

# **i4KIDS-EUROPE CHALLENGE-BASED HOSPITAL PROGRAMME 2024**

## **PARTICIPATION RULES**

### **1. INTRODUCTION**

The i4KIDS-EUROPE is a European project, the result of a collaboration agreement between a consortium of eight multidisciplinary partners, which will extend the current i4KIDS initiative, launched by SJD Barcelona Children's Hospital in Barcelona at the end of 2020, broadening the participation of different European paediatric stakeholders and territories, and strengthen competitiveness to optimise the innovation potential of the European paediatric sector.

The main objective of the i4KIDS-EUROPE is to establish an efficient, perdurable and inclusive European paediatric innovation ecosystem that integrates all pertinent stakeholders from emerging, moderate and strong innovator countries, offering the necessary services and resources to improve the paediatric innovation capacity of the EU countries and boost the arrival of solution to the patients.

To achieve the overall objective, i4KIDS-EUROPE promotes the creation of links among innovation leaders and strong innovators with emerging and moderate innovators in the paediatric healthcare field across the EU, fostering a more interconnected ecosystem through shared experiences, structures, and procedures.

It also aims to identify the gaps and barriers faced by paediatric hospitals and key innovation stakeholders, providing them with tailored tools, connections, and resources. By uniting paediatric innovation actors across European countries, including start-ups and industry, we aim to boost Europe's efficiency and capacity for paediatric healthcare innovation, helping deploy patient-centered innovations across member states and associated countries at national, regional, and local levels.

**As an activity to promote innovation in the ecosystem, i4KIDS-EUROPE proposes the creation of this challenge.**

Children's hospitals face a number of specific challenges in improving their internal processes in order to deliver high quality, efficient and patient-centred care. These challenges are linked to the complexity of caring for a young population with unique medical, emotional and developmental needs. They include key issues such as personalisation of care, optimising patient flow, paediatric patient safety and patient and family satisfaction, etc.

Continuous process improvement in paediatric hospitals requires a comprehensive and collaborative approach, involving all staff and based on continuous feedback from patients and families. Only through a systematic and patient-centred approach will paediatric hospitals be able to meet these challenges and provide excellent care to their young patients.

## 2. CHALLENGE DEFINITION

To identify and prioritise the final challenges for this call for solutions, a needs assessment was conducted by several paediatric hospitals in Europe. These hospitals are members of the European Children's Hospitals Organisation (ECHO), which aims to build a network of children's hospitals across Europe to enhance the value and quality of care for children and their families.

As a result of this workshop between C-level representatives of these ECHO member children's hospitals, **three challenges were identified for candidates to apply for:**

### A. CHALLENGE #1: IMPROVING CLINICAL WORKFLOWS:

Since the implementation of the Electronic Health Record (EHR) across hospitals and healthcare systems, the amount of documentation a healthcare professional (HCP) has to complete has been increasing. Already under great care pressure, HCPs are forced to spend a significant amount of time on administrative tasks, such as completing forms, recording patient data and complying with regulatory requirements. This administrative burden results in HCPs spending more time completing medical records than seeing and connecting with patients.

In fact, according to some studies, many physicians are not satisfied with the time required to create electronic notes. In 2010 and 2012, studies showed internal medicine physicians spend between 40% and 49% of their time using a computer, and 70% of this time is spent in documentation and order entry.<sup>1</sup>

Given the aforementioned needs, the first challenge is:

*How can we reduce the time healthcare professionals spend on administrative tasks, such as writing anamnesis, patient records, and doctor's notes to employers, to enhance efficiency and allow for greater focus on patient care?*

### B. CHALLENGE #2: HIGH-RISK MEDICATION MONITORING IN PAEDIATRIC PATIENTS:

The consequences of misusing or mismanaging high-risk medicines can be catastrophic, leading to adverse drug reactions, hospitalisations, or even fatalities. This problem is even more pronounced in paediatric medicine. Rigorous testing and

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<sup>1</sup> Building the evidence-base to reduce electronic health record–related clinician burden. Christine Dymek, Bryan Kim, Genevieve B Melton, Thomas H Payne, Hardeep Singh, and Chun-Ju Hsiao; J Am Med Inform Assoc. 2021 May; 28(5): 1057–1061.

monitoring of these drugs is therefore not only a clinical obligation, but also a moral and legal one. Paediatric patients are particularly vulnerable to medication errors and adverse drug events. The potential for adverse drug events in paediatric inpatient populations is approximately three times higher than in adults, with an estimated one in four children experiencing an adverse drug reaction during hospitalisation. A recent study investigating serious patient safety events in 44 children's hospitals found that over 20% of severe accidents were caused by medication errors.<sup>2</sup>

In light of the previously mentioned needs, the second challenge is:

*How can we ensure that each patient receives the correct medication, in the correct dose, at the correct time, and via the correct method during hospitalisation?*

### **C. CHALLENGE #3: APPOINTMENT EFFICIENCY:**

Missed hospital appointments pose a substantial challenge, resulting in wasted resources, disrupted schedules, and potential delays in patient care. Implementing effective strategies to reduce no-shows is essential for enhancing patient outcomes and optimising the efficiency of healthcare services.

Based on the needs previously identified, the third challenge is:

*How might we avoid “no shows” and improve outcomes for groups affected by healthcare inequalities?*

#### **Expected results:**

“The i4KIDS-EUROPE consortium members expect to receive technology-based innovation projects at an advanced stage of development (TRL 7-8), ready for implementation. Proposals should include a clear and feasible implementation plan. Solutions should be designed from a user-centric perspective and target various population segments, including paediatric patients and their families. Additionally, it is crucial that solutions can be easily integrated and scaled across different communities and regions in Europe, promoting accessibility and equity among various European regions.”

### **3. ELIGIBILITY CRITERIA:**

Candidates must meet the following General Criteria:

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<sup>2</sup> Burrus S, Hall M, Tooley E, Conrad K, Bettenhausen JL, Kemper C. Factors related to serious safety events in a children's hospital patient safety collaborative. *Pediatrics*. 2021;148(3):e2020030346. <https://doi.org/10.1542/peds.2020-030346>.

- Only established companies or products ready for implementation can apply for this call.
- The proposed solution must comply with current regulations in order to be marketed in Europe (MDR, GDPR, etc.) if applicable.
- Solutions must be at a TRL 7 or higher.
- Candidates can apply for more than one challenge, but must fill in one form for each challenge.
- Candidates must be available to participate in the pitch competition at the [Pediatric Innovation Day \(PID\)](#) in Riga on 27 September (more information in section 4.4).

## 4. PARTICIPATION IN THE PROGRAMME

### 4.1. Application process

Participants must complete this Application Form: <https://forms.gle/avtyZykDZNAbsebo9>

Applications must be submitted in English using the aforementioned form.

All project submissions must be completed before the specified deadline of **August, 11th at 23:59 CEST**.

### 4.2. Candidate selection process

An initial evaluation will be carried out to identify the projects that meet the eligibility criteria. Selected projects will be assigned to external evaluators for review according to the evaluation criteria described below. The external evaluators will be experts in the field of healthcare.

**A total of 6 projects** will be selected as the selected projects of the Challenge-based Hospital Programme.

All six projects will participate in the Pitch Competition at the [Pediatric Innovation Day \(PID\)](#) in Riga on September 27th, so participants must attend PID.

### 4.3. Evaluation criteria

Proposals participating in the **Challenge-based Hospital Programme** will be evaluated according to the following criteria:

#### » Idea (35%)

- Soundness and innovativeness level of the proposal.
- Capacity to respond to the proposed challenge.

#### » Feasibility and implementation capacity (35%)

- Current state of development.
- Development and implementation plan.
- Involvement of patients and users in the development phase.
- Previous experience of implementation in other centres.
- Capability to be implemented in EU hospitals.

#### » Impact (20%)

- User-centric innovation.
- Engagement strategy.
- Scope of the impact.
- Paediatric focus.

#### » Team (10%)

- Previous experience in the field.
- Candidate's capacity to implement the proposed solution.

*If deemed necessary, the evaluation committee may ask applicants to verify the information provided in the proposals, either in person or online. In case of untruthful information, the application will be rejected.*

### 4.4. Prize

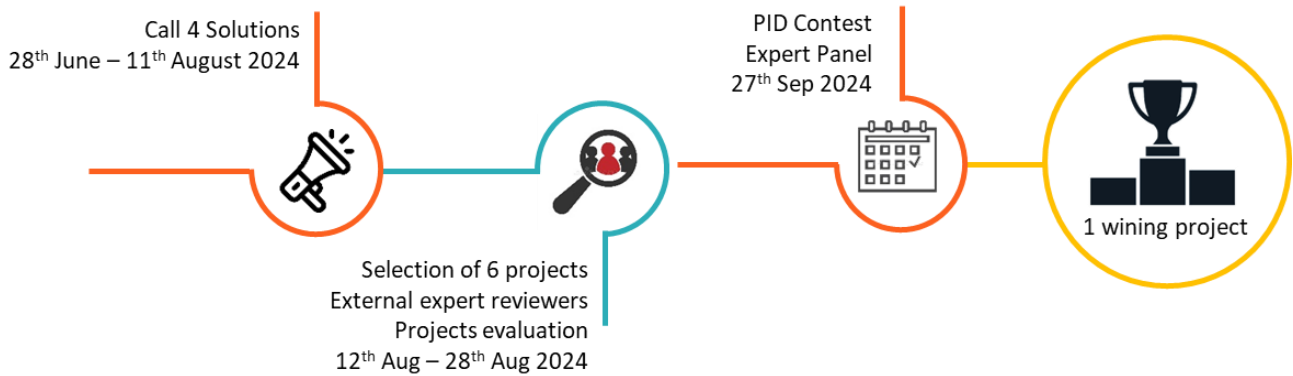
All the 6 selected projects will be rewarded with the following prizes in order to participate in the Pitch Competition that will take place in the Paediatric Innovation Day in Riga the next 27<sup>th</sup> of September:

- Travel expenses for one person/company to attend the Pediatric Innovation Day in Riga <https://innovation4kids.org/en/pediatricinnovationday2024/>
- Access to the Pediatric Innovation Day and its agenda.

For the Pitch Competition, candidates will prepare a 7-minute presentation in English and a jury panel will evaluate all presentations and select a winner based on evaluation criteria that will be shared with all participants beforehand. After the Pitch Competition, there will be only **one winner**.

The winning project will be awarded **€5,000 to start a pilot project** in one of the i4KIDS-EUROPE Hospitals. Additionally, the winner will receive a voucher for consultancy services with the [Inveniam Group](#). The winner will also have the opportunity to follow up with at least two Maternity & Children's Hospitals from ECHO and i4KIDS Europe to explore the implementation of the solution within these hospitals.

### 4.5. Timeline



## **5. ACCEPTANCE OF THE RULES**

Participation in the Programme entails full and unconditional acceptance of these Rules. Recognition as a valid participant is subject to compliance with the requirements set forth in these Rules.

## **6. ASSIGNMENT OF THE RIGHT TO USE THE IMAGE**

Applicants irrevocably and free of charge authorise i4KIDS-EUROPE consortia to make use, reproduce, edit, in whole or in part, or broadcast their full or partial name as well as their image, in any publicity or advertisement made through any media or format, whether written, audiovisual or internet, for the maximum period permitted by law, worldwide, in relation to the participation in the programme for the purpose of promotion, information and advertising of the programme and the i4KIDS-EUROPE Network.

## **7. ETHICS**

All activities carried out as part of the i4KIDS-EUROPE Challenge-based Hospital Programme must be conducted in compliance with:

- Ethical principles (including the highest standards of research integrity) and
- Applicable international, EU and national law.

The participants must ensure that the activities have an exclusive focus on civil applications.

## **8. PROCESSING OF PERSONAL DATA**

Under the provisions of the regulations on protection of personal data, it is reported that the data provided by participants under the Programme will be incorporated into a file or files, owned by the Sant Joan de Déu Barcelona's Children Hospital (HSJD) and Fundació per a la Recerca i la Docència Sant Joan de Déu (FSJD), coordinators of the i4KIDS and i4KIDS-EUROPE projects.

They will be processed for the purposes of: (i) maintenance, compliance, development, control and proper management of their participation in the Programme and subsequent related activity (including any communication that is necessary to notify or publicise their

status as a finalist, winner or alternate); (ii) as well as for any other purpose provided for in these Rules of Participation.

In the event of providing data of third parties, now or in the future, the participant guarantees that each third party will have been previously informed and their consent obtained on all those aspects foreseen in the present clause, as well as in the Rules.

Likewise, the participant guarantees that the data provided are accurate and truthful. Any false communication of personal data will entitle to disqualify the participant and his/her team.

Participants may exercise their rights of access, rectification, cancellation and opposition, under the terms provided in the data protection regulations.

HSJD and FSJD undertakes to treat personal data confidentially at all times and in accordance with the purposes set out in this clause and Rules of Participation; to adopt the necessary technical and organisational measures to ensure the security of your data and avoid its alteration, loss, unauthorised access or processing, given the state of technology, the nature of the data stored and the risks to which they are exposed, all in compliance with the provisions of the data protection regulations in force at all times.

In case of providing personal data, participants authorise HSJD and FSJD to process them according to the above.

## **9. MODIFICATION OF THE RULES**

i4KIDS-EUROPE reserves the right to modify at any time the Rules of Participation, without assuming any responsibility for these modifications, provided that there is a justified cause, due to force majeure or circumstances beyond the control in a way that does not prejudice the rights acquired by the participants, committing to communicate with sufficient notice the new conditions of participation.

## **10. EXTENSION OR SUSPENSION OF THE CONTEST**

i4KIDS-EUROPE reserves the right to be able to extend the deadline for completion of the Programme or suspend the Programme, for good cause or force majeure and in the event that it could not be developed by fraud detected, technical errors or any other nature that are not under the control of i4KIDS-EUROPE and may affect its normal development. Should any of these situations arise, all participants will be duly notified.

## **11. DISCLAIMER OF LIABILITY**

i4KIDS-EUROPE are not responsible for any possible losses, deterioration, data theft, delays or any other circumstances attributable to third parties that may arise from your participation in the present Programme.

Furthermore, i4KIDS-EUROPE does not guarantee the availability, continuity or infallibility of the operation of the Website, and consequently excludes, to the maximum extent permitted

by current legislation, any liability for damages of any kind that may be due to the lack of availability or continuity of the operation of the web pages used in the Programme.

i4KIDS-EUROPE shall not be liable for any damages of any nature whatsoever that may be suffered by the winner and/or third parties arising out of or in connection with the use of the prize.

## **12. INDUSTRIAL AND INTELLECTUAL PROPERTY**

The names, logos, icons and any element that identifies with the Programme are property and trademarks of HSJD and FSJD being reserved all their exploitation rights.

Selected programme participants are allowed to use the brand and names of the Programme and i4KIDS-EUROPE for current and future communication and marketing activities related to the team's and project's participation in the Programme.

Any intellectual or industrial property rights, know-how, trade secrets or trade secrets belonging to the programme participant which are incorporated or used in connection with the provision of the Programme shall remain the property of the programme participant, and nothing contained in this Agreement shall be construed as an assignment or licence thereof.

All information provided and presented into the Programme by programme participants will be treated confidential with the exception declared in provision 6.

## **13. CONTACT**

Should you have any questions about the call, please contact us at:

[contact@innovation4kids.org](mailto:contact@innovation4kids.org)