

RESEARCH & MEDICAL TECHNOLOGY

iAVOXEL
Engineering the Future of Healthcare

Research takes shape.

From Oujda, Morocco, iAvoxel supports research, medical engineering, digital health and education projects.

Research · Engineering · Digital health · Education

OUJDA · MOROCCO

iavoxel.com

Structure your research.

Our virtual laboratory supports PhD candidates, healthcare professionals and academic teams. This digital framework is tailored to each team's research question and resources.

01 Methodology

Research questions, systematic reviews, **meta-analyses** and protocols. Example: compare published findings on a focused clinical question.

02 Data & models

Data structuring, quality checks, statistics and models. Example: plan a cohort analysis and present findings alongside their uncertainty.

03 PhD support

Doctoral work planning, interpretation and scientific outputs, **in coordination with academic supervisors**.

04 Scientific communication

Figures, tables, reports and manuscripts. Help teams communicate findings clearly and respond to reviewers.

Authors and their institutions retain **scientific and academic responsibility**. The virtual laboratory is a digital working arrangement.

From need to prototype.

iAvoxel combines hardware, electronics and software. Manufacturing can be arranged through a partner factory in Morocco, **subject to each project's requirements and agreements.**

01 Design

Translate a practical need into requirements. Example: assess the feasibility of a connected device with a clinical team.

02 Prototyping

Combine hardware, electronics and software, then organise technical tests. The aim: assess the concept before committing to subsequent stages.

03 Industrial development

Prepare adaptations, quality requirements and manufacturing responsibilities with partners, informed by prototype results.

04 Medical robotics

Explore co-development with specialist teams, subject to feasibility and resources.

Series production and market access **remain separate stages** to be planned for each device.



EchoBox

From echocardiography to reporting.

AI-assisted analysis, under cardiologist oversight.



PRODUCT CONCEPT · IN DEVELOPMENT

Analyse and measure

EchoBox aims to analyse ultrasound sequences to **automate selected measurements** and help identify certain diseases. Trained models provide the foundation for ongoing development.

Prepare the draft report

EchoBox aims to prepare a structured draft report, combining measurements and observations for review by the cardiologist.

The cardiologist approves

The cardiologist checks, **corrects and approves** the report. Integration with IACardio is planned for examination sharing and follow-up.

Internal result on a segmentation task: **training Dice of 97.05%**. Clinical performance of measurements and disease detection remains to be validated.

SYNURIS

Connecting care teams.

A clinical copilot prototype for interdepartmental and interhospital coordination across care networks.

One-click actions

After guided data entry, **one click confirms record creation**. The copilot suggests priorities, protocol reminders and referral options. Protocols require alignment with recognised international guidelines and adaptation to the local setting.

Coordinating critical emergencies

Prototype pathways: suspected **ACS, stroke and severe polytrauma**.

The copilot structures information for specialist input, referral and transfers.

Save time. Help save lives.

Our ambition: reduce coordination delays and support timely care. These benefits remain to be measured in a pilot.

Interoperability in development: devices, software and hospital systems. IACardio: cardiology use cases in development. iAutisme: neurodevelopmental pathways. Each platform retains its own scope.

Pre-pilot prototype. Clinical validation remains to be established. Clinicians retain responsibility for every decision.



iAutisme

The child's world.

A project in development, supporting families and professionals.

01 The child's world

Adapted games, supported conversations and educational videos: planned activities to encourage learning, expression and engagement, at each child's own pace.

02 The digital assessment lab

Assessments, observations and video material in an assessment-support space. The aim: follow communication, independence and interactions step by step, according to each child's needs.

03 Reports for treating clinicians

Generated reports that can be shared with care-pathway specialists. **The goal:** automate real-time delivery to the child's treating clinicians, subject to data-sharing permissions.

04 Prototypes in development

Eye tracking and sensor wristbands are being explored to enrich clinical observation and investigate signals associated with agitation or sensory overload. Intended uses and performance remain to be evaluated.

Project in development. Diagnosis and support decisions remain under professional responsibility.

Research priorities. Shared ambitions.

Partnerships to build with clinical, academic and industry teams, around research questions, populations and data defined together.

01 Deafness & communication

Moroccan Sign Language: dictionary and learning resources. The aim: improve access to information; intelligibility requires evaluation.

02 Autism & neurodevelopment

iAutisme: child record and observation journal. The aim: support educational goal tracking and team coordination.

03 Rare diseases

Structure knowledge and document care pathways. Example: organise information relevant to a research question.

04 Oncology & cancer

Organise data and scientific analyses. Example: study a cohort around a question agreed with clinicians.

05 Congenital conditions

Define research populations and questions. The aim: document follow-up pathways more clearly.

Each programme requires scoping, feasibility assessment and a separately established maturity level.



Cardiology & neuromodulation

Two priorities for building projects with clinical teams, laboratories and technology partners.

01 Cardiology

Cardiac imaging, telecardiology and congenital heart disease screening: **IACardio**, **EchoBox** and **CardioNéo** provide starting points to define intended uses, structure data and prepare clinical evaluations.

02 Neuromodulation

A **research priority** to develop with neuroscience teams: evidence reviews, candidate uses, feasibility and laboratory characterisation of concepts. Each research question requires its own evaluation protocol.

03 Partnerships in practice

Agree on shared objectives, responsibilities and milestones: design, laboratory testing, analysis and study preparation according to project maturity.

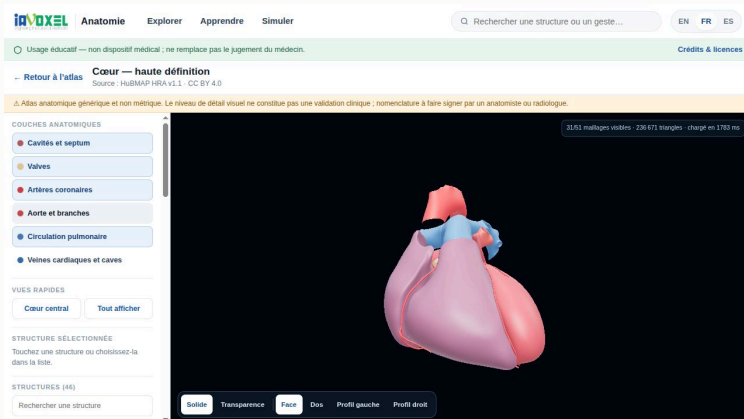
04 An open medical network

Partnership opportunities extend to **other medical specialties**. Specialists work with iAvoXel on clinical validation activities. Our network welcomes physicians who wish to contribute.

Cardiology: projects in development; performance requires evaluation. Neuromodulation: exploratory priority; modalities, indications and validation remain to be defined.

See. Understand. Learn.

Resources for students and healthcare professionals, tailored with teaching teams.



Actual screenshot · French interface · 01 Oct 2026
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Medical e-learning

Cases and knowledge assessment. Example: discuss a case during a workshop.

Anatomy 3D

Isolate structures in 3D to visualise a landmark before practical teaching.

Educational simulation

Landmarks and procedural steps to prepare for supervised practical training.

These resources complement clinical teaching and **supervised practical training**.



PARTNERSHIPS & INVESTMENT

Let's build a lasting partnership.

Let's agree on shared goals, reciprocal commitments
and a fair sharing of the value we create together.

Research & R&D

Protocols, analyses, PhD support
and jointly funded R&D.

Engineering

Design, software integration,
prototyping and licensing by
agreement.

Investment

Resources, funding and
milestones to define together.

Agreements specify deliverables, timelines, responsibilities, funding, intellectual property, publications and data use.

Let's discuss your project.

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