



**An Roinn Oideachais
agus Scileanna**
Department of
Education and Skills

PROJECTIONS OF FULL-TIME ENROLMENT
Primary and Second Level, 2018 - 2036

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This report and others in the series may be accessed at:

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Acronyms

- CSO - Central Statistics Office
- DES - Department of Education and Skills
- ECCE - Early Childhood Care and Education
- PLC - Post Leaving Certificate
- P-POD - Post-Primary Online Database
- TPFR - Total Period Fertility Rate

1 Introduction

This report provides the latest set of projections of full-time enrolment in first and second level schools aided by the Department of Education and Skills. This release updates the previous set of projections published in July 2017 [1]. A separate document on third-level projections will also shortly be made available. This document covers all years from 2018 to 2036.

The three migration assumptions and two fertility assumptions have been updated on the basis of new data which has become available since the previous publication, giving rise to six scenarios in total for which projected enrolments data is presented [2]. The Department has chosen M2F1, a scenario encompassing a medium migration assumption and an assumption of fertility remaining at a current level, as the most likely scenario going forward.

Primary enrolments, which have already risen substantially in recent years, are projected to rise by an additional 4,360 pupils by 2018, reaching a peak of over 567,800 in 2018, before beginning to reduce. This peak figure is reflective of primary enrolment levels last seen in Ireland in the mid-1980s, where enrolments rose to a peak of 567,000 pupils in 1987 before beginning to reduce.

Post-primary enrolments are also projected to rise substantially by over 6,087 by 2018 and will continue to rise under M2/M3 scenarios until 2024, at which point enrolments at second level are expected to be in excess of 402,176 pupils for the first time in the history of the State. In total, therefore an additional 19,710 pupils are expected in the system in 2020 at second level compared to September 2017.

2 Projected Enrolments for 2018-2020

The following table shows the final enrolments at first and second level for 2017, based on the annual returns of primary and post-primary schools, and the projected enrolments at first and second level for the following three academic years under scenario M2F1. Note the year refers to the beginning of a school year in September of that year.

Table 1: Overview of Enrolment Trends, 2017-2020

Year Beginning	First Level	Second Level
2017 (final)	563,459	357,408
2018	567,819	363,495
2019	566,220	369,673
2020	559,822	377,118

As can be seen from Table 1, an increase in enrolments is expected at both first and second level. At first level, the increase in births in recent years is reflected in the corresponding continuing increase in the levels of enrolment up to a peak in 2018, before beginning to decrease slightly from 2019 (Tables 1 and 2).

At second level, a year-on-year increase between 2018 and 2020 can be seen. The second-level projections follow the trend seen at primary, as the increased numbers of pupils at primary level in recent years begin to transition to post-primary education.

3 Migration and Fertility Scenarios

The latest available migration data from pupil enrolments shows a return to net inward migration. While data from 2013/14 and 2014/15 showed patterns of net outward migration, this has been reversed and we are now projecting a prolonged period of net inward migration, in line with CSO Population Projections.

In recent years, births and the Total Period Fertility Rate (TPFR) have decreased significantly below previous levels, with the 2017 TPFR now standing at 1.8 [3].

Taking the above information into account, the migration and fertility assumptions for the 2018 projections are as follows.

3.1 Migration

For migration at Primary level the following set of assumptions were used (See Appendix A.2):

M1 = 1,800. This assumption shows a return to net inward migration. The net inward migration will be at levels similar to those seen in the early 2000s.

M2 = 1,200. Net migration reflects current positive inward migration from 2018 onwards.

M3 = 600. Net migration will remain slightly positive for the whole period of the projections.

At Post-primary level, it is difficult to determine the true number of emigrants from the education system from the data available, given the higher numbers of departures from the second-level system compared to those from first level, particularly after the ending of compulsory school age. A flow-based approach, which includes migration flows, is therefore taken at second level using overall numbers of entrants to and leavers from the system at each programme level, retention rates and the "cohort survival" rates from one year to another.

3.2 Fertility

The most recent evidence shows the TPF_R in Ireland fell sharply from the 2010 level of 2.09 to 1.8 in 2017, and has now been below replacement rate for a number of years. The following TPF_R assumptions were applied:

F1: TPF_R to remain at the 2017 level of 1.8 for the lifetime of the projections.

F2: TPF_R will decline to 1.61 by 2030 and remain at that rate thereafter.

These two sets of assumptions combine to give a total of six scenarios under which enrolments are projected from 2018 to 2036, as shown on the following pages. The Department currently considers M2F1 as the most likely scenario over this period.

4 Primary-Level Projections

Table 2 and Figure 1 show the levels of enrolment at first level under the various scenarios M1F1 to M3F2, from 2018 to 2036.

Table 2: Projections of Enrolment at Primary Level, 2018-2036 ([Download detailed file](#))

Year	M1F1	M1F2	M2F1	M2F2	M3F1	M3F2
2018	568,434	568,434	567,819	567,819	567,204	567,204
2019	567,362	567,362	566,220	566,220	565,077	565,077
2020	561,404	561,404	559,822	559,822	558,240	558,240
2021	551,961	551,961	550,027	550,027	548,093	548,093
2022	541,641	541,454	539,442	539,256	537,244	537,058
2023	530,620	529,804	528,245	527,429	525,870	525,054
2024	521,662	519,715	519,198	517,251	516,733	514,787
2025	512,801	509,239	510,335	506,773	507,869	504,307
2026	503,395	497,748	500,929	495,282	498,463	492,816
2027	495,199	487,008	492,733	484,542	490,267	482,076
2028	488,272	477,085	485,806	474,619	483,340	472,153
2029	483,040	468,403	480,574	465,937	478,108	463,471
2030	479,000	460,634	476,534	458,168	474,068	455,702
2031	475,732	453,604	473,266	451,138	470,800	448,672
2032	473,460	447,585	470,994	445,119	468,528	442,652
2033	472,429	442,789	469,963	440,323	467,496	437,857
2034	472,753	439,299	470,287	436,833	467,821	434,367
2035	474,445	437,098	471,979	434,632	469,513	432,166
2036	477,434	436,261	474,968	433,795	472,502	431,329

4.1 Key Points to Note

- Focusing on the immediate three-year period ahead (2018-2020 inclusive) under scenario **M2F1**, enrolment is projected to increase by just under 4,400 pupils from 2017 to 2018 and decrease by 7,997 from 2018 to 2020. All scenarios show the peak enrolment numbers occurring in 2018 (M1 568,434, M2 567,819, M3 567,204).

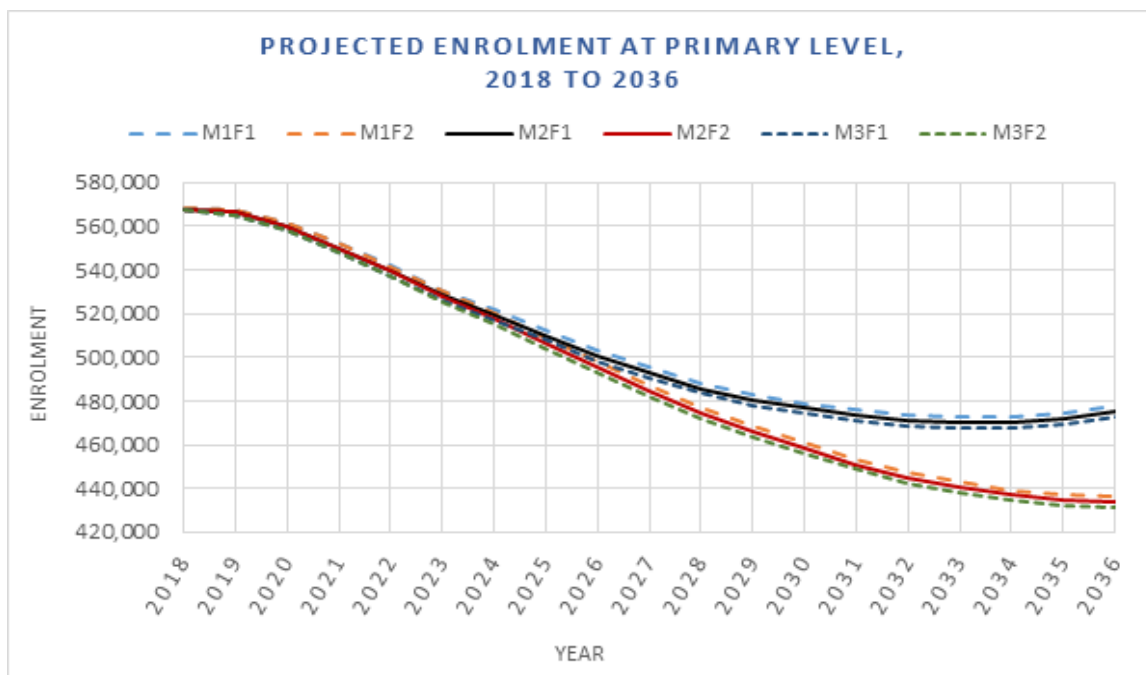


Figure 1: Projections of Enrolment at Primary Level, 2018–2036

- Currently, **M2F1** is considered the most likely scenario. This would suggest an increase in enrolments at primary level to a peak of **567,819** by 2018 and a continuous decline thereafter, to a level of 474,968 by 2036.
- The variation in the near term is due to differences in migration assumptions only, as fertility has no impact in the short term.
- Since September 2016, children can participate in the Early Childhood Care and Education (ECCE) scheme (age: 3 years - 5 years and 6 months) [4]. As a result, the number of primary entrants is reduced by the children enrolling in the second year of the free pre-school scheme for the period of the projections, i.e., the enrolment proportion of 4-year-olds has been decreased from 0.53 (2016) to 0.48 (2017).

5 Second-Level Projections

Second level comprises all Junior and Leaving Certificate course students in DES-aided schools and colleges. The figures below refer to the school-based enrolments up to Leaving Certificate and do not include PLC students.

There has been a noticeable increase in retention at second level in recent years, with the latest published retention report showing a retention rate to Leaving Certificate of all students of just over 91.2% [5]. The increased rates are reflected as part of the assumptions on flows in and out of the second-level system. Table 3 presents projected enrolment to the year 2036 at second level.

Table 3: Projections of Enrolment at Second Level, 2018-2036 ([Download detailed file](#))

Year	M1F1	M1F2	M2F1	M2F2	M3F1	M3F2
2018	363,495	363,495	363,495	363,495	363,495	363,495
2019	369,759	369,759	369,673	369,673	369,586	369,586
2020	377,377	377,377	377,118	377,118	376,860	376,860
2021	386,200	386,200	385,684	385,684	385,168	385,168
2022	393,271	393,271	392,414	392,414	391,557	391,557
2023	400,341	400,341	399,059	399,059	397,776	397,776
2024	403,943	403,943	402,176	402,176	400,409	400,409
2025	404,010	404,010	401,754	401,754	399,498	399,498
2026	401,355	401,355	398,694	398,694	396,034	396,034
2027	396,006	396,006	393,026	393,026	390,047	390,047
2028	389,079	389,079	385,866	385,866	382,653	382,653
2029	380,953	380,953	377,589	377,589	374,226	374,226
2030	373,574	373,332	370,144	369,902	366,714	366,472
2031	366,306	365,441	362,869	362,005	359,433	358,568
2032	359,084	357,111	355,647	353,674	352,210	350,237
2033	352,786	349,235	349,349	345,798	345,912	342,361
2034	347,545	341,968	344,108	338,531	340,671	335,094
2035	343,424	335,432	339,987	331,995	336,550	328,558
2036	339,955	329,348	336,518	325,911	333,081	322,474

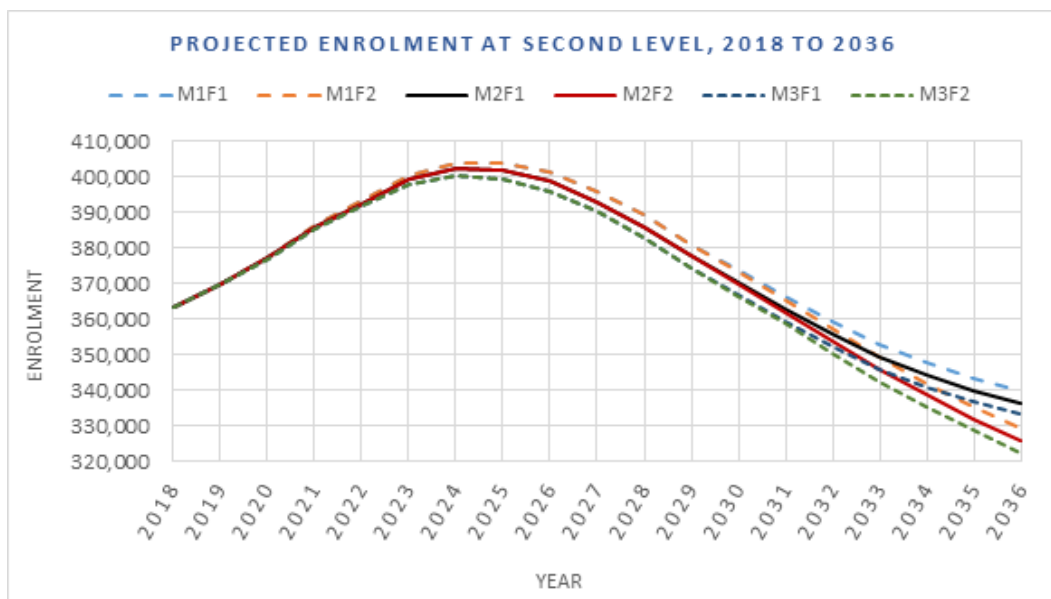


Figure 2: Projections of Enrolment at Second Level, 2018–2036

5.1 Key Points to Note

- Focusing on the immediate three-year period ahead under scenario **M2F1**, enrolment is projected to increase by 6,087 pupils from 2017 to 2018 and by 19,710 by September 2020.
- The second-level projections are a direct continuous product of the primary enrolment estimates. The peak enrolment numbers in post-primary schools for M2 and M3 are projected to occur in 2024 while under M1 it is expected to occur in 2025.
- Currently, **M2F1** is considered the most likely scenario. This would suggest a year-on-year increase in second-level enrolments to a peak of **402,176** over the period considered, occurring in 2024.
- After 2024, enrolments are projected to begin to decline. Under the M2F1 scenario, enrolments begin to decrease from 2025 to a level of just over 336,500 by 2036.
- Up to the peak year 2024, fertility has no impact on the results.
- After the year 2029, the margin between scenarios begins to widen further as assumptions on births also begin to have an effect on the projected figures.

6 Review of 2017 Projections

This section presents a short review of the last published projections and outlines the updates to the projected figures that have been made for the 2018 iteration.

The percentage difference rate of a prediction can be defined as follows:

$$\frac{|Predicted\ Value - Actual\ Value|}{Actual\ Value} * 100 \quad (1)$$

Table 4 shows the actual enrolment for 2017 at primary and second level compared to the projected enrolment for 2017 under the most likely scenario, and gives the percentage difference for each level.

Table 4: Comparisons with 2017 Projections

Year	Education Level	Most Likely Scenario	Actual Enrolment	Difference	Difference Rate
2017	Primary Level	563,716	563,459	-257	0.05%
2017	Second Level	356,412	357,408	996	0.28%

There was very little difference between the projected and the actual figure, i.e., an over-projection of 257 pupils at primary level in 2017. This difference is due to the change in net migration, i.e., the net outward migration of 0-4-year-olds was slightly lower than projected. The model has therefore been updated accordingly. In addition, the difference between real and actual figures can be partially attributed to children participating in the ECCE scheme (see sub-section 4.1), i.e., the enrolment proportion of 4y.o. has been decreased from 0.53 (2016) to 0.48 (2017). As a result, the actual enrolment figures are lower compared to the projected ones.

At second level, there was an under-projection of 996 pupils in 2017. The difference could be due to the continuing increasing numbers choosing to do Transition Year, which have grown in recent years. In 2017/18, almost 68% of Junior Cycle Year 3 pupils went on to do Transition Year, compared to 65% and 67% in 2014/15 and

2016/17, respectively. This higher proportion has been carried through the model, increasing the numbers expected to remain in the system over time.

Over the longer term, the downward trend in fertility assumptions, the increased numbers opting to take Transition Year and application of the linear model of migration used in primary level have a slight impact on the projected numbers compared to the 2017 projections. Overall, as per the previous set of projections, enrolments under the recommended scenario are still expected to peak in 2018 for primary level and in 2024 for second level, before beginning to reduce. However, the highest projected increase is expected to be higher than previously projected for primary level (about 450 pupils for M2F1) and lower for second level (about 13,000 pupils for M2F1 compared to 2024).

Further details on the data underlying the assumptions are available in Appendix A on the following page.

Appendix A Supplementary Tables and Methodological Information

A.1 Fertility Assumptions

The Total Period Fertility Rate (TPFR) is a synthetic indicator of fertility at one point in time (a year) across all cohorts of women giving birth in that year. It shows the average expected number of children a woman would have by the age of 49 based on the current years information on births and ages of mothers.

The number of births registered in Ireland in the intercensal period 2006-2011 peaked at 75,554 in 2009, when the TPFR was at a level of 2.09. Since then, recent figures show that the number of births in 2017 had fallen to 62,053, giving a fertility rate of 1.80 [3]. The total period fertility rate has shown considerable volatility between the bands 1.80 and 2.15 in the past two decades, as shown in Figure A.1.

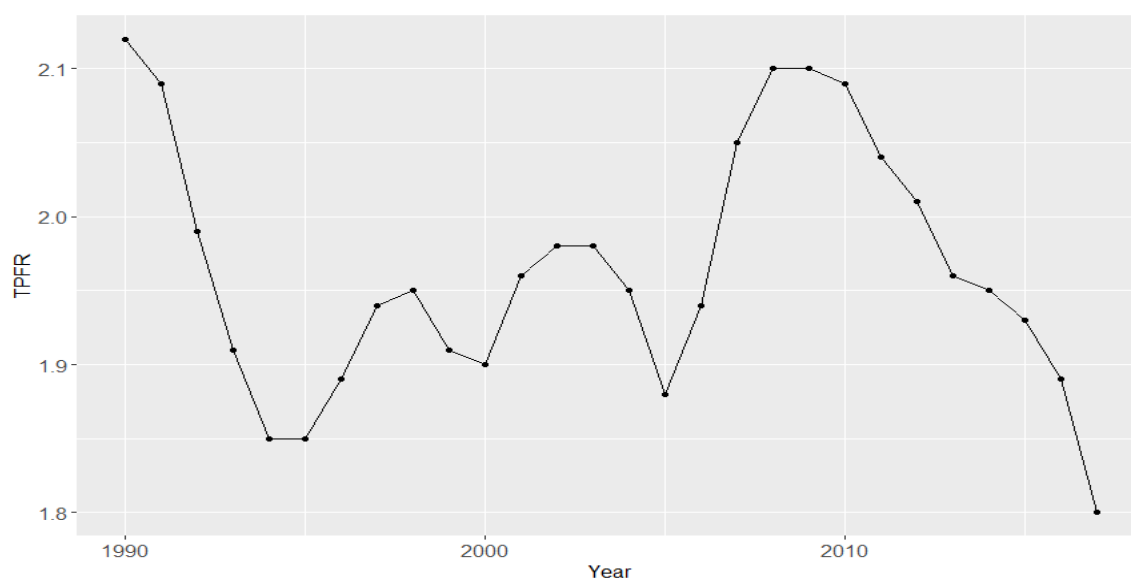


Figure A.1: Total Period Fertility Rate, 1990-2017

Assumption F1 allows for the TPFRR level of 1.80, while assumption F2 allows for a reduction to 1.61 over the period of the projections. Assumption F1 is chosen as the most likely fertility assumption. Ireland still has a relatively high fertility rate compared to other European countries, so a current level of 1.80, which is still significantly higher than the European average, seems the more likely of the two fertility assumptions.

Table A.1 shows the projected births under each fertility assumption for the period 2018 to 2036. Also, the historical births data (1990-2017) can be viewed in Figure A.2, where the periodicity of the data is clearly seen.

Table A.1: Projected Births under each Fertility Assumption, 2018-2036

Year	F1	F2
2018	61,857	61,338
2019	61,153	60,134
2020	60,436	58,928
2021	59,724	57,747
2022	59,113	56,679
2023	58,629	55,743
2024	58,314	54,981
2025	58,198	54,409
2026	58,305	54,052
2027	58,619	53,891
2028	59,116	53,890
2029	59,762	54,021
2030	60,532	54,260
2031	61,378	54,558
2032	62,255	55,338
2033	63,126	56,112
2034	63,975	56,867
2035	64,777	57,579
2036	65,533	58,252

Source: DES projections model

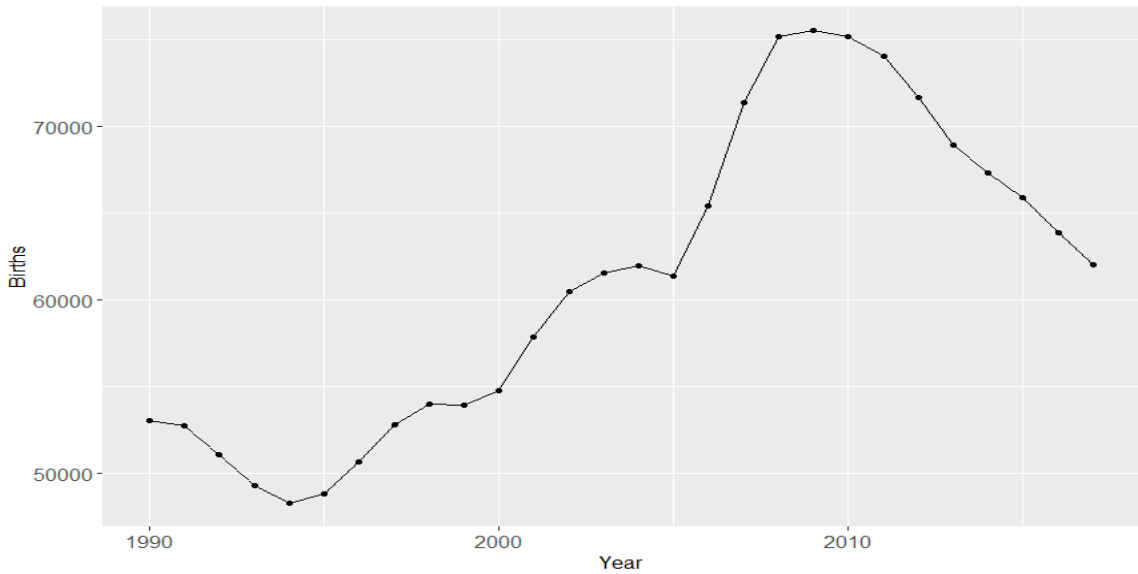


Figure A.2: Births, 1990-2017 [6]

A.2 Migration Assumptions

In order to arrive at migration assumptions for primary school-aged children, immigration and emigration variables, based on the most recent trends seen in the primary school annual returns data, are applied to projected age cohorts to derive a projection of emigration and immigration to and from the primary school system. In line with CSO migration assumptions (as used in the latest population projections), the following annual migration assumptions have been adapted: M2 shows the migration at 2017 current levels (positive net migration: 1,200), M1 shows higher than current net migration (+50% on M2), and M3 shows lower, but still positive, net migration (-50% on M2) (Table A.2) [2].

Table A.2: Projected Migration at Primary Level under each Migration Assumption, 2018-2036

M1	M2	M3
1,800	1,200	600

Source: DES projections model

At second level, it is more difficult to disaggregate the flows out of the system by destination, given the larger numbers of leavers and the wider range of possibilities for

leaving destination. While migration is the main driver of the flows in and out of the primary level system as a whole, this is not the case at second level, where flows out of the system also include dropouts, transfers to the private sector and second-chance education. Therefore, a "cohort survival" method is applied to the second-level data which takes into account all flows to and from the system, including migration. This method applies flow percentages to each programme year at second level, based on the most recent trends in migration and retention and the percentages are then carried throughout the model.

A.3 Deaths

Assumptions on deaths are taken directly from the CSO projections for each single year of age. The effect of deaths on the overall projections is miniscule given the small numbers involved.

A.4 Flows at Second Level

An inward and outward flow rate is applied to each programme year cohort at second level, reflecting trends in migration, retention, transfers to and from the private sector and repeats.

A.5 Primary Level Other Factors

A number of other factors, which have a smaller impact on overall figures at primary level, are included in the model, including transfers to and from the private sector and special education, as well as repeat rates in junior infants and 6th class in primary school.

References

- [1] <https://www.education.ie/en/Publications/Statistics/Statistical-Reports/Projections-full-time-enrolment-Primary-and-Second-Level-2017-2035.pdf>
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