Graduate Outcomes Analysis in the FET Sector in Ireland: Challenges and Benefits

Selen Guerin
Data Analytics Unit
SOLAS has responsibility for providing strategic leadership to the further education and training sector

- Supporting the development and implementation of the further education and training strategy
- Funding of the further education and training (FET) system to maximise the impact of state investment
- Overseeing the development and implementation of the Strategic Performance Agreements between SOLAS and each Education and Training Board (ETB) which set out 3 year plans to further embed a strategic and integrated FET system
- Statutory responsibility for the apprenticeship system
- Analysing the labour market and identifying and anticipating key skills needs, and
- Promoting the standing of Further Education and Training
MISSION
To be ambitious for Further Education and Training; and through that ambition to lead, support and influence an ever-improving FET sector that delivers excellent outcomes for learners, enterprise and communities.

CORE PRINCIPLES
The SOLAS approach is:
- Evidence-based
- Responsive and flexible
- Outward-looking and learner-centred
- Collaborative
- Focused on excellence
**SOLAS GOAL 1**

Align skills provided through FET courses with those required by the labour market to improve individuals’ employment prospects and lifelong learning needs.

**THREE-YEAR TARGETS**

New strategic-performance agreements with all 16 ETBs, integrated with the FET planning process.

**ACTIONS**

1.1 Carry out skills and labour-market research to inform decisions on FET provision by SOLAS.

1.2 Develop agreed skills targets using outputs from improved FET data, the strategic pilots’ projects, programme evaluation, research and improved planning processes. These would be developed with the National Skills Council, regional forums and employers as a key component of the FET strategic agreements and service planning with ETBs.
Setting the Baseline:

• **ETB Strategic Performance Agreements and Planning Framework**
  – It is statutory responsibility of SOLAS
    • fulfil its obligations under the Education and Training Act 2013:
    • ‘to assess whether or not training bodies, and other bodies engaged in the provision of further education and training programmes, to whom moneys have been advanced under section 21, perform their functions in an economic, efficient and **effective** manner’.
Setting the Baseline: SOLAS/CSO Input

SOLAS corporate plan 2017-2019:

Targeted and measured goals
• Provide accurate and reliable statistics on Learners:
  • Employment
  • Higher Education
  • Other FET
  • Back on welfare
A key objective of the current Further Education and Training Strategy is to ensure that planning for and provision of FET is supported by a strong data infrastructure.

The data deficit:
Some ETBs have sophisticated computer systems. Others relied on manual and paper based systems

In response SOLAS created

PLSS: an IT infrastructure and centralised repository of FET information
High Level Flow Chart of PLSS
We now have a framework in place for a strategic and integrated further education and training system...

**Tertiary Education Framework**
- Concept of tertiary education system introduced with plans for framework linking FET & HE

**Core FET Targets**
- Common understanding of six core functions of FET and associated targets

**Reform & New Delivery Models**
- Programme improvement plans & new types of FET provision emerging

**Strategic Planning & Funding**
- 3 year strategic agreements & upcoming review of funding model

**Data Revolution**
- Comprehensive learner database & power to link this to employment & progression databases

**Quality Assurance & Enhancement**
- Development of quality assurance processes and enhancement plans

**Framework for Future FET**
Our Role: Data Analytics Unit

• to oversee this work and to support evidenced-based planning across the organisation.
  • A key aspect of the work of the Data Analytics unit includes tracking outcomes of FET learners to measure the impact of FET in relation to the future learning progression or employment of graduates.
• Reporting on FET statistics to the DES, DEASP, ESF, Eurostat, OECD, etc.
The further education and training system is very diverse and geographically spread but complex and multi-faceted...

- Student cohort roughly equivalent to that of higher education (circa 200k)
- However 340k beneficiaries, meaning many accessing more than one course
- €640m SOLAS investment (+€140m)
- Community based model characterised by small scale provision
- Work-based components of much provision
- Large proportion of adult learners with competing demands
- Level 5 and Level 6 principally delivered via PLC, traineeships & apprenticeships
PLSS-FET Statistics, 2018

Total Learners: 175,054
Learner Activity: 263,321

39.7% Full-time
60.2% Online

Enrolments: Age Distribution by Full-time, Online, and Part-time

Percent

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Full-time</th>
<th>Online</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>under-25</td>
<td>60%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>25-34</td>
<td>30%</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>35-44</td>
<td>20%</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>45-54</td>
<td>10%</td>
<td>20%</td>
<td>70%</td>
</tr>
<tr>
<td>55-64+</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>
PLSS-FET Statistics, 2018

Completions: ISCED Broad Field of Study (Learner Activity)
Total of 173 different nationalities

- Ireland: 45.3%
- UK: 42.3%
- EU: 6.4%
- Other: 4.8%
- Unknown: 2.2%

Map of the world showing distribution of nationalities.
PLSS-Lifelong Learning

Learner Enrolments
103,238

Total Learner Enrolments
41% LLL
59% Other Enrolments

37.3% Other Enrolments
62.7%

Lifelong Learning: Enrolments by age distribution
- 25-34: 30%
- 35-44: 27%
- 45-54: 18%
- 55-64: 25%

Lifelong Learning: Enrolments by work status
- Employed: 43%
- Unemployed: 14%
- Student/Trainee: 9%
- Engaged in home duties: 5%
- Retired: 2%
- Inactive for other reasons: 2%
Participation by Learners of Roma Ethnic Origin

**Enrolments**
In 2018, there were 302 Roma enrolled in the further education and training sector, engaged in 600 learning activities. Of the total number of learning activities, 71 percent (427) were finished in 2018, while the rest were still on course.

**Profile**
54 percent female
68 percent were older than 25 years of age.

**Duration of Unemployment**
- 40% LTU
- 60% Less than 12 months

**Economic Status**

**Household Joblessness**
Among this cohort 12 learners stated that they were part of a jobless household, whereas 58 stated that they were dependents in a jobless household.

**Disability**
- 24

Learners stated that they had a long-lasting condition.

- Full and partial completions 87%
- Certification rate 57%
Participation by Learners with a Disability

**Enrolments**
In 2018, there were 8444 learners with at least one disability enrolled in the further education and training programmes; this figure constitutes 5 percent of all learners enrolled in the same year.

**Economic Status**

<table>
<thead>
<tr>
<th>Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>31%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>59%</td>
</tr>
<tr>
<td>Inactive</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Profile**
- 54 percent female
- 69 percent were older than 25 years of age.

**Total number of learners with a disability**

- Psychological: 1,689
- Hearing disability: 545
- Vision disability: 408
- Learning or... 2,603
- Intellectual: 2,136
- Mobility: 1,220
- Other Illness or... 2,529

- Full and partial completions: 90%
- Certification rate: 30%
The Aim

Method: Graduate/Learner tracking

Suitable performance indicators

An integrated approach to FET provision

Connecting supply and demand in areas where there are skills shortages

Informed decision making regarding FET provision
Benefits of Linking PLSS with Administrative Datasets

Evidence based Evaluation of FET outcomes

Performance Indicators

- Employment
  - Job
  - Wages
- Progression into education
  - Other FET
  - HET
- Unemployment
  - Welfare

SOLAS learning works
Construction of the new database

**Source Tier**
Personal Data

- PLSS
- P35
- JLD
- Form 11
- HEA

**Analysis Tier**
Pseudonymised Data

Matching using Protected Identifier Key based on PPSN
Graduate Tracking and Skills Shortages in the Labour Market
Benefits of Linking PLSS with Administrative Datasets

- Why?
  - Better than surveys
    - (Follow up Survey)
  - Better than self-declaration
  - Best practice
Strategic performance agreements mark a major milestone in the continued development of a strategic and integrated FET system...

**Establishment phase**

**Outcomes Focus**
FET Strategy 2014-19 commits to a system of outcomes-based planning and funding

**New Ecosystem**
SOLAS and ETBs becoming established as part of new skills development ecosystem (National Skills Council, Regional Skills Fora)

**Building systems & capability**

**Planning**
Build on the foundation and continual improvement of FARR annual planning framework

**Data**
Supported by the development or robust learner data tracking system

**Multi-annual strategic planning**

**Agreements**
Agreements developed with each ETB to establish 3 year FET strategic plans

**Consult**
Event with CEṣ & FET Directors, internal & external consultation, pilots to test process

**Strategic Pilots**
Initiative tested and developed a process with 3 ETBs.

**Targets**
3 year national targets for FET set down in SOLAS Corporate Plan
Graduate Tracking and Funding in FET in Ireland

Target 1
10% more learners will secure employment

Target 2
10% more learners will progress to other FET or HE

Target 3
10% increase in certification on transversal skills focused courses
Graduate Tracking and Funding in FET in Ireland

Target 4
10% more learners will engage in lifelong learning

Target 5
10,000 learners per annum securing relevant qualifications in sectors where employment growth/skills needs have been identified

Target 6
13,900 (2018-2020) Starters on Traineeship
# Appendix A

## Contribution to National FET Sector Targets by Skills Cluster

<table>
<thead>
<tr>
<th>Further Education &amp; Training Provision</th>
<th>Target 1</th>
<th>Target 2</th>
<th>Target 3</th>
</tr>
</thead>
</table>

**Sector Provision 10%**

More learners will secure employment from provision which primarily serves the labour market.

**Expected overall increase in Completers Securing Employment**

<table>
<thead>
<tr>
<th>SKILL Clusters</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Agriculture, Horticulture and Manuscriculture</td>
<td>1</td>
<td>10%</td>
<td>4</td>
<td>13%</td>
<td></td>
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<tr>
<td>Animal Science</td>
<td>4</td>
<td>13%</td>
<td>0</td>
<td>0%</td>
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<tr>
<td>Arts and Crafts</td>
<td>17</td>
<td>10%</td>
<td>1</td>
<td>25%</td>
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</tr>
<tr>
<td>Built Environment</td>
<td>4</td>
<td>11%</td>
<td>0</td>
<td>0%</td>
<td></td>
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</tr>
<tr>
<td>Business Administration</td>
<td>20</td>
<td>10%</td>
<td>7</td>
<td>10%</td>
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<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering (Electrical)</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
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<td></td>
</tr>
<tr>
<td>Engineering (IT)</td>
<td>0</td>
<td>0%</td>
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<td>50%</td>
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<tr>
<td>Engineering (Mechanical)</td>
<td>0</td>
<td>0%</td>
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<tr>
<td>Engineering (Transport)</td>
<td>4</td>
<td>13%</td>
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<tr>
<td>Entrepreneurship</td>
<td>0</td>
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<td>0%</td>
<td></td>
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</tr>
<tr>
<td>Financial Services</td>
<td>2</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>6</td>
<td>11%</td>
<td>1</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hairdressing, Beauty and Complimentary Therapies</td>
<td>11</td>
<td>10%</td>
<td>1</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health, Family, other Social Services</td>
<td>16</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Technology</td>
<td>8</td>
<td>10%</td>
<td>1</td>
<td>17%</td>
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<td></td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
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<tr>
<td>Manufacturing</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media, Graphics, Communications</td>
<td>25</td>
<td>10%</td>
<td>1</td>
<td>14%</td>
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<td></td>
</tr>
<tr>
<td>Natural Resources</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and Education-Training</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales &amp; Marketing</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>18%</td>
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<td></td>
</tr>
<tr>
<td>Science and Technology</td>
<td>2</td>
<td>11%</td>
<td>1</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security, Guarding &amp; Emergency Services</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sport and Leisure</td>
<td>12</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism</td>
<td>14</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Target 1</td>
<td>Target 2</td>
<td>Target 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018-2020</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>2019-2020</td>
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<td>2020-2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Target 1
- **Objective:** Increase in relevant qualifications across FET programmes.
- **Goal:** Increase of 2,000 learners per annum securing relevant qualifications in sectors where employment growth targets need to be identified.

### Target 2
- **Objective:** Traineeship National Target of 20,000 (2018-2020 - 12,000; 2015-2020 - 12,500) and commitments on Traineeship Skills Clusters by Sectoral Labour Market Plans.

### Target 3
- **Objective:** Expected overall average contribution to National Target and ETT capacity.

<table>
<thead>
<tr>
<th>Year</th>
<th>Expected number</th>
<th>Expected %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2020</td>
<td>25</td>
<td>10%</td>
</tr>
<tr>
<td>2019-2020</td>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td>2020-2021</td>
<td>40</td>
<td>10%</td>
</tr>
<tr>
<td>2021-2022</td>
<td>107</td>
<td>11%</td>
</tr>
<tr>
<td>2022-2023</td>
<td>11</td>
<td>8%</td>
</tr>
<tr>
<td>2023-2024</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2024-2025</td>
<td>33</td>
<td>10%</td>
</tr>
<tr>
<td>2025-2026</td>
<td>238</td>
<td>0%</td>
</tr>
<tr>
<td>2026-2027</td>
<td>333</td>
<td>0%</td>
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<tr>
<td>2027-2028</td>
<td>225</td>
<td>0%</td>
</tr>
<tr>
<td>2028-2029</td>
<td>333</td>
<td>0%</td>
</tr>
<tr>
<td>2029-2030</td>
<td>238</td>
<td>0%</td>
</tr>
<tr>
<td>2030-2031</td>
<td>333</td>
<td>0%</td>
</tr>
</tbody>
</table>

### Table Notes
- **Number:** Expected contribution to the National Target for Trainees in Starters and ETT capacity.
- **%:** Percentage contribution to the National Target.
Target 1

10 percent more learners will secure employment from provision which primarily serves the labour market.

Filter linked data to include early leavers, partial and full completers

Filter for programmes with Labour Market focus

Employment status: employment episodes that last at least 12 cumulative weeks or more across all employments within the first 12 months after completion of the first course.

Skill cluster: if the learner has completed more than one course but in different skills clusters, the employment outcome should be attributed to the skills cluster the course is assigned to for the course immediately preceding the employment start date.
## Target 1

<table>
<thead>
<tr>
<th>Programme Type</th>
<th>Full-time/part-time</th>
<th>NFQ level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blended Training</td>
<td>Full-time</td>
<td>3-6</td>
</tr>
<tr>
<td>Local Training Initiatives</td>
<td>Full-time</td>
<td>3-5</td>
</tr>
<tr>
<td>PLC</td>
<td>Full-time</td>
<td>5-6</td>
</tr>
<tr>
<td>Specific Skills Training</td>
<td>Full-time</td>
<td>4-6</td>
</tr>
<tr>
<td>Traineeship Training</td>
<td>Full-time</td>
<td>4-6</td>
</tr>
<tr>
<td>VTOS</td>
<td>Full-time</td>
<td>4-6</td>
</tr>
<tr>
<td>VSCCs PLC</td>
<td>Full-time</td>
<td>5-6</td>
</tr>
<tr>
<td>Momentum</td>
<td>Full-time</td>
<td>4-6</td>
</tr>
<tr>
<td>Cork Institute of Technology</td>
<td>Full-time</td>
<td>6</td>
</tr>
<tr>
<td>Evening Training</td>
<td>Part-time</td>
<td>3-6</td>
</tr>
<tr>
<td>eCollege</td>
<td>Part-time</td>
<td>3-6</td>
</tr>
</tbody>
</table>
Target 2

10 percent more learners will progress to other further or higher education courses from provision which is progression focused.

Sample includes early leavers as well as partial and full completers

Filter for progression focused provision

Search for the Learner in the HEA enrolment dataset or in PLSS
## Target 2

<table>
<thead>
<tr>
<th>Programme Type</th>
<th>Full-time/part-time</th>
<th>NFQ level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justice Workshops</td>
<td>Full-time</td>
<td>3-4</td>
</tr>
<tr>
<td>Youreach</td>
<td>Full-time</td>
<td>2-5</td>
</tr>
<tr>
<td>Bridging &amp; Foundation Training</td>
<td>Full-time</td>
<td>3-4</td>
</tr>
<tr>
<td>Community Training Centres</td>
<td>Full-time</td>
<td>3-5</td>
</tr>
<tr>
<td>Specialist Training Programmes</td>
<td>Full-time</td>
<td>2-5</td>
</tr>
<tr>
<td>BTEI</td>
<td>Part-time</td>
<td>3-5</td>
</tr>
<tr>
<td>Skills for work</td>
<td>Part-time</td>
<td>2-3</td>
</tr>
<tr>
<td>VSCCS BTEI</td>
<td>Part-time</td>
<td>3-5</td>
</tr>
<tr>
<td>Other</td>
<td>Part-time</td>
<td>1-6</td>
</tr>
</tbody>
</table>
FET progression

- 43,995 progression movements
- 29,410 unique learners

### Table 3

<table>
<thead>
<tr>
<th>Change</th>
<th>Move to Higher NFQ</th>
<th>Move to Lower NFQ</th>
<th>No Change in NFQ</th>
<th>Undefined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>3,789</td>
<td>2,326</td>
<td>10,597</td>
<td>27,283</td>
</tr>
</tbody>
</table>

### Table 4

<table>
<thead>
<tr>
<th>Change</th>
<th>Move to Higher NFQ</th>
<th>Move to Lower NFQ</th>
<th>No Change in NFQ</th>
<th>Undefined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>2,866</td>
<td>1,257</td>
<td>7,118</td>
<td>5,810</td>
</tr>
</tbody>
</table>

### Table 5

<table>
<thead>
<tr>
<th>Change in NFQ Level</th>
<th>0</th>
<th>-1</th>
<th>-2</th>
<th>-3</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
<th>+4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7,118</td>
<td>1,046</td>
<td>199</td>
<td>12</td>
<td>2,260</td>
<td>498</td>
<td>94</td>
<td>14</td>
<td>5,810</td>
</tr>
</tbody>
</table>
FET progression

- The majority of progression movements occur within the same skills cluster accounting for 69 percent of total progression movements. The other 39 percent (13,457) are cross skills cluster movements.
## Target 1-Results

<table>
<thead>
<tr>
<th>ETB</th>
<th>ETB Reported</th>
<th>Total number of unique learners who finished a Target1 course</th>
<th>Employment1</th>
<th>Employment2</th>
<th>Employment3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Total</td>
<td>11762</td>
<td>60926</td>
<td>28338</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Note:**

- **Employment1:** This column shows the number of unique learners who were employed for more than 12 cumulative weeks during 2017 (the drawback of this method is that we do not know when the employment started and finished).
- **Employment2:** This column shows the number of unique learners who were employed for more than 12 weeks during 2017 and whose gross annual salary was greater than 4,400€ (same drawback as employment1).
- **Employment3:** This column shows the number of unique learners who were employed after the course start date and at least 12 cumulative weeks during 2017. This data links 2015 and 2016 employments with PLSS as well as 2017 as there are some learners with 2015 and 2016 start dates. Finally, the eligible cohort is filtered for gross annual salary threshold of 8 hrs multiplied by the minimum wage (9.80) for 12 weeks (i.e. 940 euro).
## Target 2 - Results

<table>
<thead>
<tr>
<th>ETB</th>
<th>Learners Target 2</th>
<th>Progression in FET</th>
<th>Progression HEA</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Total</td>
<td>24436</td>
<td>7194</td>
<td>298</td>
<td>7492</td>
<td>31</td>
</tr>
</tbody>
</table>
Challenges and Questions

• Data Coverage: Highly improved since the launch in 2017
• Data Gap: missing observations, sensitive personal data

• Collection of sensitive personal data: what might help? When best to collect sensitive data? ESF requirements should be mandatory?
• Reporting definitions: who is a ‘graduate’? What is a ‘completion’? Who to track?