

Laboratoire d'InfoRmatique en Image et Systèmes d'information
LIRIS UMR 5205 CNRS / INSA de Lyon / Université Claude Bernard Lyon 1 / Université Lumière Lyon 2 / Ecole Centrale de Lyon

Collaboration: LIRIS-CNRS / Albatross Foundation
<https://albatrossglobal.org/en/>
active in China, France, Spain, Brazil

Aim: to design an evolutive and flexible app suited to different contexts and cultures

- allowing non-computer scientists to add contents
- considering the multilingual and multicultural context
- considering the different contexts of use

Solution: a multilingual **authoring tool** producing a Progressive Web App, usable on computers, tablets, and smartphones, online or offline

SAPHIR: education to Sustainable development with Albatross through Pedagogical activities: Humans Involved in the Respect of their environment

SAPHIR educational resources model

Creating a new module with MINE consists of completing the different parts of the **resources model**

Module = (Course; Quiz; Memo-Game; Association-Game; Cycle-Game; Experiment; Video; Pedagogical-Support)

Quiz = n Question, $n \geq 1$

Question = (Title; m Q-Propositions; Explanation), $m \in [2, 10]$

Q-Propositions = (Title; Personalized-Explanation; Validity)

Course = p Page

Page = (Title; Text; Picture; Caption; r Tag; q Quiz), $q \leq n$

Tag = (Text; Coordinate-Horiz; Coordinate-Vert)

Memo-Game = 6 (Picture; Title; Definition)

Association-Game = (2 Category; t A-Proposition)

A-Category = (Title, Picture)

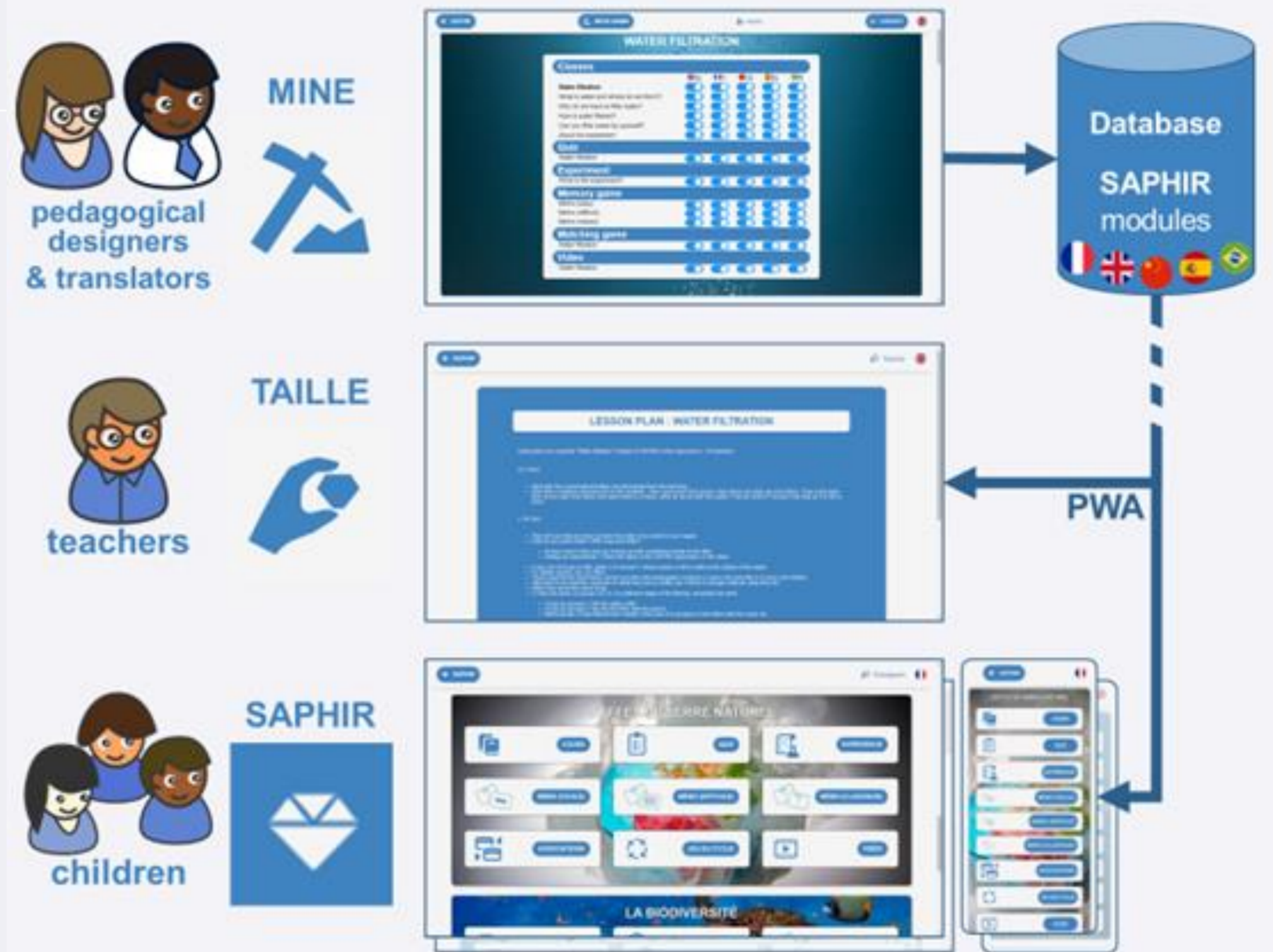
A-Proposition = (Title; Category; Personalized-Explanation)

Architecture of SAPHIR environment

MINE is the authoring tool used by *pedagogical designers and translators* to create and translate resources without requiring any programming skills.

TAILLE is dedicated to *teachers* to whom he provides educational explanations to use SAPHIR with their learners.

SAPHIR is the main software proposing activities to *children* to learn and play.

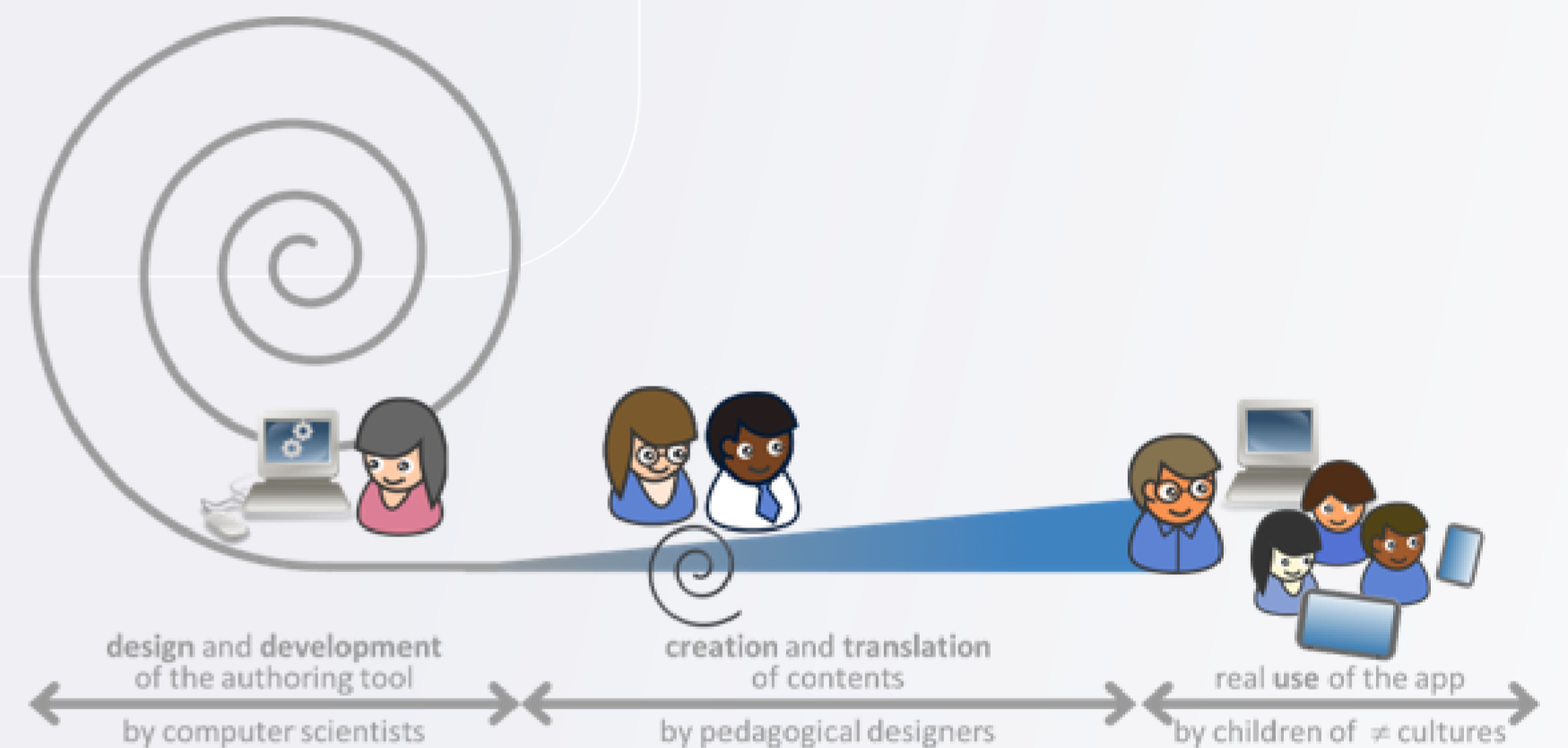


SAPHIR design process

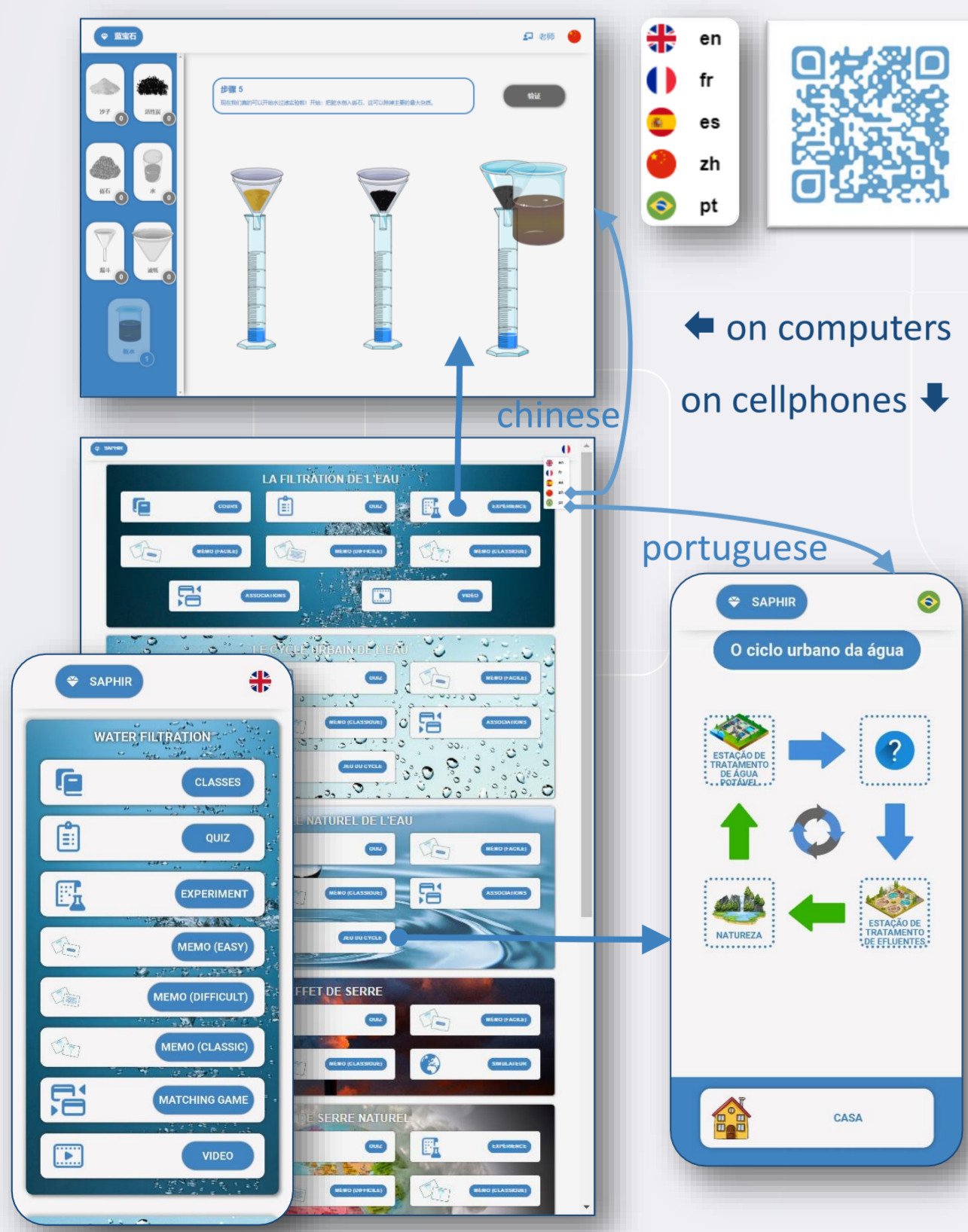
Iterative design and development of the environment by computer scientists.

Development of the **authoring tool**, enabling to create more easily new contents.

Filling this empty shell with the **educational contents** by experts.



SAPHIR available on/offline in various languages



MINE, the authoring tool of SAPHIR

