

# ALADIN Organizational relevant aspects

*Piet Termonia*



# 5 priority points (see my strategy note last year): steps taken.

- Investment in code design/development/maintenance:
  - OOPS:
    - A task and an opportunity, but should be managed carefully.
    - LAM community is becoming active with a concrete plan; **[talk by Claude later this week]**
  - Common flux-conservative physics-dynamics interface for AROME and ALARO (D. Degrauwe and F. Bouysse) [help is welcome here!]
  - APLPAR/APL\_AROME is becoming quite complex: we need reflection on that (what and who will do it?)
- Replace ISBA by the ISBA scheme in SURFEX (why maintain the old ISBA if there is one within SURFEX?)
  - SURFEX SC meeting, 1 March. **[see talk of Eric Martin]**
  - SURFEX WW in Brussels later this year: PREP in full pos and output in FA files. **[to be discussed this week LTM, CSSI-HMG]**
- Collaboration
  - The long-standing action of 3MT-in-ARPEGE: the code is now being phased!
- External funding (not discussed here, this is for your managers)
- “Define” our end user
  - Verification meeting in Brussels **[talk by Christoph Zingerle later this week]** produce a concrete work plan **[to be discussed later this week, LTM meeting, CSSI-HMG]**.



# A few examples for illustration



ALADIN Organizational relevant aspects

3



# Improving FullPos Algorithms

Staff: Tayfun Dalkılıç

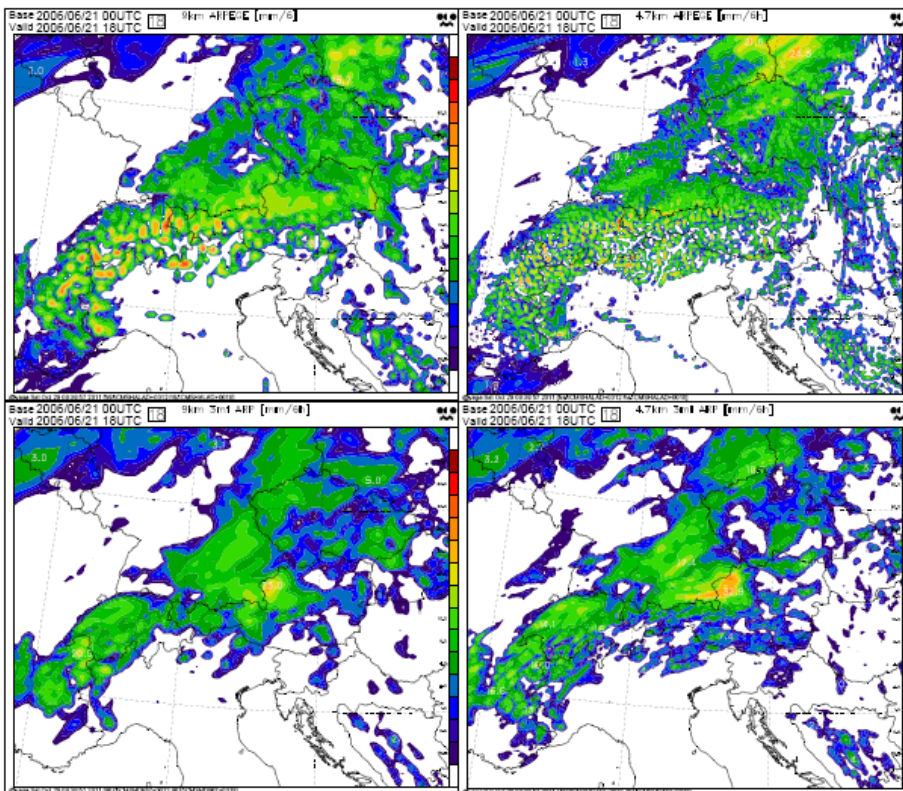
When making historical files in FullPOS, it needs to invoke two parts which are required to start the control cascade from almost the beginning. By removing the code below the condition LFPART2 and making more straightforward mechanism instead is planned in this study. Scalability of FullPOS can be increased avoiding from these limitations.

***Excellent example from the “tour d'ALADIN” for the GA from our Turkish colleagues!!!***

***By the way, OOPS will be an opportunity here.***



# 3MT in ARPEGE (Cz with some contributions from Be)



- 3MT has been interfaced with the CBR scheme, KFB and RRTM/FMR (compared to old Louis type, TOUCANS Geleyn Shallow convection and ACRANEB).
- There still open scientific issues, BUT,
- This is an example of flexible code.
- Interesting next step: test 3MT on the globe *[anyone interested?]*

**Wake up sleeping beauty!**

(she is sleeping since 2006)

*[quote from Dijana]*



# Monthly report - interface

**|| AVP menu ||**

- DATA
  - station list
  - model list
  - view data (synop)
- SCORES
  - select score
- REPORTS
  - monthly report
- DOCUMENTATION
  - user guide
- pEPS
  - multigrams
- MONITOR
  - check files
  - check database




**|| User menu ||**

login: user  
user level: 1

**Logout**

## Monthly station report

Select your data.

Report 1	Report 2	Report 3
year: 2006 month: 4 model: aat_oper_00	year: 2006 month: 4 model: aat_oper_00	year: 2006 month: 4 model: aat_oper_00
STATION: LJUBLJANA/BEZIGRAD	STATION: LJUBLJANA/BEZIGRAD	STATION: LJUBLJANA/BEZIGRAD
		
Include <input checked="" type="checkbox"/> and <input type="checkbox"/> <b>ADD</b> <input type="checkbox"/> <b>CLEAR</b>	Include <input type="checkbox"/> and <input type="checkbox"/> <b>ADD</b> <input type="checkbox"/> <b>CLEAR</b>	Include <input type="checkbox"/> and <input type="checkbox"/> <b>ADD</b> <input type="checkbox"/> <b>CLEAR</b>

Compare up to 3 reports.

**Reports in process:**

**VIEW**

**ALL IN ONE**

# Monthly report - selection

## || AVP menu ||

### DATA

station list  
model list  
view data (synop)

### SCORES

select score

### REPORTS

monthly report

### DOCUMENTATION

user guide

### PEPS

multigrams

### MONITOR

check files  
check database

## || User menu ||

login: user  
user level: 1

Logout

## Monthly station report

Select your data.

### Report 1

year 2006  
month 3  
model asi\_oper\_00

#### STATION

SOFIA (OBSERV.) (t)



Include  and

ADD

CLEAR



### Report 2

year 2006  
month 3  
model ahr\_oper\_00

#### STATION

SOFIA (OBSERV.) (t)



Include  and

ADD

CLEAR



### Report 3

year 2006  
month 4  
model eot\_oper\_00

#### STATION

LIUBLJANA/BEZIGRAD



Include  and

ADD

CLEAR



Compare up to 3 reports.

### Reports in process:

data found for Report 1

VIEW

no data entry for Report 2

ALL IN ONE



# Monthly report (1/6)

## || AVP menu ||

DATA

[station list](#)  
[model list](#)

[view data \(synop\)](#)

SCORES

[select score](#)

REPORTS

[monthly report](#)

DOCUMENTATION

[user guide](#)

pEPS

[multigrams](#)

MONITOR

[check files](#)

[check database](#)

## || User menu ||

login: user

user level: 1

[LogOut](#)



### Monthly REPORT 1

Station: 15614

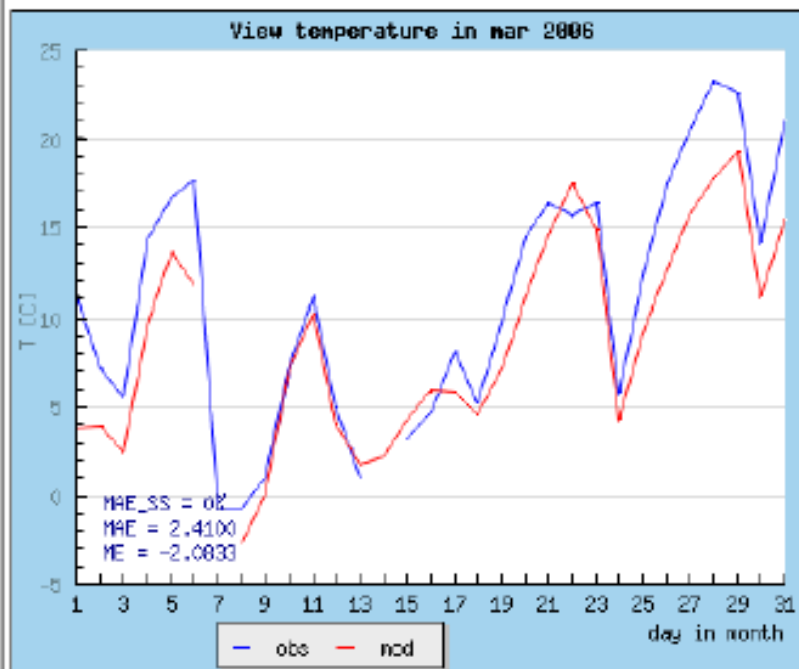
Date: mar

Model: asi00

2006

#### A.) TEMPERATURE

I. Maximal temperature on 2m



### Monthly REPORT 2

Station: 15614

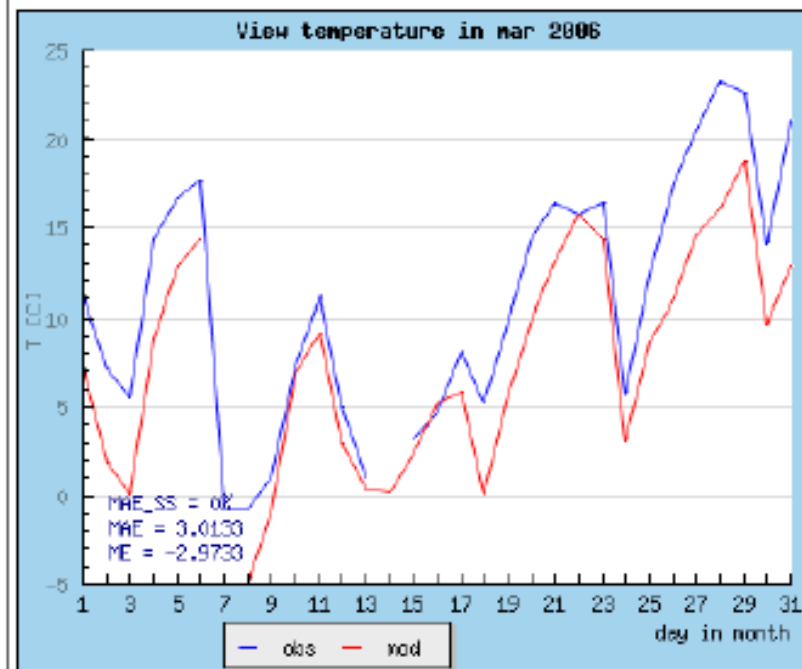
Date: mar

Model: ahu00

2006

#### A.) TEMPERATURE

I. Maximal temperature on 2m



# Post-BRAC-HR status

The three open issues of the Brač-HR meeting have been discussed. I cite them here from the the synthetic outcome report of that meeting:

1. *owing to the various choices available for making evolve other less ‘central’ parts of the code (themselves in strong interaction with the dynamical core for determining the model’s behavior) the degree of emergency and/or of priority of ‘taking a bet’ about the said dynamical core issue.*
2. *the main aims of an evolution or substitution of our dynamical core, if the latter would prove structurally unable to face the challenges of science and/or of High Performance Computing (HPC) technology in the future;*
3. *the detailed priorities for the necessary evolutions of our diagnostic-validation-verification ensemble of tools.*

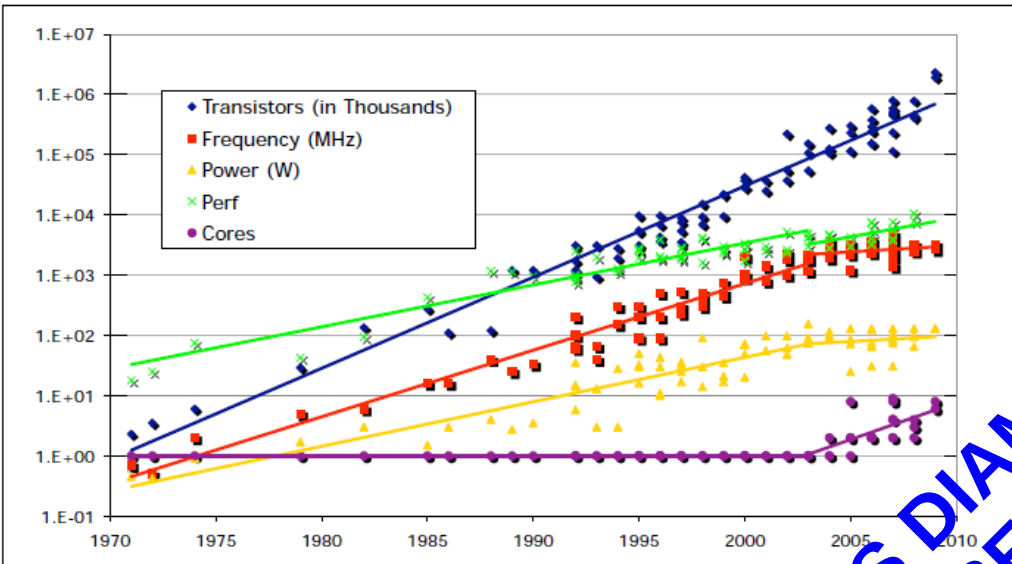
***For the third point, see the outcome of the Brussels' meeting mentioned before***



About point 1 and 2 ...



# Dynamics Evolution of HPC



THIS EVOLUTION GOES DIAMETRICALLY AGAINST EVERYTHING WE HAVE BEEN DOING IN THE PAST

Information gathered from some high performance computing vendors.

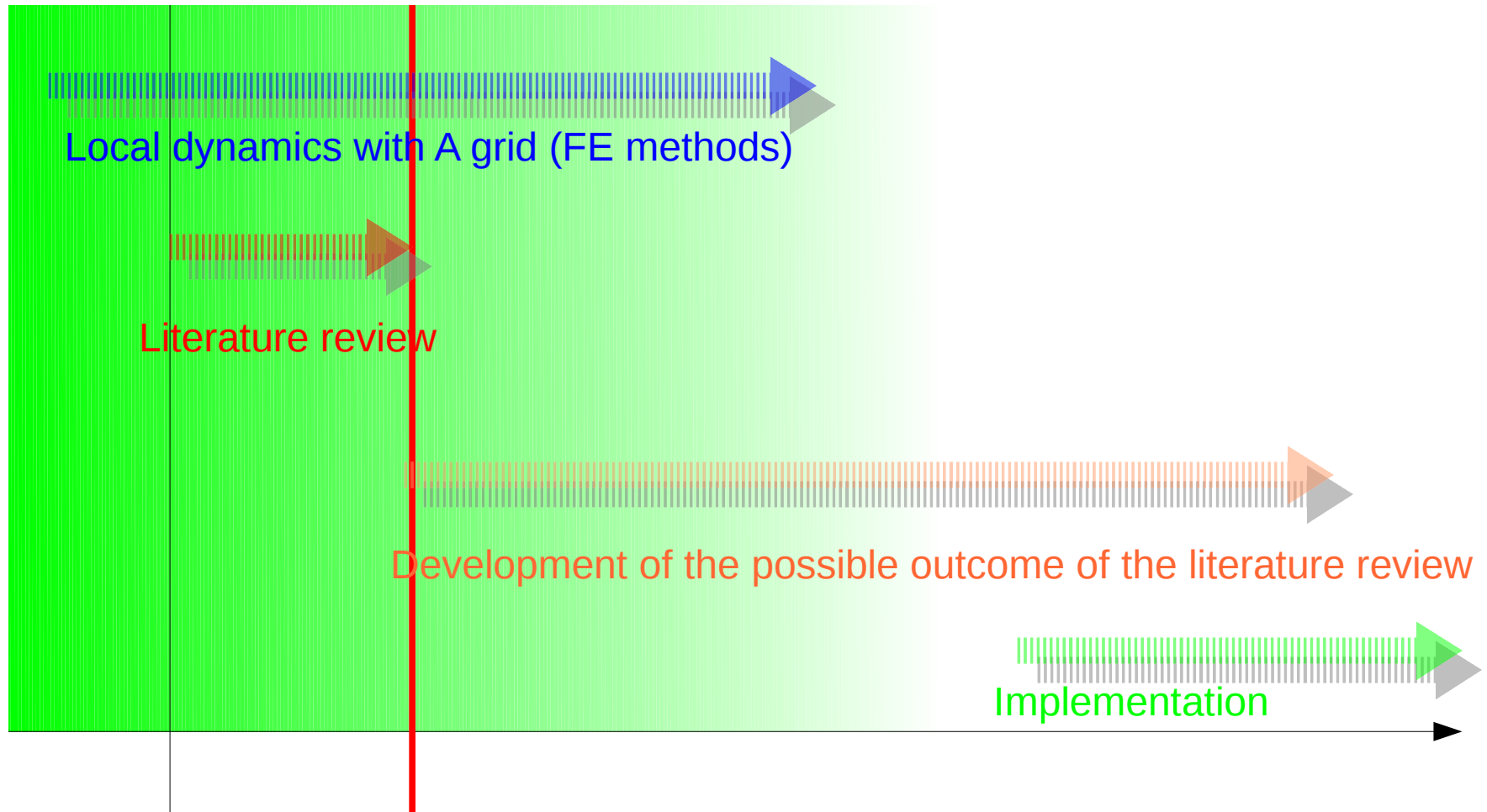
- ▶ processor *clock period* ↓ ,
- ▶ *memory* available to nodes ↓ ,
- ▶ processor *instruction set* ↓ ,
- ▶ *number of processor* and of nodes ↑ ,
- ▶ the I/O bottleneck partly solved by specializing processors (but then, the code does not take advantage of this automatically).

HYBRID PARALLELISM



ALADIN

# Dynamics: road map presented to our GA



2012

2014

2017-2020

2025

13

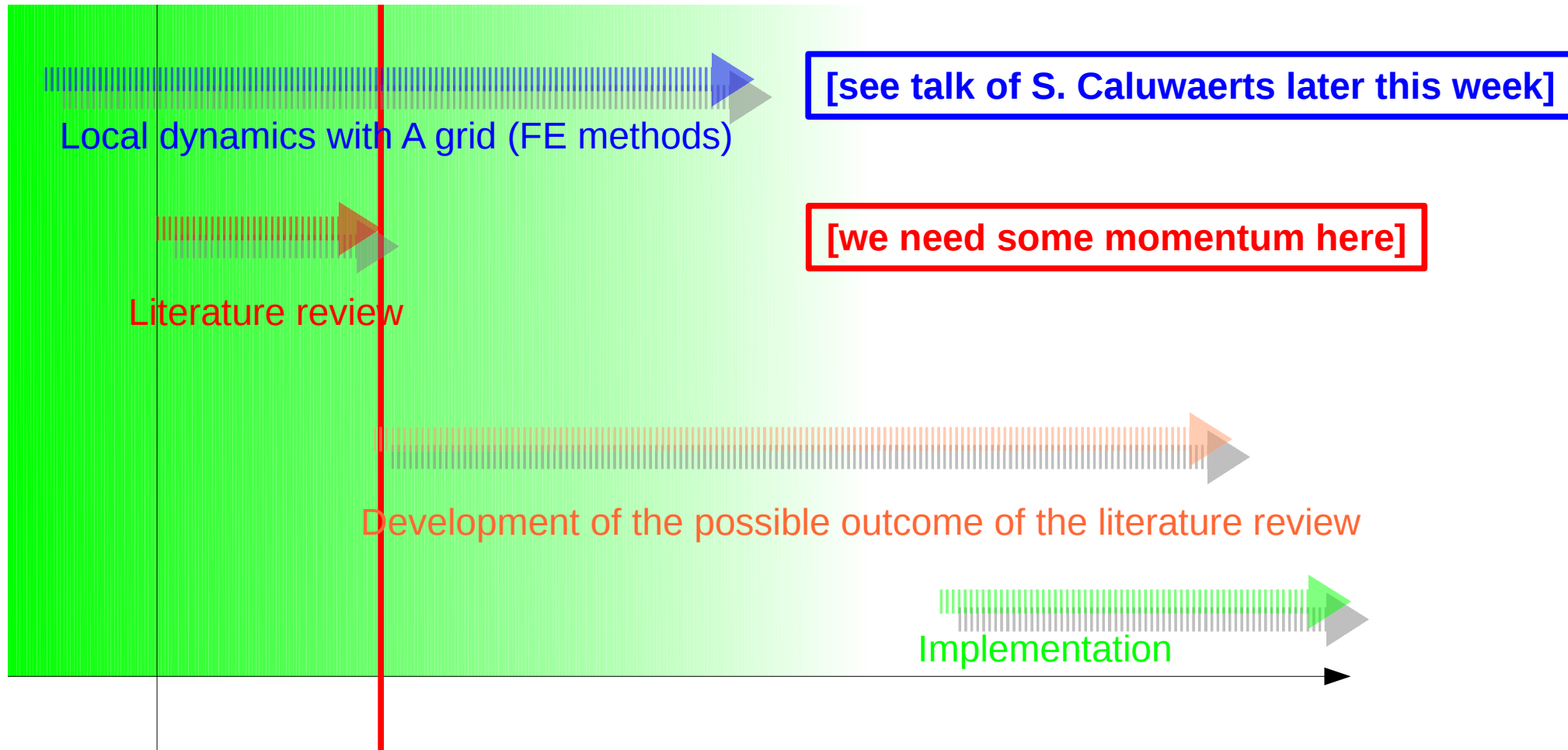
ALADIN Organizational relevant aspects



Eliminating the A grid means we have to overhaul the whole system.

We stay with the current system at least for the term of the current strategy plan (green area).

# Dynamics: road map presented to our GA



2012

2014

2017-2020

2025

14

ALADIN Organizational relevant aspects

Eliminating the A grid means we have to overhaul the whole system.

We stay with the current system at least for the term of the current strategy plan (green area).



# Also, ...

- EUMETNET, future of SRNWP, *[talk by Gergely Boloni]*
- LACE Initiative (see Dijana's talk): Assembling ALARO-1: the ALARO-1 meeting in Brussels, 13-15, June, Ljubljana *[talk by myself]*
- COST0905: I attended the meeting in Savona, 20-22 March. There is a meeting in Hamburg (WG2+3+4 meeting: Cloud parameterization and microphysics: Scale independence and unification) this week where some of our ALARO experts are present [and not here]. *[There is an extremely interesting case presented by Sami, see his talk later!]*
- Radar data assimilation, LACE Working Week, 18-21 June, Prague. *[talk of Tomislav]*
- LAMEPS:
  - we can, **together**, provide more economic value on top of ECMWF [Smet et al. 2012 and several other tests]. **Thanks Trond (Iversen) and Yong (Wang)!**
  - This is important because it proves that, as a pan European collaboration we are potentially adding more forecast skill on top of ECMWF! *[see talks of Yong, Mihaly, Alex]*



***Your input on these issues during this week  
will be highly appreciated!***





# Management

- ACNA: Roger Randriampianina
- We have (on the ALADIN side prepared) the kick-off of the verification Task Force.
- An “efficient” LTM meeting (tomorrow).
- Changes in the composition of CSSI:
  - Roger Randriamampiana (ACNA)
  - Daan Degrauwe (Physics)
  - Task Force Leader on verification (C. Zingerle as proposed candidate, to be confirmed)
- Some changes in the reporting (Patricia Pottier) related to the strategic goal of code design/development/maintenance

