

## First functional version of OP7.7 - Dashboards giving access to project management data (D7.6 - SGA3)



Figure 1: Publications Statistical Dashboard

Comments on Figure 1. The Publications statistical dashboard is available in the “PLUS” project monitoring tool to provide an overview of publication data in the Project.



Project Number:	945539	Project Title:	HBP SGA3
Document Title:	D7.6 - First functional version of OP7.7 - Dashboards giving access to project management data		
Document Filename:	D7.6 (D68) SGA3 M18 ACCEPTED 220520.docx		
Deliverable Number:	SGA3 D7.6 (D18)		
Deliverable Type:	Other		
Dissemination Level:	PU = Public		
Planned Delivery Date:	SGA3 M18 / 30 Sep 2021		
Actual Delivery Date:	SGA3 M18 / 13 Sep 2021; accepted 20 May 2022		
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Description in GA:	Release of a Project Management Dashboard for project participants, managers, and governance to have a synthetic vision of project status and progress on the individual elements of the project framework. This Deliverable will also include an update with better assistance for the verification of project metadata collected.		
Abstract:	<p>This document provides a high-level overview of the Project Management Dashboards developed in PLUS.</p> <p>A first version of the dashboards is released, running and is accessible to consortium members via the PLUS project monitoring tool.</p>		
Keywords:	PLUS, Statistical Dashboards, Modules, Project Status, Progress and Monitoring, Publications, Users, KPIs, Disseminations, Outputs		
Target Users/Readers:	WP Leaders, WP Managers, PCO, Consortium Members, PLUS Users		

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# 1. Introduction

This document provides an overview of the statistical dashboards that were developed and released as part of the HBP's internally developed "PLUS" project monitoring tool. The dashboards give Project contributors, managers and governance bodies access to data about the Project's progress.

## 1.1 History

In SGA2, T11.2.4 developed a statistical dashboard (Quality Assurance Dashboard). It was initially optimised for report-based information collection. In early 2019, it was adapted to support continuous monitoring. It allowed the tracking of quantitative metrics used to monitor Project implementation and enabled better communication with stakeholders. The status of major work plan elements (Deliverables, Milestones, KPIs, dissemination, publications, and gender) was accessible to anybody in the Consortium during most of SGA2. For SGA3, we decided to transfer the statistical dashboards to the PLUS project monitoring tool to centralise data and visualisation in one place. This Deliverable highlights the status of each dashboard at M18 of SGA3.

## 1.2 What is "PLUS" and how is it used?

PLUS is a tool for coordinating, monitoring and reporting Project progress that includes:

- **Modules:** These facilitate data collection, centralise information and make it accessible to the entire Consortium throughout SGA3. The content of each module (Dissemination, Publications, KPIs, Outputs and Users) is designed to collect key information for the Project Progress Report (PPR) and for monitoring progress of the Project continuously and efficiently. Each module is developed in Task T7.5 and is validated by the "PLUS user group" before final release in PLUS.
  - **Use:** For the Project Coordination Office (PCO), Work Package Managers (WPM) and Principal Investigators (PIs), each module simplifies Consortium-wide data collection using a single tool, PLUS, and facilitates preparation of the PPR and continuous internal monitoring.
- **Quality Controls:** Data that has been entered in each PLUS module (except the User module) is checked by the teams responsible for data verification (e.g., Tasks T7.4 and T8.1) to ensure completeness and quality of information entered in each module. During this phase, an iterative process between users and the teams responsible for data verification ensures ongoing data alignment and compliance. The Quality Control checklists used to verify PLUS data are set out in Deliverable D7.1 "White Paper on Quality Control - Version 2".
  - **Use:** During Quality Control checks, data verification teams can communicate with users by sharing comments/actions to be implemented directly in PLUS. This facilitates communication and traceability of actions to ensure data alignment and compliance.
- **Statistical dashboards:** Dashboards are available for each module in PLUS and are accessible to all SGA3 participants. Dashboards are automatically updated when information is entered in the corresponding PLUS module. Each dashboard's graphics provide an overview of the status and progress of the different elements used for monitoring SGA3 project implementation. Users can apply different filters to display information most relevant to them. Dashboards are developed by Task T7.5 and are validated by the user group before their final release in PLUS.
  - **Use:** Dashboards are used by the PCO to produce internal progress reports to support decision making by governance bodies. The dashboards are used by the PCO, WPMs and the Consortium to continuously monitor the progress and status of activities throughout the SGA3 Phase.

## 1.3 Current status of dashboards

By SGA3 M18, five statistical dashboards had been released in PLUS (see [Table 1](#)). The Dissemination dashboard was released as a basic version and extensive updates are under way.

**Table 1: Status of statistical dashboards at SGA3 M18**

#	Dashboards	Status at SGA3 M18
1	Publications	Implemented
2	User (Gender)	Implemented
3	KPIs	Implemented
4	Outputs	Implemented
5	Disseminations	Implemented - updates/validation under way
6	Risks	Not started
7	Milestones	Not started
8	Deliverables	Not started

## 1.4 Future developments

We plan to finalise the updated Dissemination dashboard and release three more dashboards (Risks, Milestones and Deliverables). We also plan to extend the functionality of the existing dashboards, to incorporate feedback and suggestions for further improvements from users and stakeholders.

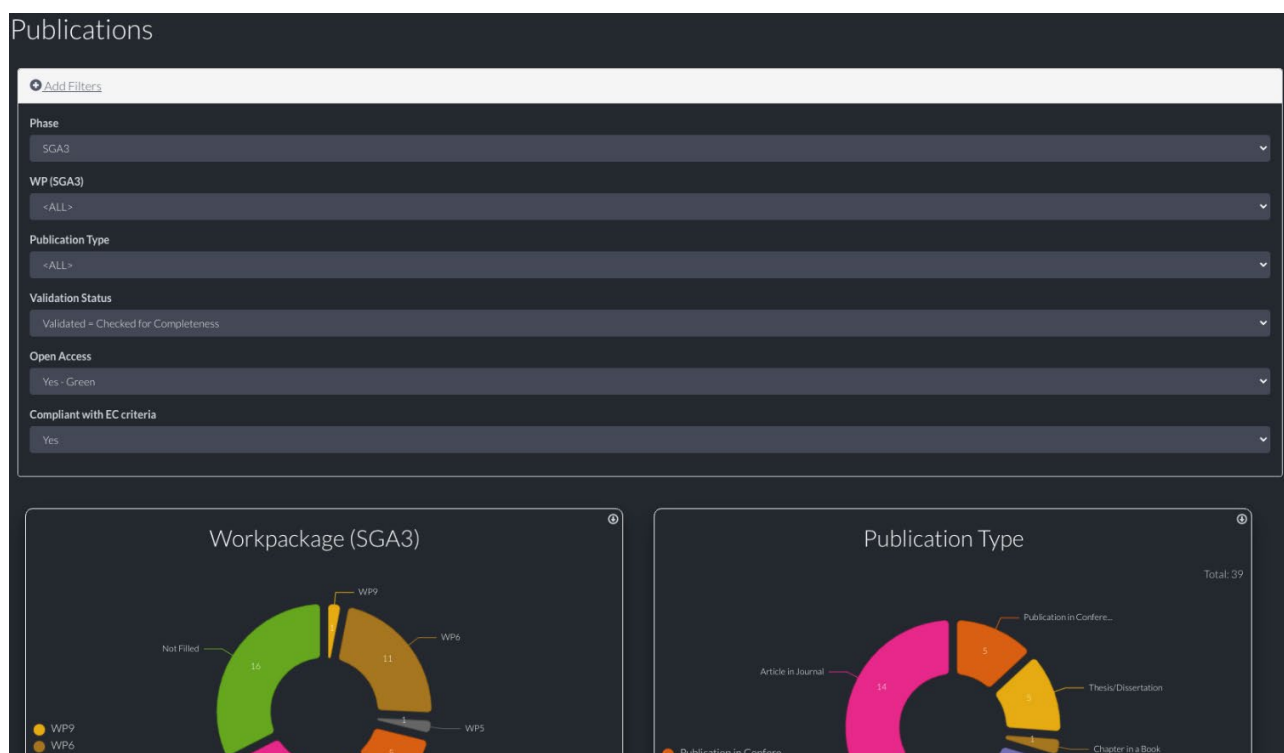
## 2. Statistical Dashboards

### 2.1 General description of PLUS Dashboards

The statical dashboards are grouped in PLUS with the modules they cover. Each dashboard displays several charts based on metadata that are collected in PLUS.

#### 2.1.1 Dashboard layout

The layout is similar across all dashboards. Below we show the Publications dashboard as an example.


**Figure 2: Illustration of the layout of the Publications dashboard**

At the top of the dashboard page a filter section is visible, although it is collapsed by default. When expanded (as shown in Figure 2) the “Add Filters” section offers various filter options.

The relevant charts are shown below the “Add Filters” section. The information in each chart automatically adapts to the current filter selection and only includes data that matches a given filter criterion.

Changing the filters also influences which charts are shown, so only relevant charts appear. For example, the “Workpackage (SGA3)” chart shown in Figure 2 above only gets displayed when the “Phase -> SGA3” filter is selected in the filter options.

## 2.1.2 Functionality

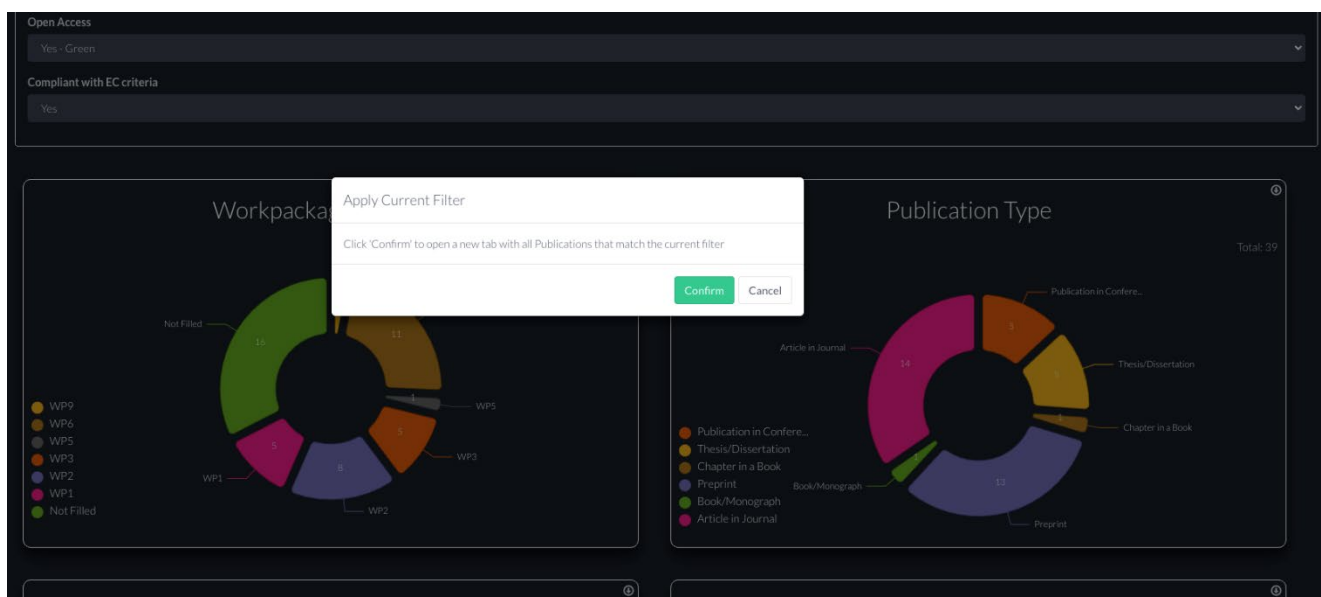
### 2.1.2.1 Filters

For each dashboard, the user has the option to manage which data the charts are based on, by selecting different filter options.

This can be useful, for example, for a Work Package Manager to quickly identify the number of publications by scientists in his/her Work Package that match a given filter criterion.

In the charts, users can easily see the number of matching entries for a given filter criterion. Additionally, the current filter can also be used to access individual records (e.g., Publications) that match this filter. This enables users to easily identify and update a record, for example, to add missing information to a publication.






The list of records can be accessed by clicking on a specific slice in the chart, which will display the dialogue shown in Figure 3 below.



**Figure 3: Apply current filter functionality**

In this example, applying the given filter takes the user to the list of publications that match the current filter (illustrated in Figure 4 below).

Matching Publications: 5 Download

<b>P2633 - MAGIC: A label-free fluorescence method for 3D high-resolution reconstruction of myelinated fibers in large volumes</b> Preprint - BioRxiv - 2020-07-29	
<b>P2636 - Analytical and fast Fiber Orientation Distribution reconstruction in 3D-Polarized Light Imaging</b> Article in Journal - Medical Image Analysis, Vol. 65 - 2020-06-27	
<b>P2638 - Reflections on the past two decades of neuroscience</b> Article in Journal - Nature Reviews Neuroscience, Vol. 21, No. 10 - 2020-09-02	
<b>P2709 - Subject-specific segregation of functional territories based on deep phenotyping</b> Article in Journal - Human Brain Mapping - 2020-12-24	
<b>P2881 - From deep brain phenotyping to functional atlas</b> Article in Journal - Current Opinion in Behavioral Sciences, Vol. 40 - 2021-07-06	

Filter Options

ID

DOI

Publication Date Start

Publication Date End

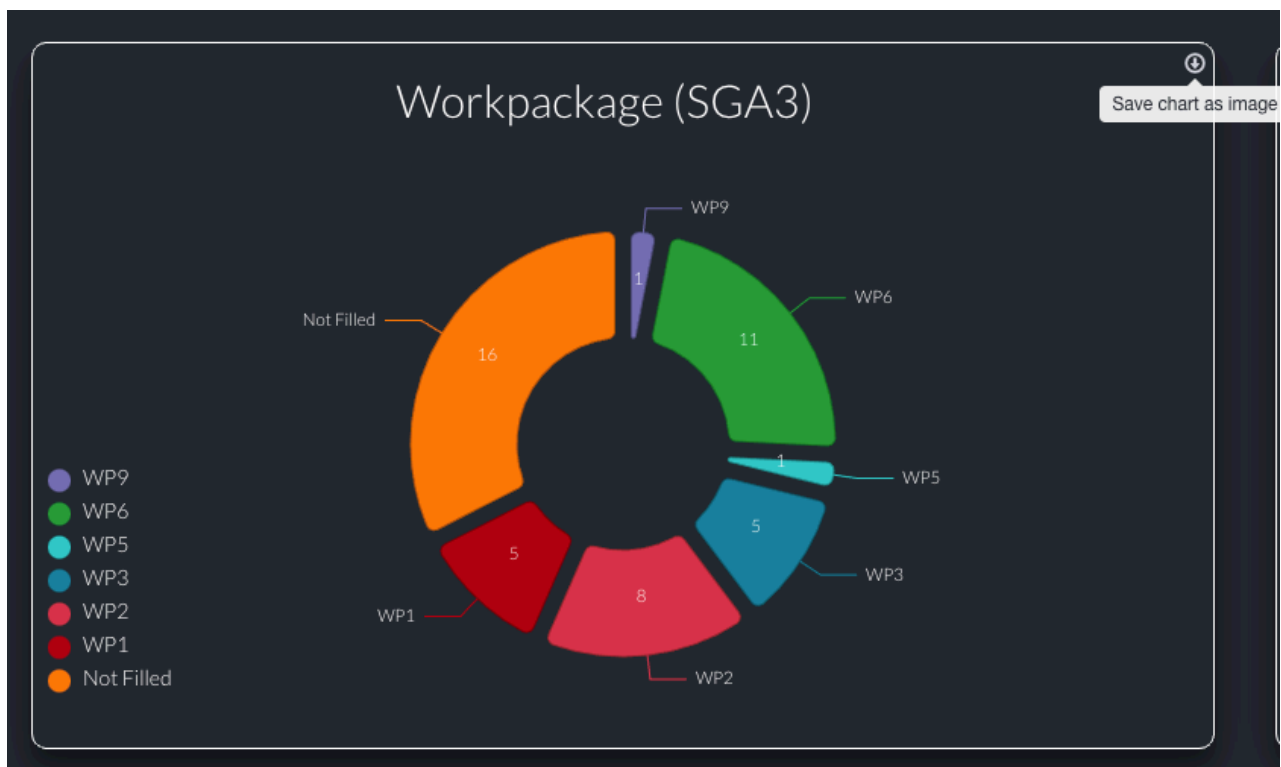
SP (SGA2)

WP (SGA3)

**Figure 4: Filter to identify relevant publications**

### 2.1.2.2 Chart Download

Another functionality that is often used in dashboards is “chart download”. This is accessible by clicking the download icon in the upper right corner of each chart. This functionality allows the user to download a chart; for example, to use in a presentation or report.



**Figure 5: Download functionality for charts**

## 2.2 Publications dashboard

The PLUS Publications Module was developed to record all relevant HBP publication information in a central place. It also allows publications to be linked to other Project aspects such as Work Packages or Service Categories. The [Publications dashboard](https://plus.humanbrainproject.eu/publication-statistics)<sup>1</sup> enables the user to easily analyse the recorded publication metadata.

<sup>1</sup> Publications dashboard: <https://plus.humanbrainproject.eu/publication-statistics>



All HBP publications are verified to ensure that the EC criteria<sup>2</sup> for publication eligibility described below are applied:

- All publications must acknowledge EC funding.
- For **peer-reviewed journal articles**, the following additional eligibility criteria are applied:
  - If the publication is an article in a journal and it is peer reviewed, it must be **Open Access via a scientific repository**.
  - If the publication is Green Open Access, it must have an **embargo period of no longer than 6 months** for Science, Technology, Engineering and Mathematics (STEM) subject matter, and **no longer than 12 months** for Social Sciences and Humanities (SSH) topics.

Please note that in all Publications dashboard charts below, the “Phase => SGA3” filter option is applied. It is possible to select different phases or show publications of all phases via the filter options of the dashboard.

## 2.2.1 Publication Type

This chart is based on the type of publication recorded in the PLUS Publications module. The available options are shown in Figure 6 below.

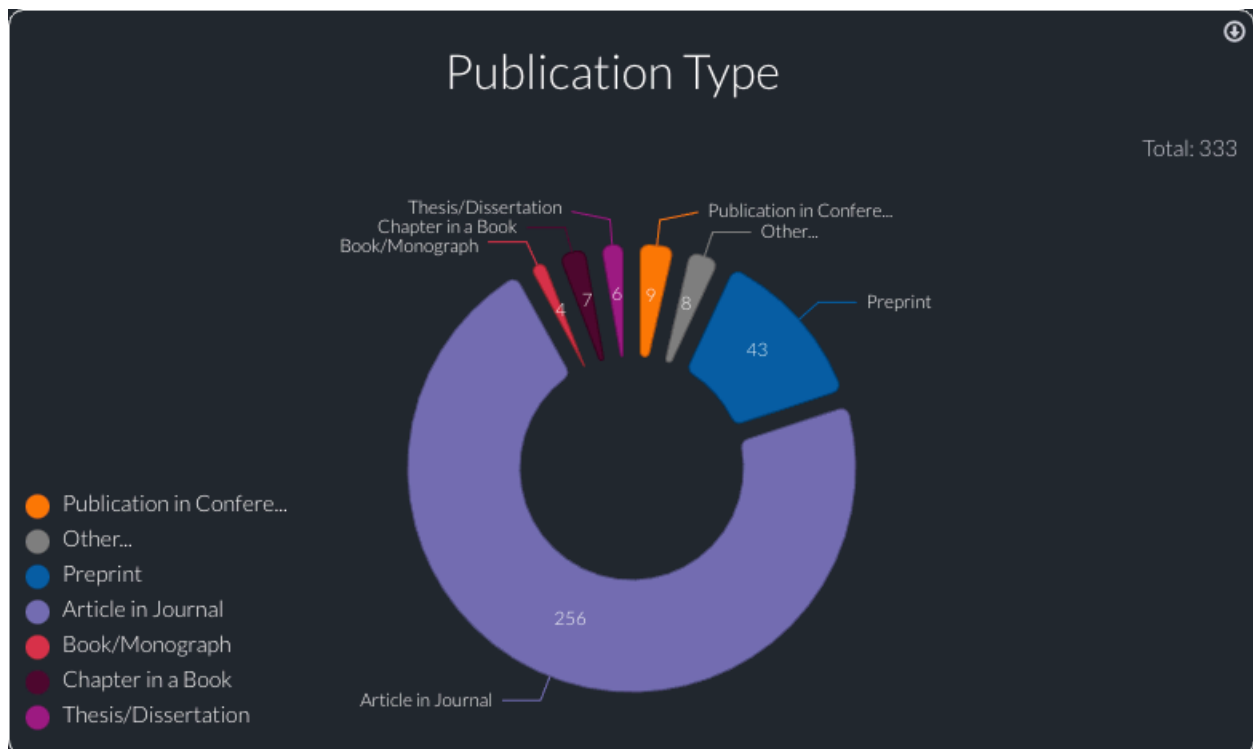


Figure 6: Publications - Publication Type chart

## 2.2.2 Validation Status

“Validation status” indicates the current status of the publication in terms of validation. There are possibilities:

- “Not Ready for Validation”

<sup>2</sup> EC guidelines “Guidelines to the rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020”:

[https://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-pilot-guide\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf)



- “Ready for Validation”
- “Validated = Checked for Completeness”

The publication is “Not Ready for Validation” while data remain to be entered.

“Ready for Validation” means the data concerning the publication are completely entered and have passed the automatic validation checks.

“Validated” means the publication has passed all validation checks and has been reviewed by the Quality Control team (Task T7.4).

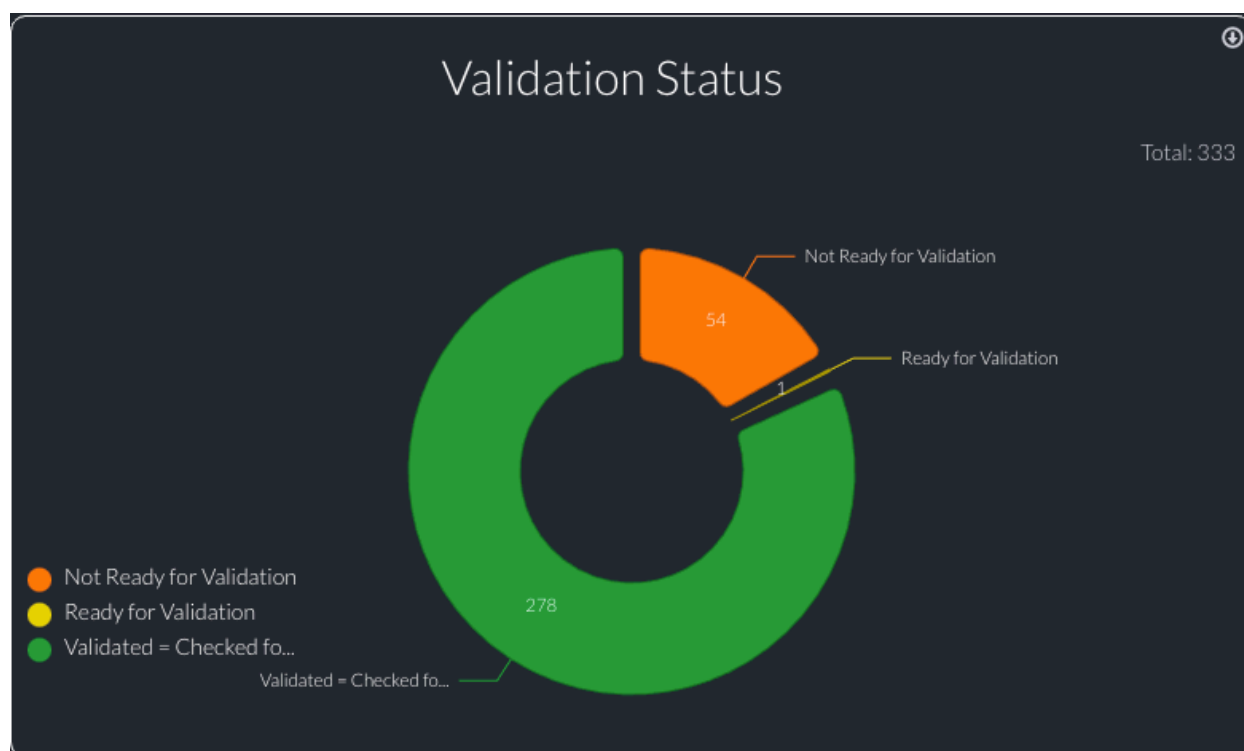


Figure 7: Publications - Validation Status chart

The validation status was introduced to improve the quality of publication metadata recorded in the module. Introducing the validation process also helped us in reaching the second objective of this Deliverable: to provide “better assistance for the verification of project metadata collected”.

### 2.2.3 Lead Author

There are two charts that display information about the Lead Author of a Publication that is recorded in PLUS:

- “Lead Author Gender”: As the HBP Project is encouraged by the EC to improve gender balance, information on the lead author’s gender is recorded for statistical purposes in the Publications module. Please note that “Unknown” is not an option *per se*, but a default choice if no selection is made.
- “Lead Author HBP”: This chart shows the number of publications for which the lead author was recorded as being a member of the HBP.

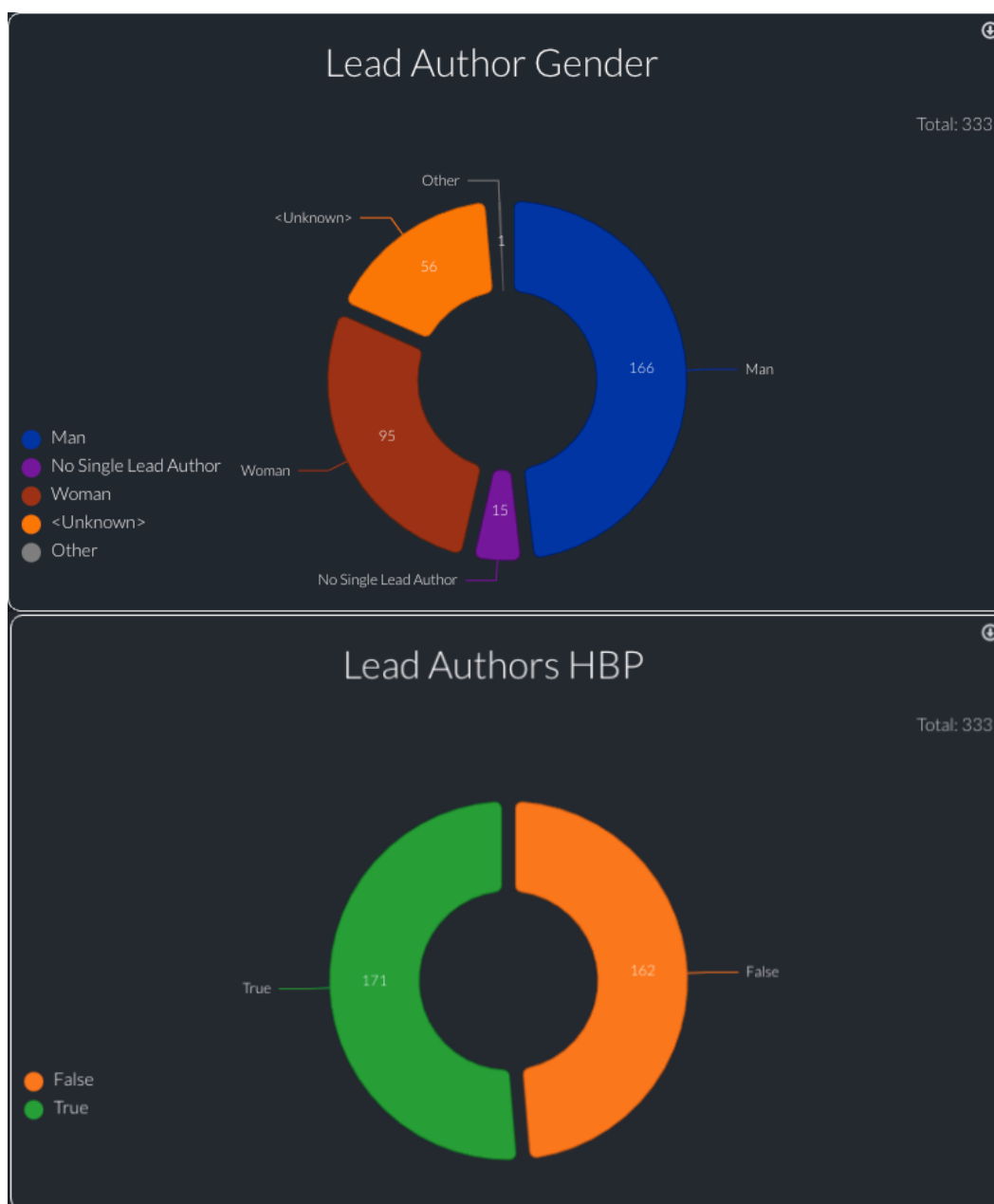


Figure 8: Publications - Lead Author charts

## 2.2.4 Processing charges for Gold Open Access

In the Publications module, the “Processing Charges in Euros” for Gold Open Access publications are recorded. This chart gives an overview of the number of publications for the following categories:

- “0€ / Not filled”
- “>0€ - 3000€”
- “>3000€ - 9000€”
- “>9000€”

This chart is only available if the “Open Access -> Gold” filter option is applied.

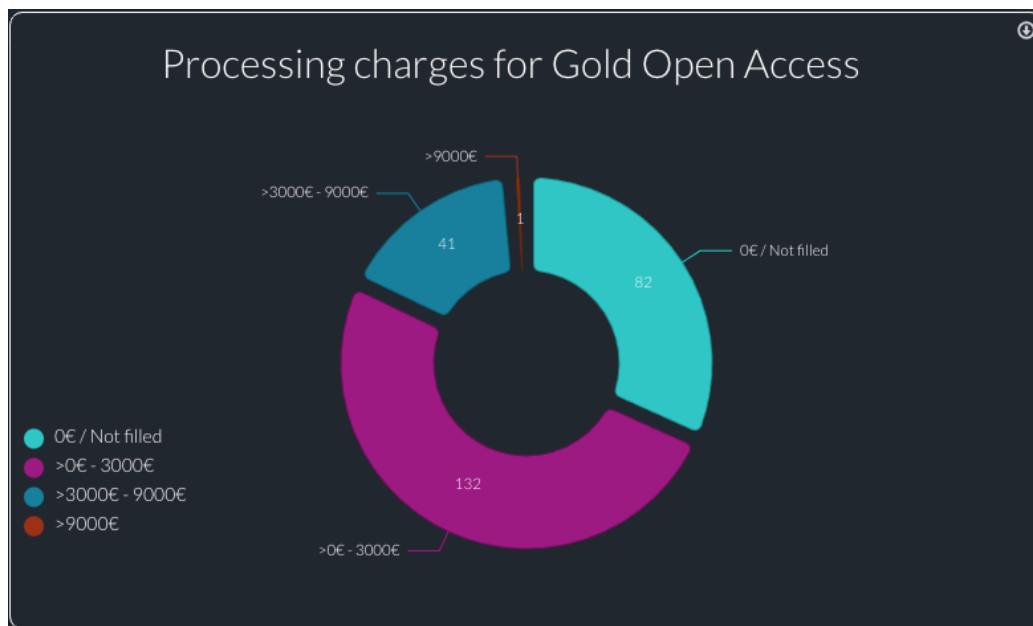


Figure 9: Publications - Processing Charges for Gold Open Access chart

## 2.2.5 HBP Associations

In this module, Publications can be linked to various aspects of the Project via the “HBP Associations” field. There are several charts that show the number of publications that are associated with Work Packages, Platforms and Service Categories. An example is shown in Figure 10.

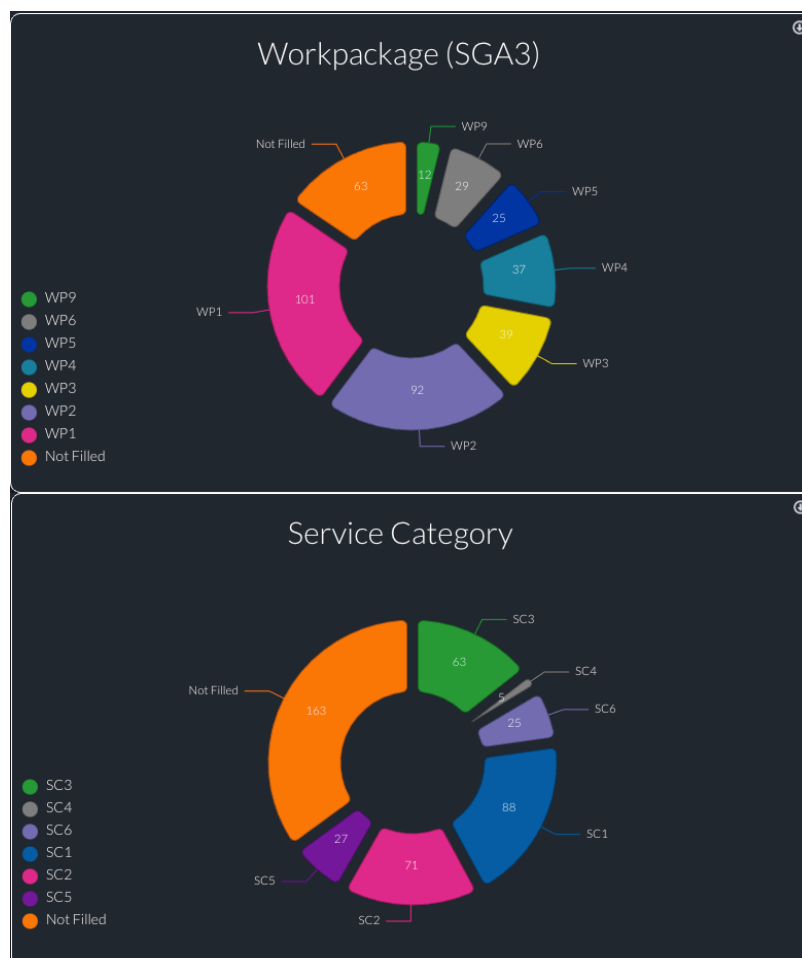


Figure 10: Publications - HBP Association charts

## 2.3 User dashboard

The User module offers the ability to record and share various information of Project participants. It is up to the individual user to decide which information they want to record and share with other HBP/EBRAINS users. The [User dashboard](#)<sup>3</sup> shows three different charts; gender, research status and funding; these are described in more detail below.

Please note that the graphs below show information on users who are active in the current SGA3 project phase (Filter “SGA3 Only” applied). It is possible to show users for both SGA2 and SGA3 phases by deselecting the “SGA3 only” filter toggle.

### 2.3.1 Gender

The EC monitors gender balance in research to guide its action plans to improve this area. The first figure below (Figure 11) shows the number of “women”, “men”, “non-binary gender” and “prefer not to say” within the HBP. Please note that “Unknown” is not an option *per se*, but a default choice if no selection is made.

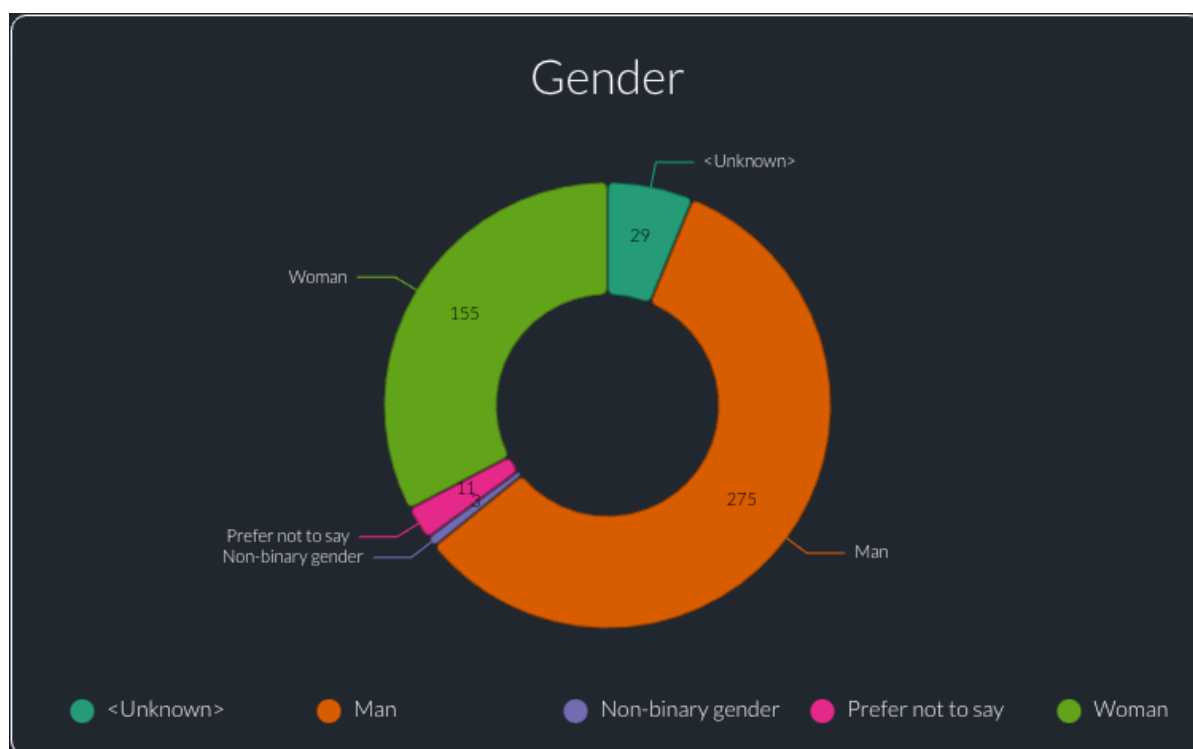


Figure 11: User - Gender chart

### 2.3.2 Is Researcher

Researchers are professionals engaged in the discovery of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques instrumentation, software and/or operational methods. The Users module records information on researchers at different career stages: students (master/PhD/postdoc), established researchers, principal investigators with/without (co-) leadership within the HBP. Non-researchers are developers, technicians, management or administration staff. Their exact function is recorded in a separate field “Function in your organisation” (e.g., Management Position, Technician, etc.) inside the Users module. The chart below (Figure 12) shows the number of Researchers within the HBP.

<sup>3</sup> User dashboard: <https://plus.humanbrainproject.eu/users/dashboard>

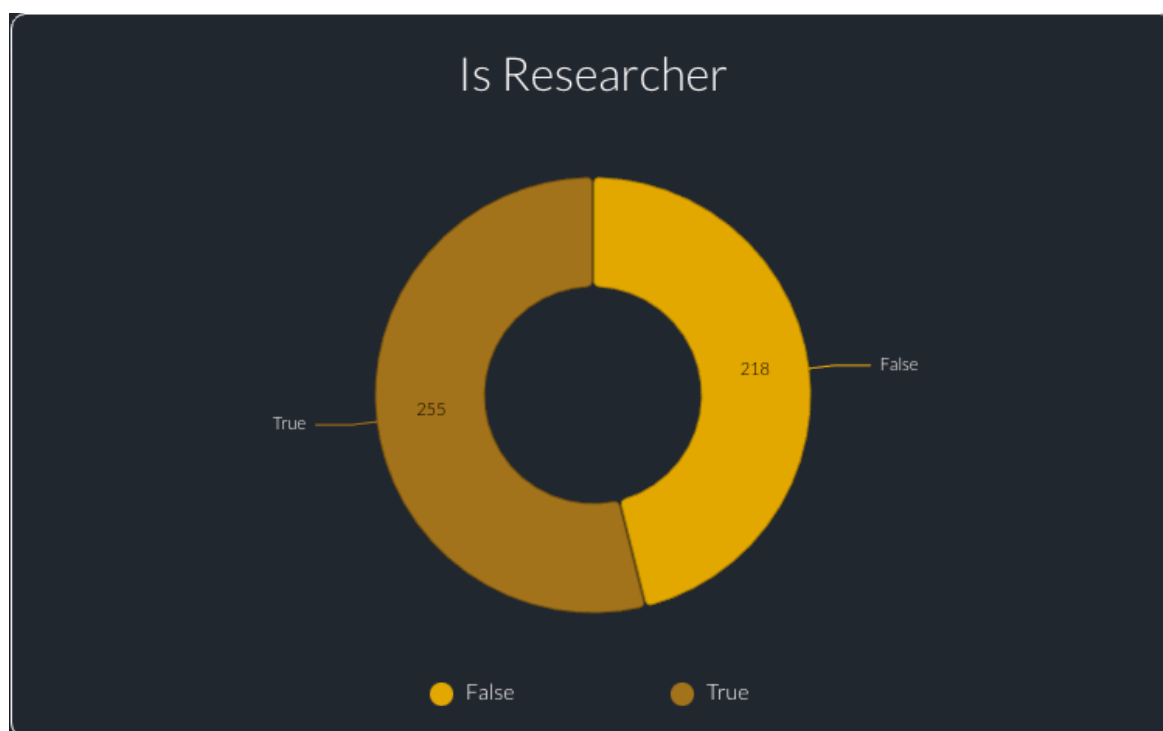


Figure 12: User - Is Researcher chart

### 2.3.3 HBP Funded

This information is used to identify users funded by HBP. The third chart from the Users dashboard below (Figure 13) shows the number of people funded by SGA3 funded people, fully or partially, regardless of the proportion of their time funded and whether or not their time might be an in-kind contribution provided by a 3<sup>rd</sup> party, or a non-SGA3-funded one (co-funded). Please note that “Unknown” is not an option *per se*, but a default choice if no selection is made.

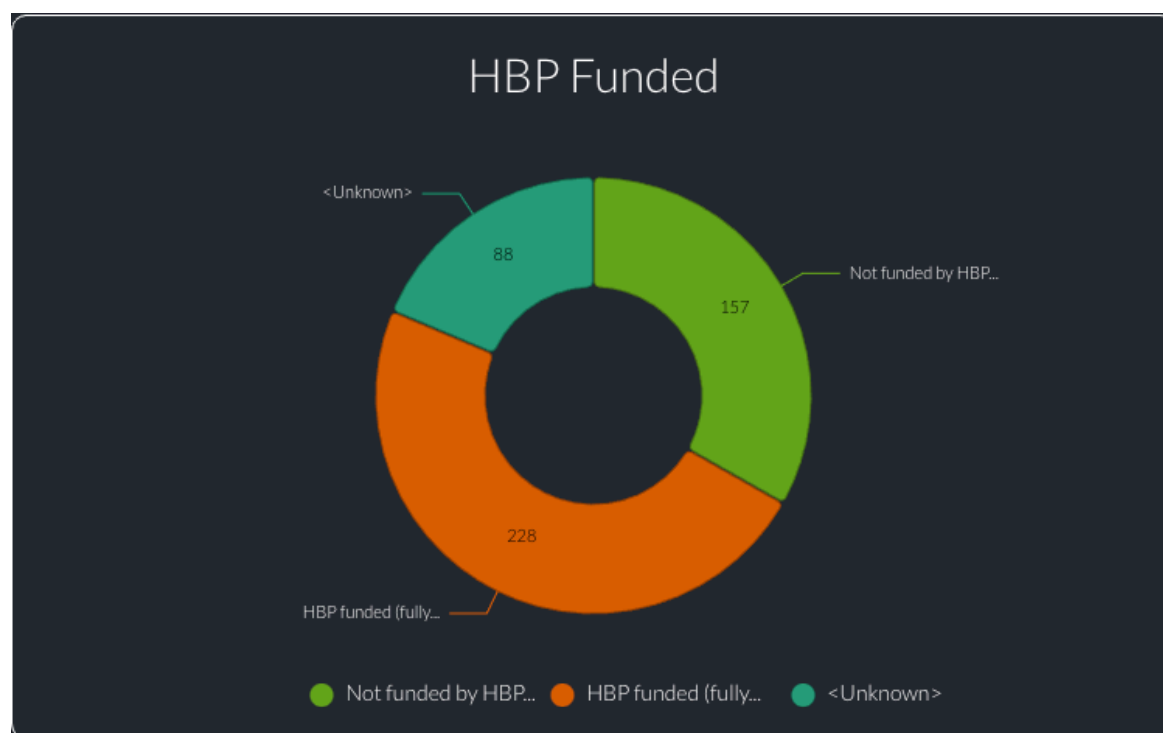


Figure 13: Users - HBP Funded chart

## 2.4 KPI/Prl(s) dashboard

The [KPI/Prl\(s\) dashboard](#)<sup>4</sup> gives users an up-to-date overview of “Key Performance Indicators” (KPIs) and “Progress Indicators” (Prls) in the Project. Production of internal progress reports, Periodic Progress Reports and ongoing monitoring are facilitated and simplified by exporting data and charts directly from the KPI/Prl(s) module/dashboard in PLUS.

### 2.4.1 Status of Achievement

In the statistical dashboard, KPIs are used to measure the HBP progress classified in eight different achievement statuses (see Figure 14):

- “On track”
- “Achieved”
- “Over-achieved”
- “Not on track but achievable by M21”
- “Not on track but achievable by M36”
- “Not on track and NOT achievable by M21”
- “Not on track and NOT achievable by M36”
- “Not achieved”

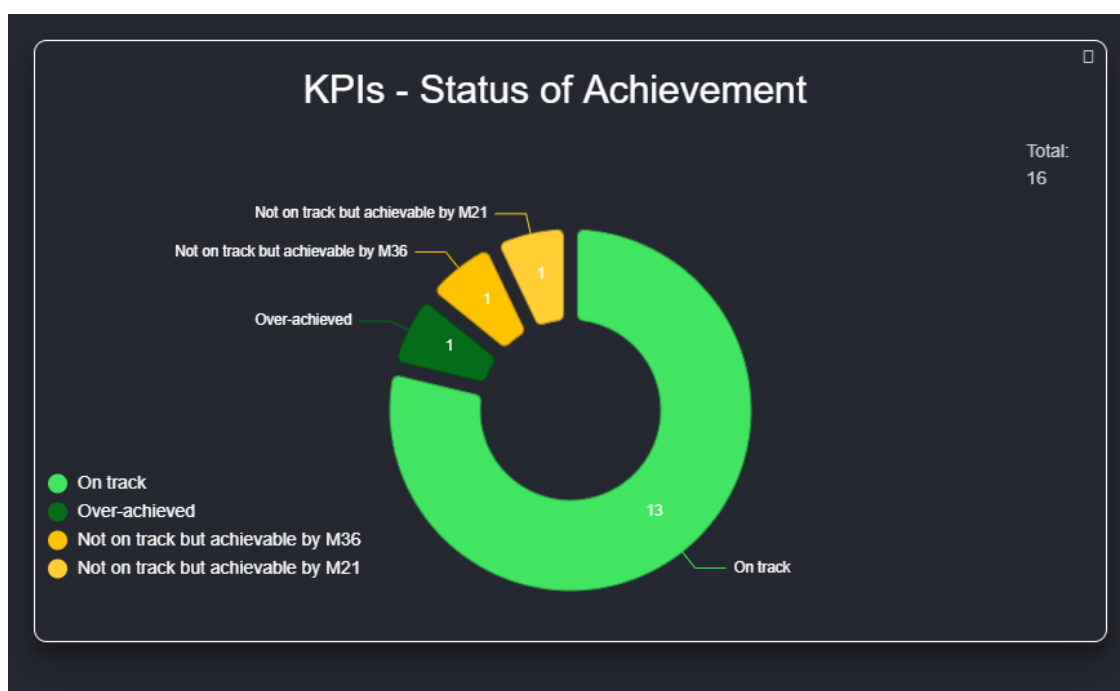


Figure 14: KPI/Prl(s) - KPIs - Status of Achievement chart

## 2.5 Output(s) dashboard

The [Output\(s\) dashboard](#)<sup>5</sup> gives users an up-to-date overview of Outputs in the Project. Production of internal progress reports, Periodic Progress Reports and ongoing monitoring are facilitated and simplified by exporting data and charts directly from the Output(s) module/dashboard in PLUS.

<sup>4</sup> KPIs dashboard: <https://plus.humanbrainproject.eu/kpis/statistics>

<sup>5</sup> Output(s) dashboard: <https://plus.humanbrainproject.eu/output-statistics>

## 2.5.1 Status

In the statistical dashboard, the Output status is used to quickly show the progress made by an individual Output. There are seven possibilities (see Figure 15):

- “Not Started”: note that the current workflow for Outputs establishes that its status, as well as the evidence of achievement and related data, should be completed in PLUS at the due date. Therefore, Outputs identified as “not started” refer to the continuous Outputs along the Project duration as well as the Outputs scheduled later on.
- “Achieved”
- “Partially achieved”
- “Not achieved”
- “On-track”
- “Not on-track but achievable at the due date”
- “Not on-track and NOT achievable at the due date”



Figure 15: Output(s) - Status chart

## 2.6 Dissemination(s) dashboard

A basic version of the [Dissemination\(s\) dashboard](https://plus.humanbrainproject.eu/dissemination-statistics)<sup>6</sup> was developed which shows the types of dissemination activities recorded in the module (see Figure 16). The dashboard also offers different filter options, for example, for Work Packages. The Dissemination(s) module is currently being updated to introduce a validation workflow similar to that used for Publications. As part of this update, an improved version of the dashboard with additional charts will also be released later.

<sup>6</sup> Dissemination(s) dashboard: <https://plus.humanbrainproject.eu/dissemination-statistics>



## 2.6.1 Activity Type

A dissemination can have one of four activity types:

- "Internally HBP-(co)-Organised Event"
- "Externally Organised Event to which HBP contributes"
- "Contribution to internal or external Events"
- "Other dissemination activity"



Figure 16: Dissemination(s) - Activity Type chart

## 2.7 Conclusions

In summary, the “PLUS” project monitoring tool offers several important benefits to users:

- As a whole, the Consortium has access to the latest project management data in one place, thus reducing the number of tools used in data access and management.
- Greater and more effective visualisation of project management data is provided by the different dashboards, which are automatically updated when new data is entered into PLUS, thus facilitating better project monitoring.
- Production of internal progress reports, Periodic Progress Reports and ongoing monitoring are facilitated and simplified by exporting data and charts from PLUS and communicating feedback directly in PLUS.

Guided by user feedback, the PLUS development team will continue to improve the PLUS tool, to enhance data collection, monitoring and reporting.