

Why new names ?

We have the feeling that the use of ALADIN-2 was too much confusing: ALADIN-2= « interface »? = « a new model »?= « a project »?

Some basic rules

The tools (NWP system):

AROME= the tool at fine scale (MNH physics + AladinNH + 3D-Var ALADIN)

ALARO= the tool at other scales with other options

The project: ALADIN-2

The consortium: ALADIN

Subprojects by scale range

- **AROME** ($\leq 3\text{km}$) « resolved convection »
- **ALARO-5** (3-10 km) « resolved & parametrized »
- **ALARO-10** (3 km) « parametrized convection »

Transversal subprojects

- **TOOLBOX**: first convergence effort : flexible use of \neq options of ALADIN/ALARO/AROME & efficiency/portability.
- **ALAROPAC**: Predictability, Assimilation, Coupling
- **ALAD1**: Operational suites

Proposal WP04 for ALADIN-2

The way it was built:

- By subprojects
- Documents used :
 - « National » programs from coordinators
 - « ALADIN medium-term research plan 2002-2004 » and status report (october 2003)
 - « strategic document for the preparation of an ALADIN-2 project » december 2003
 - « Current status and Plan of the AROME project » october 2003.
 - LACE work plans (january 2004)
 - ALADIN workshop of november 2003
 - WP04 on predictability and assimilation

TOOLBOX

- First convergence effort (transversal action):
 - Interface (Phys/dyn and time step management)
 - Externalisation of the surface
 - Efficiency/portability

Objective : To offer on model choices the highest level of options. This concept extends beyond the scope of the Aladin-2 project. It guarantee that the **convergence** of the ALADIN and AROME (taken here as tools) will offer to all the partners other intermediate choices. This sub-project is also devoted to **cost efficiency and portability**.

AROME

- NH dynamics
- Equations
- Physics (MNH) : subjects that required 1D tool or AROME prototype or MNH model

Objective: To **contribute to nominal AROME** on subjects that go beyond the convergence but can be tackled outside Toulouse because they are of **general interest** to justify investment from the partners.

ALARO-5

- Grey zone:
(No Météo-France participation)
 - Deep convection
 - Shallow conv and Low cloudiness
 - Orographic drag
 - Prognostic cloud water

Objective: To possibly solve the problem of this scale, i.e a scale where the **convection** is **not fully explicit** and **not fully resolved**.

ALARO-10

- Validation/upscaling
 - Building and test prototype from AROME
 - Optimization (efficiency)
 - Verification at mesoscale

Objective: To ensure that developments designed for smaller scales will **improve forecast skill** at the current operational ones without too much loss of **numerical efficiency**.

ALAROPAC

- Research on issues that concern all scales as scheduled
 - Predictability
 - Assimilation
 - Coupling

Objective: cover issues that concern **all scales** and that are **not purely model** ones

ALAD1

- Improve the skill of operational suites including the future improvements brought by ALARO/ARPEGE

Objective: Improvement of the **operational suites, maintenance** of the code, benefit from **ALARO and ARPEGE outcomes, case studies**.