 industrial partners



“**B-Q Minded**” is a collaborative research project relying on the strength of 5 academic partners, coordinated by the University of Antwerp. In collaboration with the industrial partners the methodology for Q-MRI will be further developed and fine-tuned.

The partners:

- Antwerp University Hospital - Belgium
- Erasmus Medical Center - The Netherlands
- icometrix - Belgium
- Jülich Forzungscentrum – Germany
- MR Solutions - United Kingdom
- Quantib - The Netherlands
- Siemens - Belgium
- Synthetic MR - Sweden
- University of Antwerp - Belgium
- University of Sheffield - United Kingdom

“**B-Q Minded**” aims to transform MRI from a purely imaging modality towards a quantitative tool for precise measurement of brain features.

Research for the improvement of MRI-brain scans

Signal intensities (“contrast”) in conventional, qualitative MRI images are expressed in relative units that depend on scanner hardware and acquisition protocols.

While visual inspection of such images by a radiologist is feasible, qualitative MRI complicates quantitative comparisons between successive scans of a patient and certainly also between scans of several patients.



Fortunately, advanced Q-MRI methods, where the contrast is directly related to the underlying biophysical characteristics of the brain tissues, exist.

Those quantitative scans have a lot of potential to improve the clinical diagnosis.

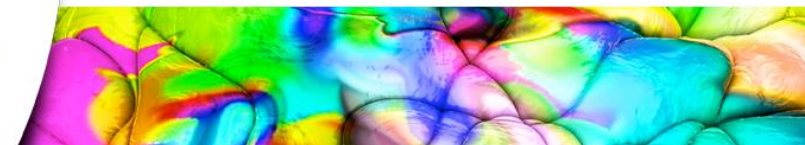
However, due to the long scan time for Q-MRI, causing discomfort for patients and limiting the throughput, Q-MRI methods have not entered clinical practice yet.

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www.bqminded.eu

During the last years, the academic partners in this project have developed and applied innovative MRI image processing algorithms such as a super-resolution reconstruction, accurate quantification and advanced MRI simulation methodology.

In collaboration with the 5 industrial partners the methodology for Q-MRI will be further developed to increase precision, enhance robustness to motion, and reduce acquisition time. This will bring Q-MRI within reach of clinical routine diagnosis.



INTERESTED?

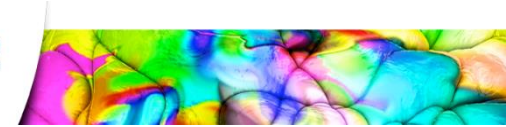
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**WE'RE
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ESR₁ (Erasmus Medical Center - The Netherlands)
ESR₂ (University of Antwerp - Belgium)
ESR₃ (MR Solutions - United Kingdom)
ESR₄ (Erasmus Medical Center - The Netherlands)
ESR₅ (University of Antwerp - Belgium)
ESR₆ (University of Sheffield - United Kingdom)
ESR₇ (MR Solutions - United Kingdom)
ESR₈ (Jülich Forzungscentrum - Germany)
ESR₉ (University of Sheffield - United Kingdom)
ESR₁₀ (icometrix - Belgium)
ESR₁₁ (Siemens - Belgium)
ESR₁₂ (Antwerp University Hospital - Belgium)
ESR₁₃ (Synthetic MR - Sweden)
ESR₁₄ (Jülich Forzungscentrum - Germany)
ESR₁₅ (Quantib- The Netherlands)

15 PhD's (*Early Stage Researchers – ESR's*) will work together in the **B-Q Minded** project to enable accelerated, quantitative Q-MRI imaging.

After a very competitive selection process, the EU considered this ambitious project with a total budget of 3.9 million euros as the best of a list of 394 projects (only 6 percent of the submitted projects were accepted).

**European
Research Project
B-Q Minded
1/1/2018 -31/12/2021**

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