

# DESI Membership Effort and Builder Status Policy

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## 1 Introduction

This document describes the DESI Collaboration policy for membership effort and the threshold for Builder status.

The DESI Publication Policy has created the status of Builder, to be based on extensive and long-term service to the construction and execution of the DESI experiment. The Publication Policy designates that the Membership Committee of the Institutional Board will develop the detailed policy for the effort threshold to be applied as well as the mechanism for approval of Builders, with approval of the resulting policy by the Institutional Board. This document contains that policy.

The DESI Institutional Board has approved a policy for Continuing Participants. This policy similarly refers to effort levels, the definition of which is described herein.

Per the DESI Bylaws, DESI Participants are faculty and senior research staff; they join DESI by a Memorandum of Understanding (MOU) or formal letter. Participants must be individually approved by the Membership Committee of the Institutional Board. DESI Participants sponsor post-docs and students at their institution. The word Member refers to both Participants and their sponsorees.

## 2 Collaborative Effort from DESI Members

### 2.1 Overview

DESI expects that its Participants will engage in DESI as a substantial portion of their research effort. We seek to build an active collaboration in which all Participants are intellectually invested in the scientific products of the survey and are motivated to solve the many technical challenges that our survey will face. It is important that we avoid a server/client model in which some group produces the data for the consumption of a second group.

Because of this, the DESI Bylaws require that Participants contribute their effort, in addition to their cash contribution. We interpret this as requiring ongoing effort toward Project and Collaboration Service (hereafter ‘DESI Service’, described further in §2.2). We note that these contributions are expected throughout the life-cycle of DESI and may go beyond the original plans discussed in the project MOUs. Sponsored junior members, with the exception of undergraduates and graduate students in their first three years of graduate work, are similarly expected to make such a contribution. Sponsored junior members will be exempted for a one-year grace period as they learn about DESI and its collaboration.

Further, Participants joining the collaboration have specified an effort level in their MOUs for their total annual effort for the DESI experiment. This total includes DESI Service as well as work toward collaboration science analyses (all papers, not just Key Projects; see §2.3. The effort is reported as a percentage of the Participant’s research time (defined in §2.4).

These ongoing contributions are tracked by the Membership Committee of the Institutional Board. Failure to maintain suitable effort levels will result in warnings, and repeated warnings can result in removal from the Collaboration, via clause 14.10 of the Bylaws.

41 Members are required to specify their intentions for DESI service work as well as their inten-  
42 tions for DESI science as part of the Membership Form. Further, the Participant Information  
43 Sheet requested by the Membership Committee and incorporated into the initial MOUs asks for  
44 descriptions in both of these categories.

45 The Membership Committee expects all Members to update periodically their plans for DESI  
46 service work and DESI science by re-submitting their Membership Form.

## 47 **2.2 Definition of Project and Collaboration Service**

48 The phrase “Project and collaboration service”, aka DESI Service, is intended to encompass all  
49 efforts toward the DESI common good, excluding direct effort toward one’s own science analyses.  
50 Examples of common-good effort include:

- 51 • being a convener of a WG or a sub-group of a WG;
- 52 • construction and documentation of catalogs that support a WG goal;
- 53 • reporting of quality assurance investigations on survey data;
- 54 • contributions to survey hardware, pipelines, target selection, survey simulations, or imaging  
55 data sets;
- 56 • aid to documentation, public or collaboration web presence, or other forms of public outreach;
- 57 • contributions to data release papers or technical papers;
- 58 • service in refereeing collaboration papers;
- 59 • contributions toward collaboration management, governance, committees, fund-raising, or the  
60 organization of collaboration meetings.

61 Basically, any activity that helps DESI to be a successful scientific collaboration, save for a narrow  
62 servicing of one’s own science analysis, is suitable.

63 Furthermore, in order to incentivize the production of the alphabetically author-ordered Key  
64 Papers (see Publication Policy for definition), effort specifically toward their development is also  
65 included as a Service activity. Effort toward first-author science papers, including those that  
66 support Key Papers, is not included (but would count toward Total DESI time, see §2.3). For  
67 example, consider a member who produces a pipeline to measure galaxy clustering in support of  
68 a Key Paper, writes a first-author paper about the method and its performance on DESI mock  
69 catalogs, and then produces a variety of results and additional tests included in the alphabetically  
70 ordered Key Paper. The last of these would be time counted as Service, but the time to develop the  
71 method and write the first-author paper would not be. Clearly, this will require some judgement  
72 about the fraction of time spent on the two papers. Note from the previous paragraph that time  
73 to construct the WG catalogs and test for systematics therein is counted as Service, even if the  
74 results are in a first-author paper, as this is directly supporting the WG. The intention is to reward  
75 activity that benefits the full collaboration.

76 Work that involves the overlap of DESI with other external data sets or more general theoretical  
77 development can be beneficial in some cases, but only the portion that directly involves DESI should  
78 be counted. I.e., one should consider if doing the work is actually directly helping DESI science  
79 to happen or is a broader, more project-agnostic investigation. An example of this might be the

80 development of a new analysis methodology: a paper describing a methodology that is applicable  
81 to many surveys would not be counted as DESI service, but the implementation specifically in  
82 the DESI software framework would be. Similarly, a cosmological simulation with general utility  
83 would not be DESI service, but the time required to utilize those data products to produce a  
84 DESI-specific mock catalog would be. The production of an external observational catalog would  
85 not be DESI-service, but the time to ingest that catalog into a form needed for a DESI pipeline  
86 would be. We expect that such activities could end up with a fractional counting of the time, as a  
87 weighing of the uniqueness to DESI.

88 This is particularly important in regard to effort toward imaging surveys. We note that only  
89 DECaLS, BASS, MzLS, and WISE qualify for DESI contribution (see chapter 3 of the Final Design  
90 Report for discussion of these surveys), and analyses of these surveys that are not germane to DESI  
91 target selection are not counted as DESI Service. Tests specific to DESI targeting that involve other  
92 catalogs count as DESI Service, but not the generation of those external catalogs themselves.

93 For all of the above, to have effort for the development of software packages counted as Service, it  
94 is required that the source code and documentation of the package be made available for inspection  
95 and use by the collaboration, preferably as part of a collaboration-accessible software repository.  
96 This is particularly relevant to Key Paper work and other WG contributions. This does not imply  
97 that the software is being made available for external use, whether by collaboration members or  
98 others, and it is expected that use of code be with appropriate attribution and credit.

99 Members who are uncertain as to whether particular work should be counted as DESI Service  
100 should contact the Membership Committee for clarification. The Membership Committee is en-  
101 couraged to keep a record of examples, so as to be able to help members maintain a fair assessment  
102 standard.

### 103 **2.3 Definition of DESI Total Effort**

104 Time spent on DESI work, including all science analyses that directly relate to DESI data or  
105 design, that does not qualify as DESI Service is defined as “DESI Science” time. The total of the  
106 two categories is “Total time on DESI”.

107 As described in the last subsection, effort toward activities that benefit DESI but that also have a  
108 stand-alone purpose should be prorated according to what portion of the activity is specific to DESI.  
109 Obvious examples thereof are large cosmological simulations, external observational programs, or  
110 general theoretical work, each of which may have purposes that reach beyond DESI.

### 111 **2.4 Definition of Research Time**

112 The phrase “research time” refers to time available to the individual for their research program.

113 Examples of items that should be excluded from research-time accounting:

- 114 • teaching;
- 115 • academic (non-research) advising;
- 116 • department/university service, including service on student thesis or mentoring committees;
- 117 • national or community-level service;
- 118 • refereeing of proposals or (non-DESI) papers;

- 119 • attendance of seminars;
- 120 • consulting to research activities beyond one's direct (non-DESI) research activities (e.g., help-
- 121 ing other students or consulting to a research facility, where there is no expectation of co-
- 122 authorship).

123 Examples of items that should be included in research-time accounting:

- 124 • personal research;
- 125 • advising of students and postdocs on work relevant to the personal research group;
- 126 • any effort or service to large research collaborations (including DESI);
- 127 • research grant writing.

## 128 **3 Builder Status**

### 129 **3.1 Requirements for Builder Status**

130 The Publication Policy establishes the category of Builder to designate individual DESI Members  
131 who are eligible to co-sign a wide range of DESI publications. We further expect that the title of  
132 DESI Builder will be useful to Members as a formal recognition from the Collaboration of extensive  
133 service.

134 Builder status will be awarded based on a) the accumulation of DESI Service time (defined in  
135 §2.2) and b) a suitably long engagement with the Collaboration.

136 Members will report, on an annual basis, the average number hours of DESI Service performed  
137 in a typical (non-vacation) work week. It is not needed to adjust for occasional vacations and  
138 holidays. However, if the Member was inactive in DESI for a substantial portion of the year,  
139 then the reported amount should be prorated. E.g., if someone joins the collaboration halfway  
140 through the year and works 20 hours/week in the second half, they should report 10 hours/week  
141 averaged for the year. Similarly, a faculty member who works on DESI for 30 hours/week during  
142 3 summer months and 10 hours/week for the 9 academic-year months should report the average of  
143 15 hours/week for the year.

144 The threshold for DESI Builder status will be 60 year-hours/week, e.g. one might report 20  
145 hours/week for 3 years. Furthermore, Builder status will require at least 2 years of engagement  
146 with the Collaboration. Eligible effort starts January 2013.

147 In highly exceptional cases, the DESI Directorate may opt to reduce these quantitative thresh-  
148 olds. However, we remind that Builder status is not required to co-sign papers with which the  
149 Member was an active contributor. Many collaboration members will get co-authorship recogni-  
150 tion of their activities without Builder status.

### 151 **3.2 Applying for Builder Status**

152 Members who believe that they have satisfied the requirements for Builder Status should notify the  
153 Membership Committee chair to apply. If the Membership Committee requires more detail about  
154 their work, it may request a roughly 1 page description of the DESI Service work performed.

155 Applications will then be reviewed by the Membership Committee. In particular, the committee  
156 will consider whether the self-reported effort levels appear accurate given the work accomplished.  
157 The committee may consult with Working Group leads, DESI Project L2 leads, and other super-  
158 visors to determine this. If in favor, the Membership Committee will recommend the candidate to  
159 the Directorate, who will consider the case for final approval.

160 Appeals will be considered by the full Institutional Board; the Member or their Institutional  
161 Board representative raising the issue to the chair. Members may want to make use the Omsbud-  
162 persons should they be concerned about how the interpretation of this policy is affecting them; the  
163 Membership Committee and Spokespersons are also available for these discussions.

## 164 **4 Continuing Participants**

165 The DESI Collaboration policy on Continuing Participants uses the same effort metrics as those  
166 for Builder status, namely year-hours/week of DESI Service.

## 167 **5 DESI Annual Effort Accounting**

168 To carry out the assessments described above, the Membership Committee will require DESI mem-  
169 bers to report annually on their effort. This report will include a brief description of activities, as  
170 well as three quantities:

- 171 1) Total Time on DESI, as a fraction of Research time.
- 172 2) DESI Service Time, as a fraction of Research time. Clearly this should not exceed item 1.
- 173 3) DESI Service Time, as average number of hours per (non-vacation) work week, prorated by the  
174 fraction of the year engaged with DESI.

175 The Membership Committee may review these self-reported quantities and may circulate them  
176 to WG Chairs, L2 Project Managers, Directorate, the member's Institutional Board representa-  
177 tive, or other supervisors in order to confirm them. Reports that appear implausible will lead to  
178 discussions with the Member and direction to re-file the report. The reported quantities will not  
179 be made available to the full collaboration.

180 Failing to report will result in an assumption of zero effort.

181 The Collaboration has opted for annual reporting as we believe that this will allow members to  
182 give more prompt and higher fidelity reports on their activities and allow them a better sense of  
183 how they are converging to Builder status.

184 When a Member has accumulated 30 year-hours/week toward Builder status, the Membership  
185 Committee will review their reported effort in order to assure that the Collaboration management  
186 and the member are in agreement regarding the amount of effort remaining to achieve Builder  
187 status. Members may also request such review.