RWP2021 Manpower graphics

The Management Group and the Support Team co-edited the "Execution of the RWP2021" document. It was proposed to the STAC who made recommendations at their 15 Nov. 2021 meeting and adopted by the Assembly on 8 Dec. 2021.

The 2021 manpower figures were scrutinised by the PM and CSS, in coordination with MG Members. As an outcome, the PM and the CSS have prepared the table with the total realised manpower, per country, which is proposed for approval to the Assembly Members in connection with the voting for DestinE.

In addition, for information, the PM and the CSS propose below complementary charts, about:

- A comparison of the manpower committed and reported, by Area
- A comparison of the manpower committed and reported, by Workpackage
- An evolution of the yearly reported manpower, by type of work

Should any Member have questions or comments on these charts, please contact the PM and the CSS.

The list of Work Packages is in Annex: the content of the Work Packages is given in the "RWP2021" document.

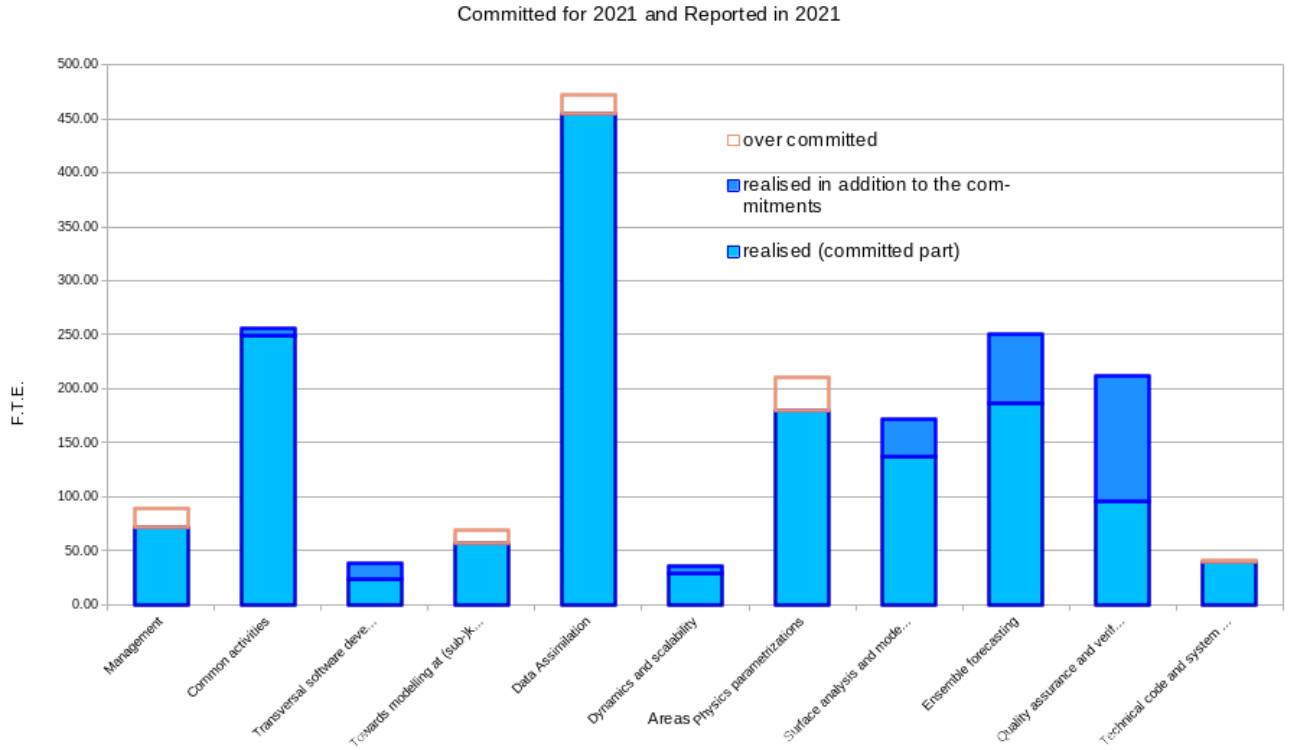

Figure 1. Commitments in the RWP2021 and work reported in 2021, by area

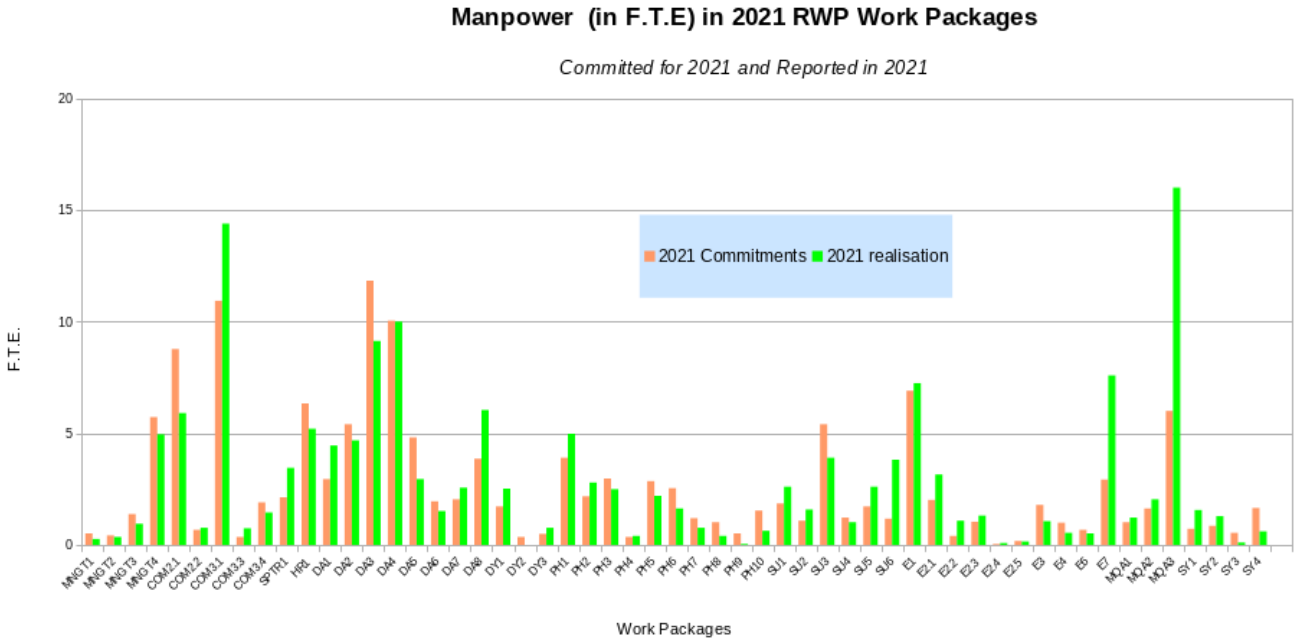

Figure 2. Commitments in the RWP2021 and work reported in 2021, by Work Packages

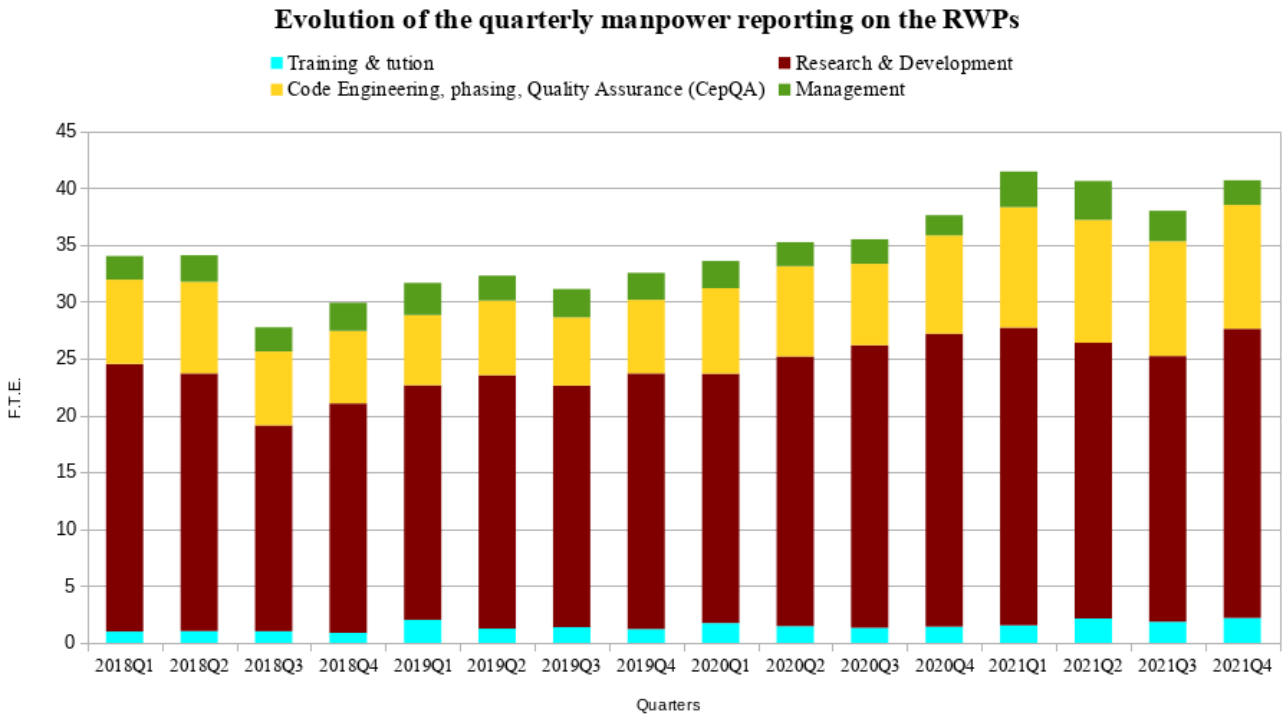

Figure 3. Evolution of the quarterly manpower dedicated to the Rolling Work Plans since 2018

Annex: List of Work Packages

AREA	WP NUMBER	WP NAME
MNGT	MNGT1	Management and ALADIN support activities
	MNGT2	Management LACE
	MNGT3	Management HIRLAM
	MNGT4	NEW !!! Management ALH
COM2	COM2.1	Code generation and maintenance: ongoing process, tools already used
	COM2.2	Code generation and maintenance: evolution of the work practices and environment
COM3	COM3.1	Maintenance and Partners' implementations of ALH system
	COM3.3	Training (preparation, lectures, attendance)
	COM3.4	NEW!!! Attendance and preparation of ASW & EWGLAM
Transversal software developments	SPTR1	**NEW !!! Addressing future evolutions of software infrastructure**

Towards modelling at (sub-)km resolution	HR1	(Sub)-km modelling
Dynamics and scalability	DY1	Improvement of SISL spectral dynamical core (H and NH)
	DY2	FVM-like solution as an alternative to SISL dynamical core
	DY3	Development of methods for solving the implicit equation in gridpoint space.
Data Assimilation	DA1	Further development of 3D-Var (alg. Settings)
	DA2	Development of flow-dependent algorithms
	DA3	Use of existing observations
	DA4	Use of new observations types
	DA5	Development of assimilation setups suited for nowcasting
	DA6	Participation in OOPS
	DA7	Observation pre-processing and diagnostic tools
	DA8	Basic data assimilation setup
Physics parametrizations	PH1	Developments of AROME-France (and ARPEGE) physics
	PH2	Developments of HARMONIE-AROME physics
	PH3	Developments of ALARO physics
	PH4	Common 1D MUSC framework for parametrization validation
	PH5	Model Output Postprocessing Parameters
	PH6	**NEW !!! Study the cloud/aerosol/radiation (CAR) interactions**
	PH7	**NEW !!! Develop approaches for 3D physics**
	PH8	**NEW !!! Assess the use of ML for physics parametrizations**
	PH9	**Consistency and convergence of the CSC physics**
	PH10	**NEW !!! Litterature survey of existing fully stochastic physics parametrizations**
Surface analysis and modelling	SU1	Algorithms for surface assimilation
	SU2	Use of observations in surface assimilation
	SU3	SURFEX: validation of existing options for NWP
	SU4	SURFEX: development of model components
	SU5	Assess/improve quality of surface characterization
	SU6	Coupling with sea surface/ocean
Ensemble forecasting and predictability	E1	Arome-France EPS (PEARO)
	E2.1	Development of convection-permitting ensembles: HarmonEPS - Physics perturbations
	E2.2	Development of convection-permitting ensembles: HarmonEPS - Initial conditions perturbations

	E2.3	Development of convection-permitting ensembles: HarmonEPS - Surface perturbations
	E2.4	Development of convection-permitting ensembles: HarmonEPS - Lateral boundary perturbations
	E2.5	Development of convection-permitting ensembles: HarmonEPS - HarmonEPS system
	E3	Development, maintenance and operation of convection-permitting ensembles for LACE
	E4	Development, maintenance and operation of LAEF
	E6	Ensemble calibration
	E7	**NEW !!! Develop user-oriented approaches**
Meteorological quality assurance and verification	MQA1	Development of HARP
	MQA2	Development of new verification methods
	MQA3	Meteorological quality assessment of new cycles and alleviation of model weaknesses
Technical code and system development	SY1	Code optimization
	SY2	Maintenance and development of the Harmonie Reference System
	SY3	Revision of the Harmonie scripting system
	SY4	**NEW !!! Towards a more common working environment: explore practical choices, prototyping, scripting**