STEM Women Congress

Creating opportunities through STEM

SWAR2024

Stem Women Annual Report

PORTUGAL

STEM WOMEN CONGRESS

STEM WOMEN CONGRESS (SWC) is a big event who works especially to make STEM women visible and promote and generate a vocation in this type of professions and achieve the elimination of gender biases that exist in these sectors. We currently have the support of 6,000 STEM women.

The results of the Annual Report are presented during the event. We also contribute to give visibility to the STEM initiatives. We have become facilitators and creators of opportunities, involving institutions, schools and universities, as well as public and private organizations.

We have talks, panels, interview and awards during the SWC. We have also an entrepreneur pitch for female STEM entrepreneurs where the public chose who is the winner. The winner also gets advice from the jury and also awareness on the media.

STEM Women Congress
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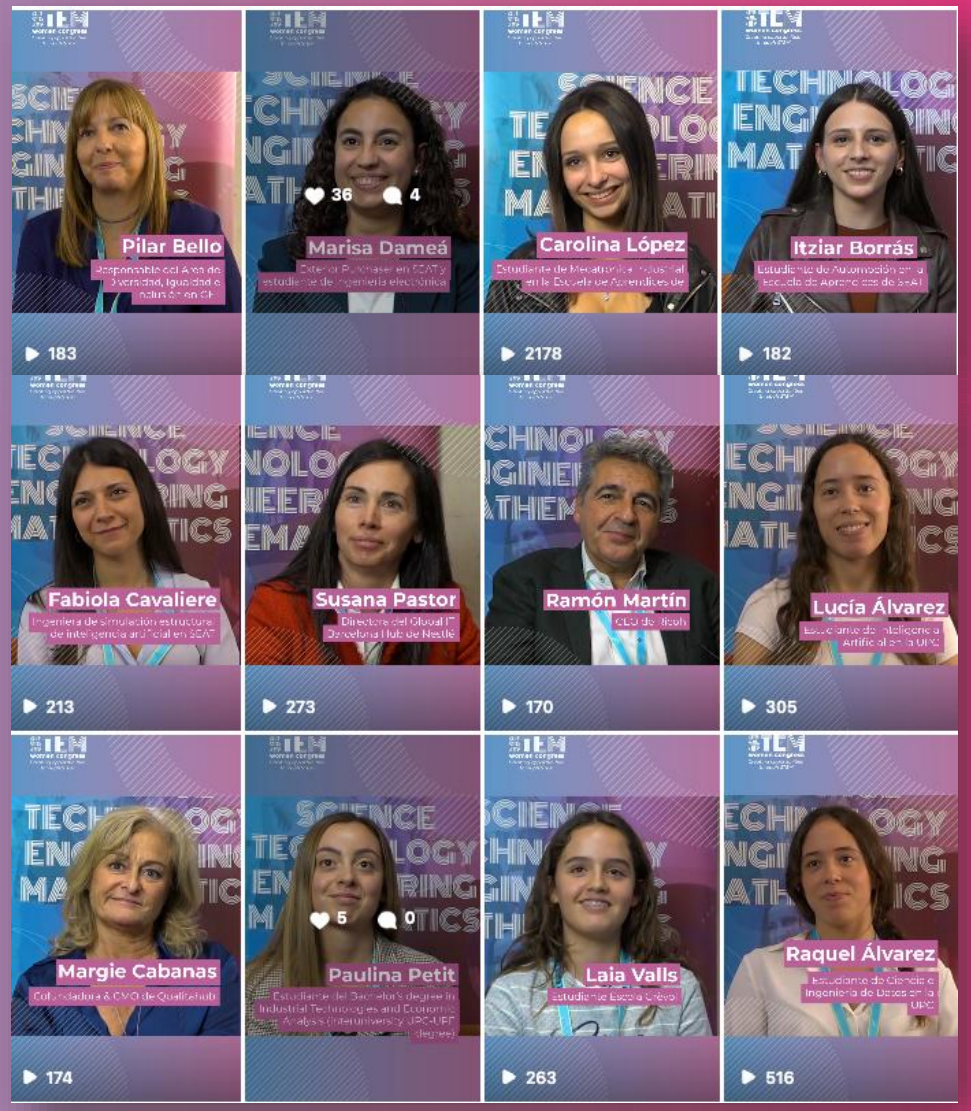
SWC Lisboa 2024

GLOBAL SUCCESS

In just five years, STEM Women Congress has ignited a global movement for gender equality in STEM.

With unwavering dedication, we've established six groundbreaking congresses:



Each congress serves as a beacon of empowerment, uniting voices, and catalyzing action to amplify the representation of women in the STEM world. Do you want to be next country to host a STEM WOMEN CONGRESS?

AWARD AND RECOGNITION

In November of 2023 SWC received recognition from the Generalitat of Catalonia, earning the DONA TIC award in the Leading Business Initiative category at an event held at the Museum of Contemporary Art in Barcelona.

This award underscores the importance of fostering a culture of diversity and equality in the ever-evolving landscape of science and technology. In this regard, Eva Díaz remarked in her speech that “this award serves as a catalyst for developing the new projects we have set for 2024 and encourages us to continue with our mission of expansion.” SWC is poised to host the STEM WOMEN CONGRESS in five cities in 2024: Milan, Madrid, Bogotá, Lisbon, and Barcelona.

STEM Women Congress
Creating opportunities through STEM

WHAT MAKES US **UNIQUE**?

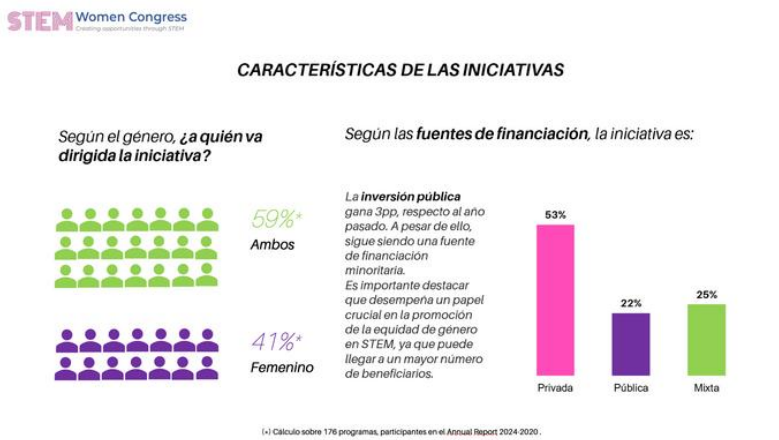
STEM Women Annual Report

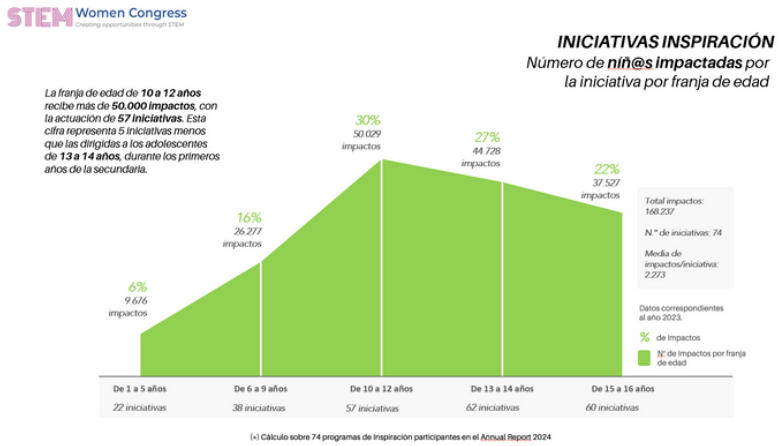
During the STEM Women Congress we present the results of the STEM Women Annual Report. The SWAR is annual study about all the STEM Women initiatives detected in each country where we have a chapter. The SWAR data allow us to get an x-ray of the initiatives, locate them territorially and see at what stage of the training or professional trajectory they operate.

Thus, we are able to analise the gaps and establish join efforts and global objectives, creating and promoting new joint actions.

The conclusions are made public during the STEM Women Congress, after the work sessions with the initiatives themselves that are engaged with our project.

The SWAR allow us to have a efficient methodology to be more precise in bringing more girls and women in STEM and to accelerate the change for a more inclusive and diverse STEM ecosystem.





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STEM WOMEN ANNUAL REPORT – PORTUGAL 2024

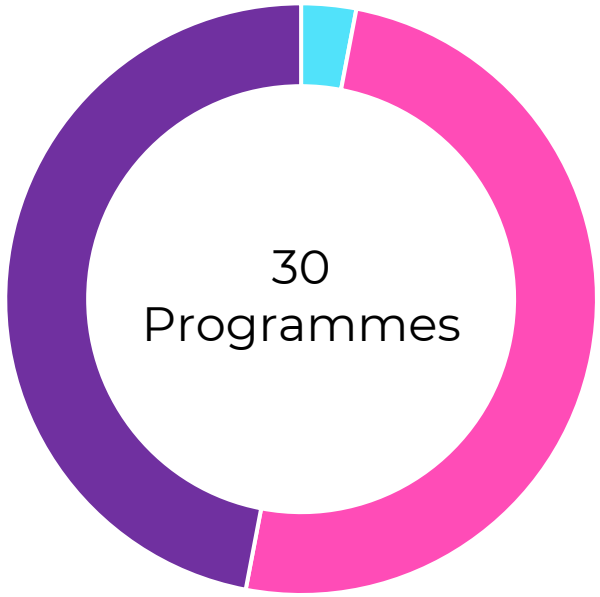
Initiatives **surveyed**

Segments

3% Inspiration
1 Programme

50% Career
15 Programmes

47% Inspiration & Career
14 Programmes



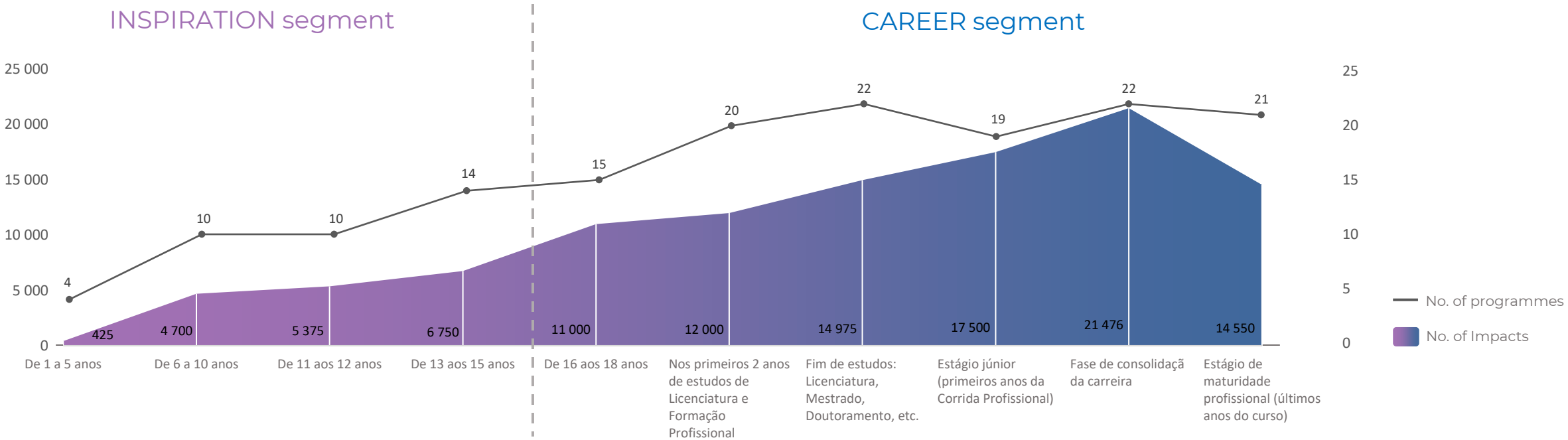
INSPIRATION
(Pre-Primary School and basic education)

CAREER
(Secondary education, higher education and professional stage)

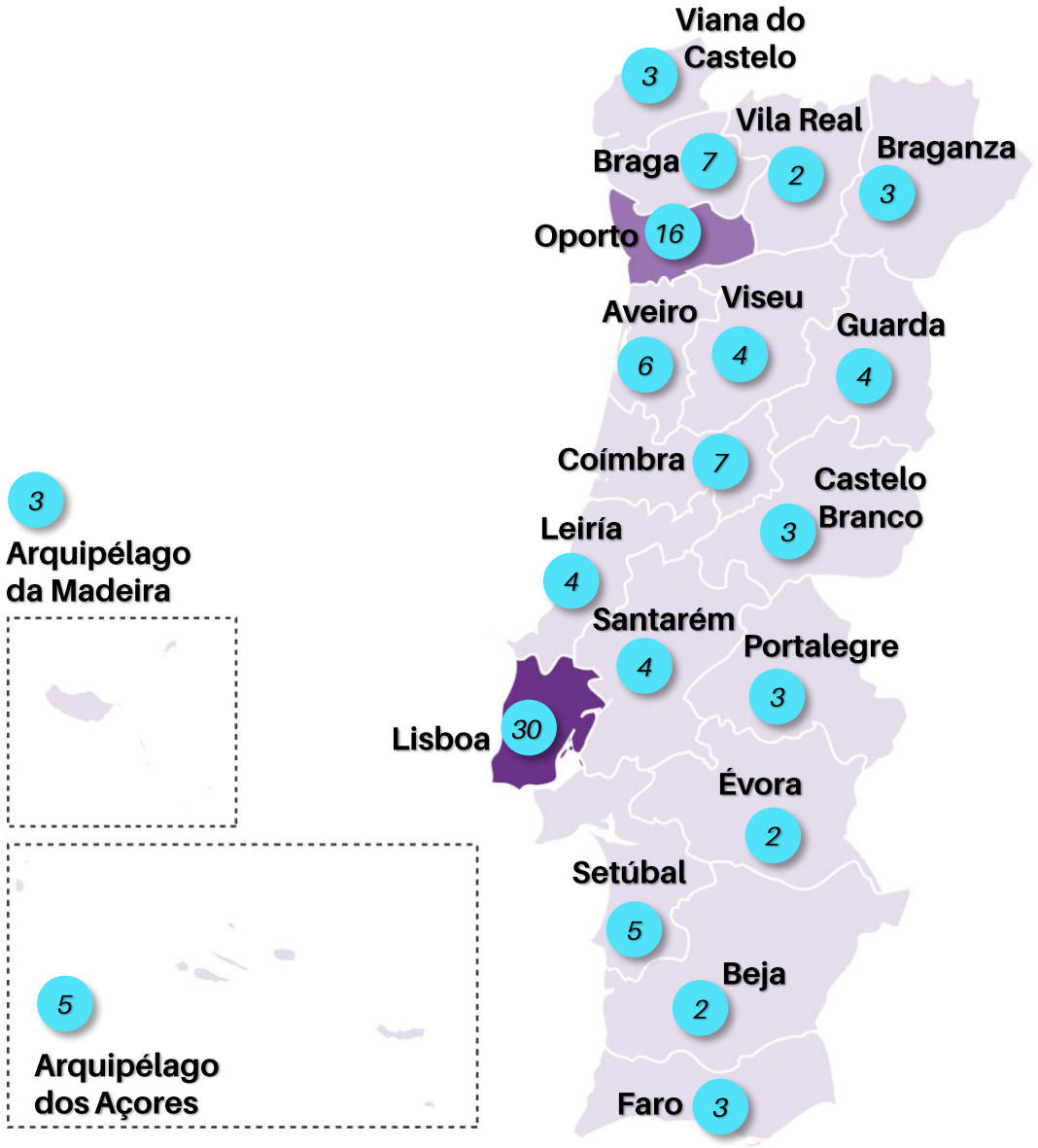
(*) Calculation on a total of 30 programs, corresponding to 29 initiatives, participating in the Annual Report 2024. Data from 2023.

IMPACTS

Impact distribution and participation in SWAR 2024



(*) Calculation on a total of 30 programs, corresponding to 29 initiatives, participating in the Annual Report 2024. Data from 2023.



GEOGRAPHICAL SCOPE

*Programmes **by districts***

*All the programmes participating in this study have an impact on at least the district of **Lisboa**. 47% of them exclusively on the capital.*

% programmes by district out of total programmes participating in the Annual Report

- Over 75% programmes
- Between 51% and 75% programmes
- Between 25% and 50% programmes
- Under 25% programmes
- No. of programmes

(*) Calculation on a total of 30 programs, corresponding to 29 initiatives, participating in the Annual Report 2024. Data from 2023.

2. Inspiration Initiatives 2024

In PORTUGAL,

15 programs have impacted at least

17.250[1] children

aged 1 to 14 by 2023.

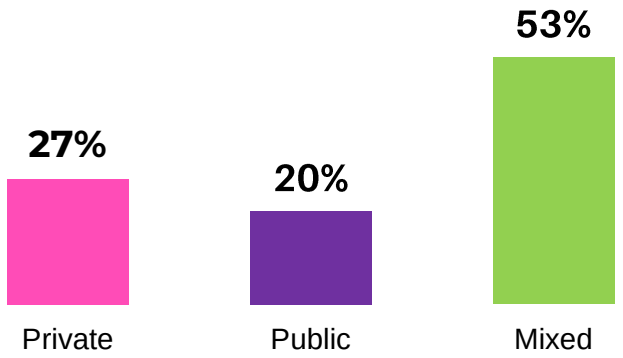
They represent **1,26%** of a population of **1.363.768[2] children**

Source: Instituto Nacional de Estatística (INE).

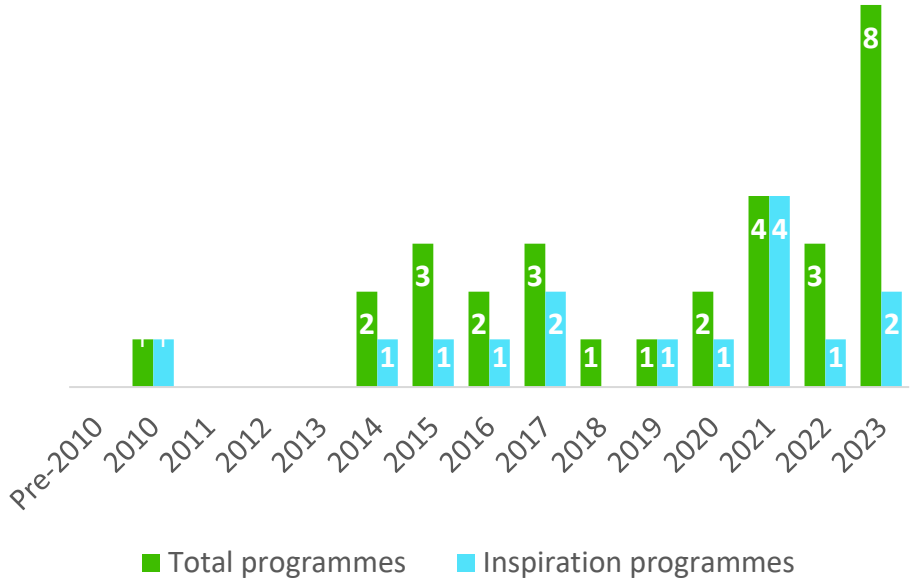
(1) Calculation based on the number of impacts reported by the initiatives (the range of >5,000 could not be delimited, so the minimum has been valued) and on the assumption that each impact refers to a different child.
(2) Provisional Resident Population Estimates revised in June 2024 (include in the resident population displaced persons from Ukraine who are beneficiaries of the Temporary Protection regime in Portugal).

CHARACTERISTICS OF INSPIRATION PROGRAMS

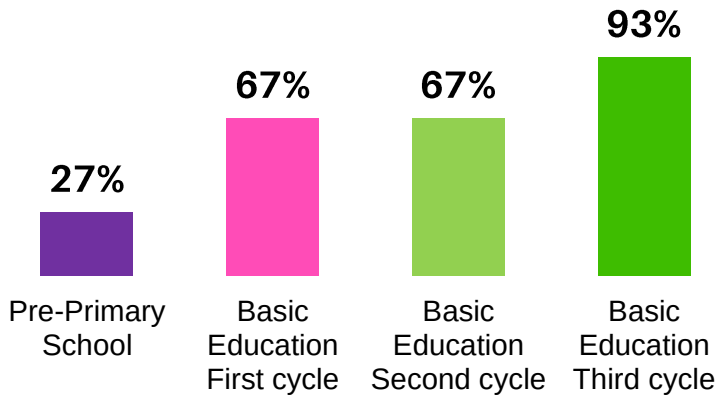
Finance Sources



Launched year

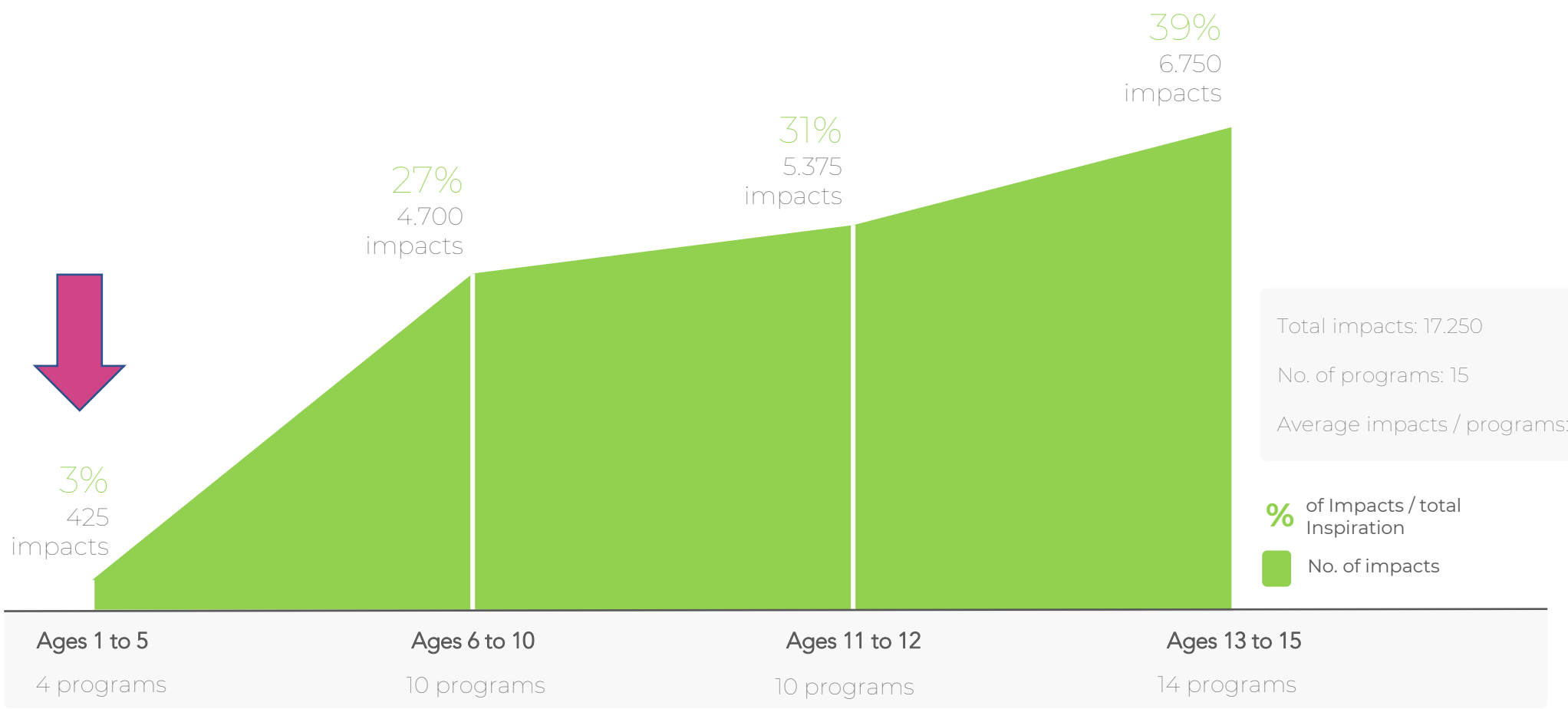


Age Program Impact



IMPACT INSPIRATION PROGRAMS

Number of **children impacted** by the program by age



Total impacts: 17.250

No. of programs: 15

Average impacts / programs: 1.150

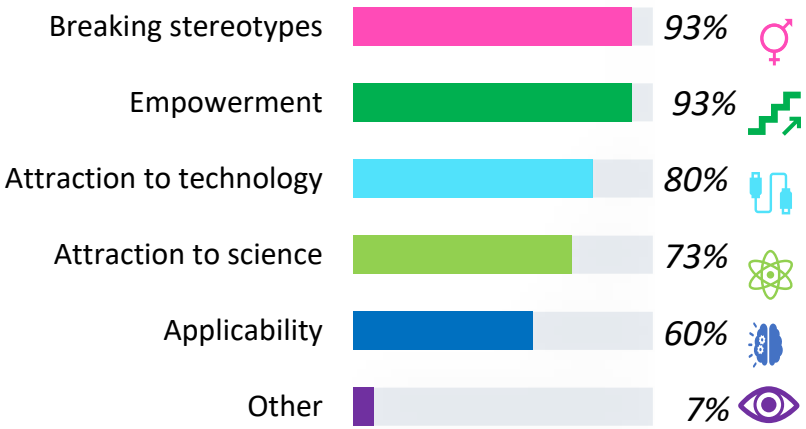
% of Impacts / total Inspiration

No. of impacts

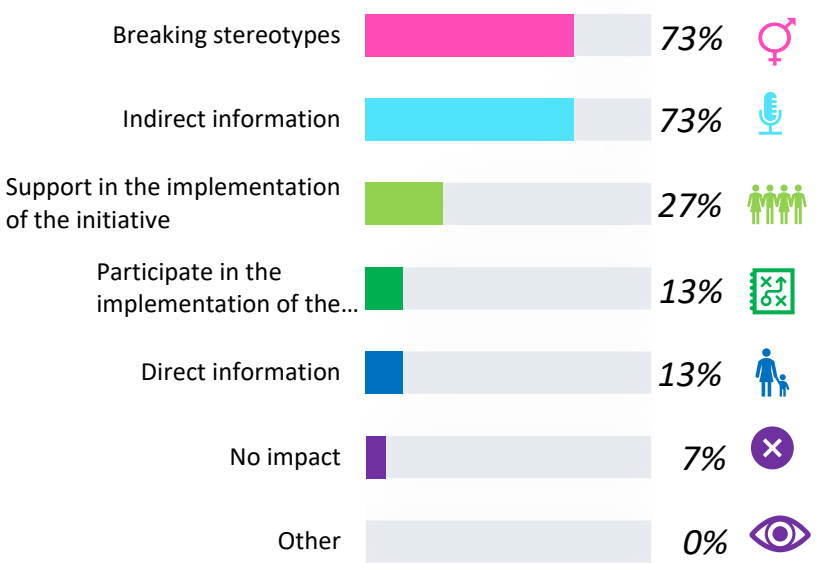
(*) Calculation based on 15 programs, corresponding to 14 initiatives in the Inspiration segment, participating in the Annual Report 2024. Data from 2023.

INSPIRATION PROGRAMMES

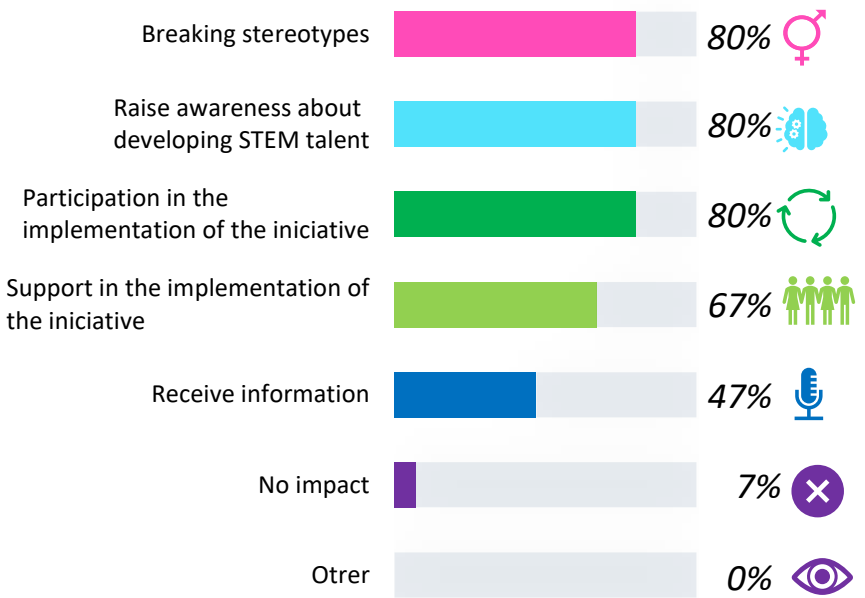
Impact on **Children**



Impact on **Families**



Impact on **Teachers**



% Over total number of Inspiration programs

3. Career Initiatives 2024

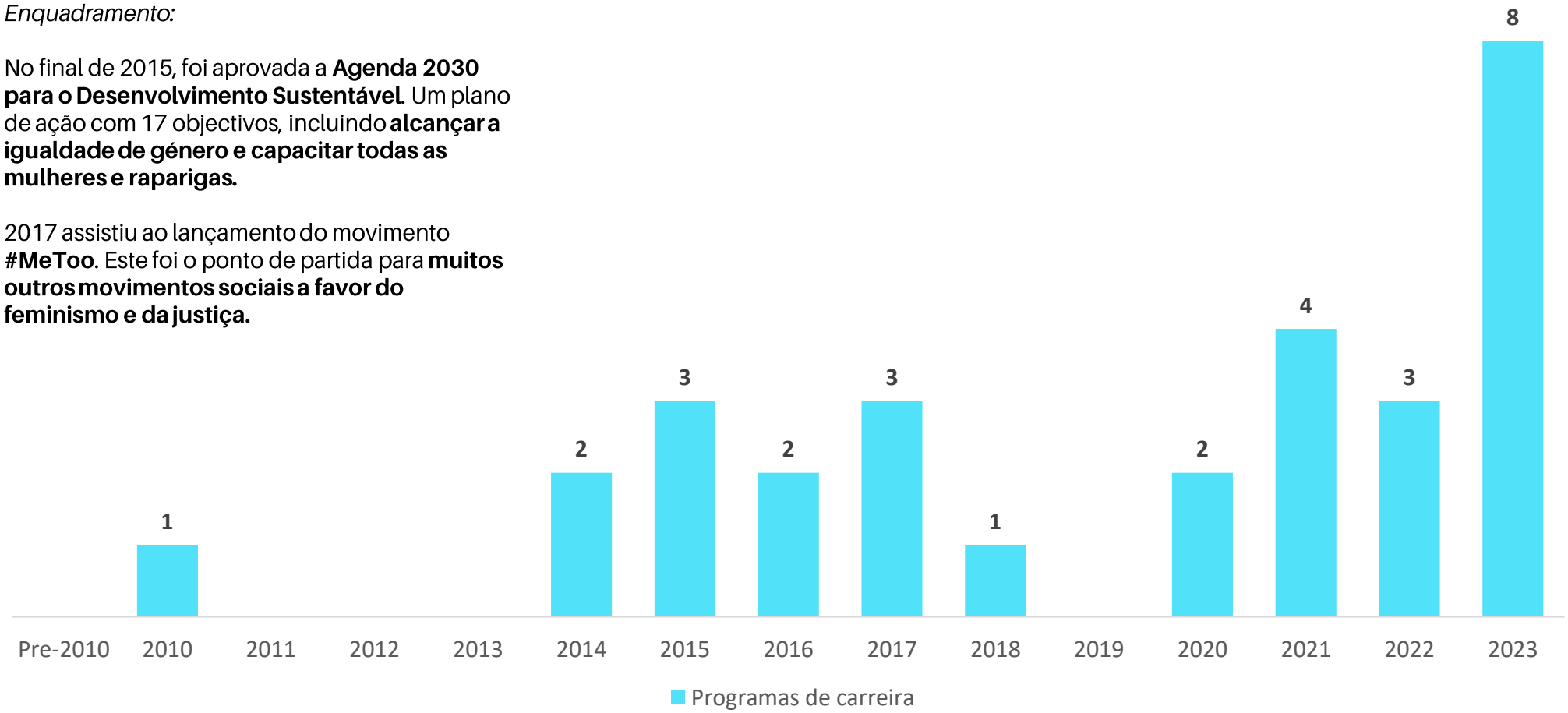
CARACTERÍSTICAS DOS PROGRAMAS DE CARREIRA

Ano de lançamento

Enquadramento:

No final de 2015, foi aprovada a **Agenda 2030 para o Desenvolvimento Sustentável.** Um plano de ação com 17 objectivos, incluindo **alcançar a igualdade de género e capacitar todas as mulheres e raparigas.**

2017 assistiu ao lançamento do movimento **#MeToo.** Este foi o ponto de partida para **muitos outros movimentos sociais a favor do feminismo e da justiça.**



(*) Cálculo baseado em 29 programas, correspondentes a 28 iniciativas do segmento Carreira, participantes no Relatório Anual 2024. Dados de 2023.

In PORTUGAL,
25 programs have impacted at least

37.975[1] women students

Aged 15 and over in 2023.

They represent

22,77%

Of a population of

166.812[2] women students in STEM

Source: Direção-Gral de Estatístas da Eduacação e Ciência (DGEEC)

In PORTUGAL,
24 programs have impacted at least

53.526* professional women

in 2023.

They represent

28,02%

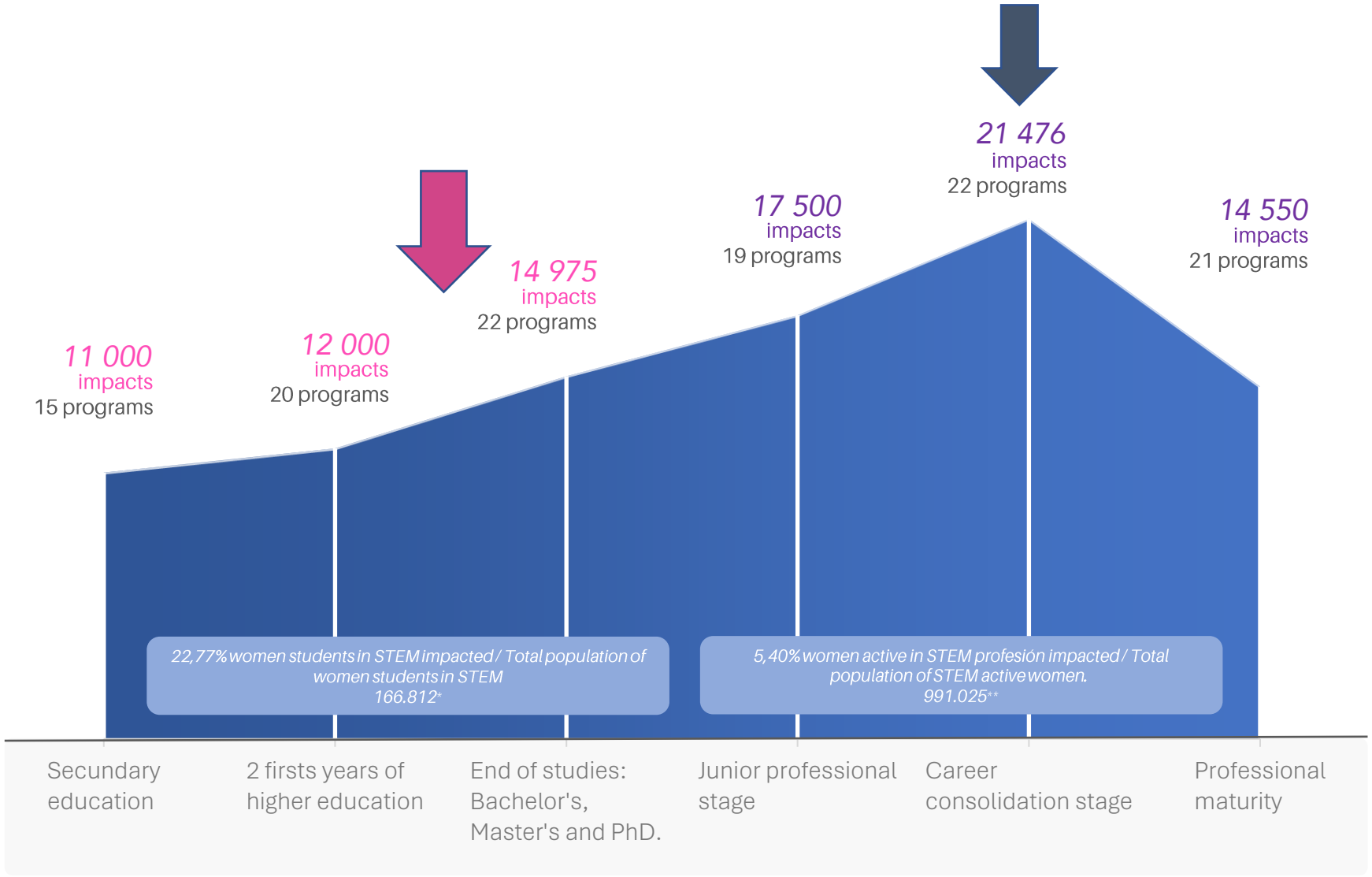
Of a population of

191.050 professional women in STEM

Source: Instituto Nacional de Estatística (INE). Employed population by sex and economic sector (CAE)

CAREER PROGRAMMES

Number of **students and profesional STEM women** impacted by the programme.



Total impacts: 91.501

No. of programmes: 29

Average impacts / programs: : 3.155 impactos

No. of impacts achieved by programs

(*) Directorate General of Education and Science Statistics (DGEEC).

(**) Source: National Statistics Institute (INE)

(*) Calculation based on 29 programs, corresponding to 28 initiatives in the Career segment, participating in the Annual Report 2024. Data from 2023.

CHARACTERISTICS OF CAREER PROGRAMS

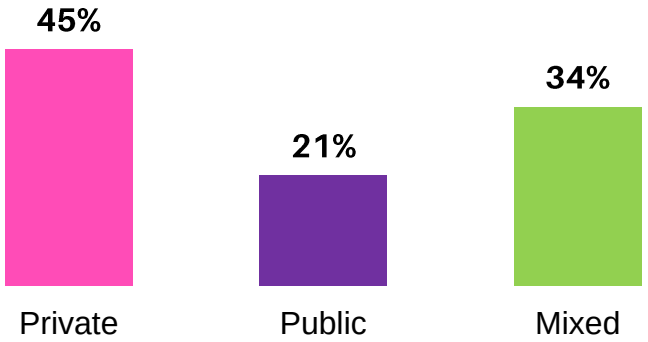
Age Program Impact

Initiative Adressed

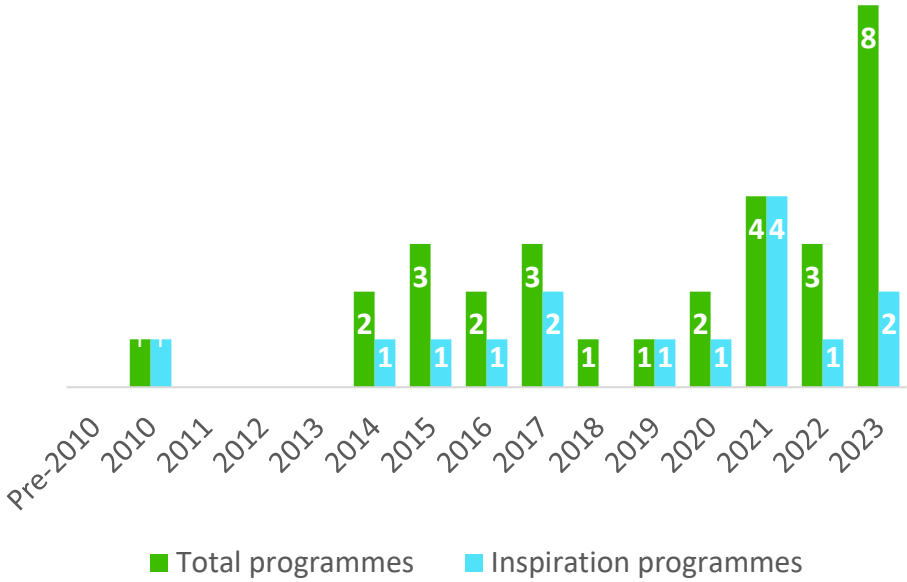
62%*
Female

38%*
Both

Finance Sources



Launched year



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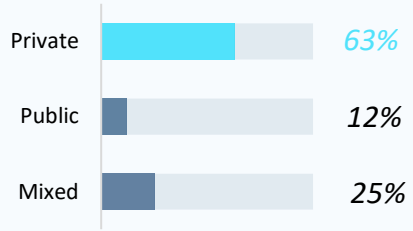
Career
Profile of new creation programs 2023
8 programs

ACCORDING TO GENDER

75% Female

25% Both

SOURCES OF FINANCE



Only **one programme** has been launched with **100% public funding** in the last years.

NUMBER OF STAFF

Around **37 employees** and volunteers are involved in the 8 initiatives lounched in Portugal in 2023

25,0% 1 (independent / Freelance)

37,5% 2 to 5 employees

100% programmes ≤ 10 employees

37,5% 6 to 10 employees

GEOGRAPHICAL SCOPE

100% Lisboa

38% Oporto

25% Aveiro

ACTIVITIES

The most **important activities** driving in 2023 according to the Initiatives.

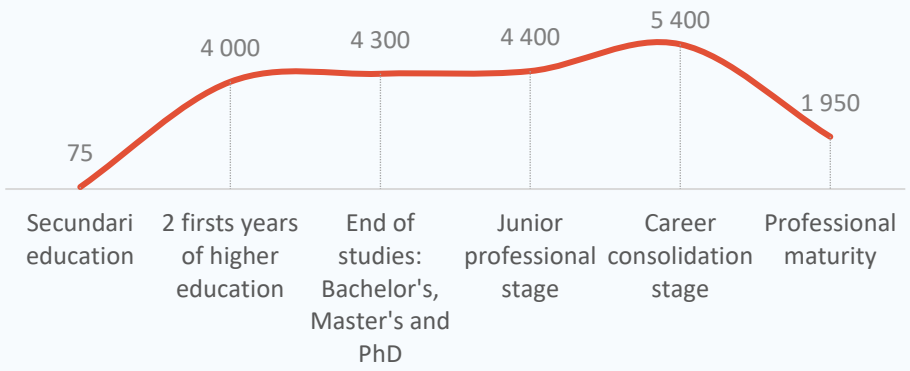
88% Mentoring

75% Resources: training materials or similar

64% Promoting Entrepreneurship

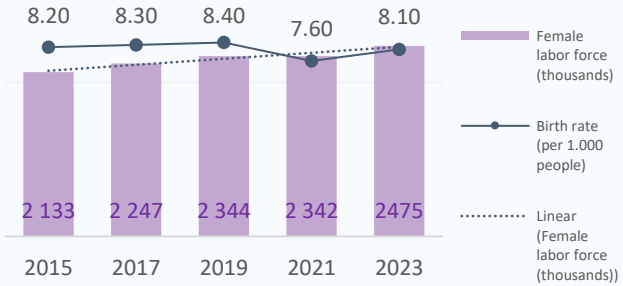
IMPACTS

The impact of the new initiatives is focused from **higher education to advanced professional** careers..



FRAMEWORK

The **number of births in Portugal reached its highest level** since the onset of the pandemic, with 85,699 newborns



ECOSYSTEM

Depending on the **origin of the initiative**, it may be driven by one or more companies, or it may be an independent project.

62,5% Independent initiative

37,5% Internal to a company, but open to anyone.

0% Internal to a company, but only for employees of the company.

4. Conclusions

INSPIRATION PROGRAMS

1/

15 programs developed in 2023 to encourage and inspire children and young people to choose STEM studies had an impact on 1.26% of the total population of 1.3 million girls and boys.
From the moment these programs are introduced, the impact is greater on children, especially girls, inspiring them and awakening their interest in STEM fields, which are currently largely dominated by men.

2/

A positive aspect is that 73% of the initiatives rely on public or mixed funding sources (53% mixed and 20% public), while only 27% are solely funded by private capital.
This contrasts with the career-oriented segment, where almost half of the initiatives are privately funded.

3/

The importance of early intervention lies in the fact that this is when children begin to shape their perceptions of gender roles. This can be achieved by introducing activities that challenge traditional gender stereotypes.
Half of the surveyed initiatives focus on promoting and raising awareness of scientific and technological studies for both girls and boys. However, we identified only four programs that specifically target early childhood.

4/

With a total of 6,750 impacts across 14 programs, the greatest impact is observed in the 8th and 9th grades of primary education. This is followed by the 6th and 7th grades, with 5,375 impacts across 10 programs.
At the onset of adolescence, it is especially important to empower girls and ensure their equal access to STEM opportunities.

PROGRAMAS DE INSPIRAÇÃO

1/

15 programas *desenvolvidos em 2023 para incentivar e inspirar as crianças e os jovens a optarem por estudos STEM tiveram* ***impacto em 1,26%*** *da população total de 1,3 milhões de raparigas e rapazes.*
A partir do momento em que estes programas são introduzidos, o impacto é maior nas crianças, especialmente nas raparigas, inspirando e despertando para as áreas STEM, atualmente muito ocupadas pelo sexo masculino.

2/

Um aspeto positivo é o facto de ***73% das iniciativas utilizarem fontes de financiamento públicas ou mistas*** *(53% mistas e 20% públicas), enquanto apenas 27% utilizam apenas capital privado.*

Isto contrasta com o segmento orientado para a carreira, em que quase metade tem financiamento privado.

3/

Importância da intervenção precoce*, porque é nesta altura que as crianças começam a formar as suas percepções dos papéis de género. Através da introdução de actividades que desafiam os estereótipos tradicionais de género.*
Metade das iniciativas inquiridas centra-se na promoção e sensibilização de estudos científicos e tecnológicos para raparigas e rapazes. No entanto, ***identificámos apenas 4 programas que trabalham na infância.***

4/

Com um total de 6750 impactos em 14 programas, ***o maior impacto regista-se no 8º e 9º anos do ensino básico****.*
Seguem-se o 6º e 7º anos, com 5.375 impactos em 10 programas.
No início da adolescência, é especialmente importante capacitar as raparigas e garantir a sua igualdade de acesso às oportunidades STEM.

INSPIRATION PROGRAMMES

5/

It is worth highlighting that a large percentage of initiatives (93%) include actions targeted at teachers, 80% of whom are directly involved in implementing the activities.
Teachers play a crucial role as educators and key stakeholders.
It is essential for governments to support their STEM training to ensure the development of the necessary skills and competencies.

6/

More than 80% of Inspiration initiatives impact children through activities focused on breaking stereotypes and empowerment. They also engage teachers and families, with activities aimed at eliminating stereotypes and supporting the implementation of the initiative.

7/

One of the strongest points is that 53% of the initiatives have been recognized for their efforts in bringing science and technology to children.
Recognizing and celebrating their achievements is crucial to amplifying their positive impact and encouraging more programs to follow their example.

PROGRAMAS DE INSPIRAÇÃO

5/

*É de salientar que **uma grande percentagem das iniciativas (93%) inclui acções dirigidas aos professores**, 80% dos quais estão diretamente envolvidos na execução das actividades. Os **professores desempenham um papel fundamenta**l enquanto educadores e partes interessadas. É essencial que os governos apoiem a sua formação em STEM para garantir o desenvolvimento das aptidões e competências necessárias.*

6/

*Mais de 80% das iniciativas de Inspiração têm impacto nas **crianças** através de actividades centradas **na quebra de estereótipos** e na capacitação. Envolvem também **professores e famílias**, com actividades centradas na **eliminação de estereótipos** e no **apoio** à implementação da iniciativa*

7/

*Um dos pontos mais fortes é o facto de 53% das iniciativas terem sido reconhecidas pelos seus esforços para levar
ciência e tecnologia às crianças.
Reconhecer e celebrar as suas realizações é importante para ampliar seu impacto positivo e incentivar e incentivar ainda mais programas a seguirem seu exemplo.*

CAREER PROGRAMMES

1/

A total of 25 programs reached 22.77% of women enrolled in secondary or higher education in STEM fields. In contrast, 24 programs impacted 5.40% of professional women.
This difference is due to the fact that, although the number of women reached is at least 37,975 and 53,526, respectively, the group of STEM students (±165,000) is significantly smaller than the number of women working in science and technology (±991,000).

2/

The highest number of programs was launched last year, possibly due to the SDG reports, which prompted companies to introduce new initiatives focused on diversity, equity, and inclusion, as well as the availability of European funding.
Four career initiatives were launched shortly after our first SWC in Portugal.

3/

The results show that only 28% of initiatives are supported by a company, and only 21% are funded exclusively by a public funding source.
It is vital for both large corporations and small and medium-sized enterprises (SMEs) to actively support and participate in these efforts. There are certainly many initiatives yet to be discovered, and we at the STEM Women Association are committed to continuing our research and making all initiatives that support women in STEM visible.

4/

According to the latest published data, 20% of the Portuguese population emigrated in 2023 (51.60% men and 48.39% women), representing a 5.6 percentage point increase in recent years.
The brain drain is one of the recurring challenges in STEM fields. To effectively address the retention of women in STEM, it is essential to implement work-life balance policies. Additionally, establishing mentorship programs and targeted initiatives can significantly improve the retention of these talented professionals within the workforce.

Segmento de carreira

1/

*Um total de **25 programas atingiu 22,77% das mulheres que frequentam o ensino secundário ou superior nas áreas STEM.** Em contrapartida, 24 programas tiveram impacto em 5,40% das mulheres profissionais. Esta diferença deve-se ao facto de, embora o número de mulheres abrangidas seja de, pelo menos, 37 975 e 53 526, respetivamente, o grupo de estudantes de STEM (± 165 000) ser inferior ao número de mulheres que trabalham em ciência e tecnologia (± 991 000).*

2/

***O maior número de programas foi lançado no ano passado**, talvez devido aos relatórios dos ODS, que levaram as empresas a lançar novas iniciativas centradas na diversidade, na equidade e na inclusão, e também devido aos fundos europeus.*
Foram lançadas quatro iniciativas de carreira logo após a nossa 1.ª SWC em Portugal.

3/

*Os resultados mostram que apenas **28% das iniciativas são apoiadas por uma empresa e apenas 21% são financiadas exclusivamente por uma fonte de financiamento pública.***
*É vital que tanto **as grandes emp**resas como **as pequenas e médias empresas** (**PME**) apoiem e participem ativamente nestes esforços. Há certamente muitas iniciativas ainda por descobrir e nós, na Stem Women Association, estamos empenhados em continuar a investigar e a tornar visíveis todas as iniciativas que apoiam as mulheres nas áreas STEM.*

4/

*De acordo com os últimos dados publicados, **20% da população portuguesa terá emigrado em 2023** (51,60% homens e 48,39% mulheres). Trata-se de um aumento de 5,6 pp nos últimos anos.*

***A fuga de talentos** é um dos problemas recorrentes no domínio das CTEM. Para abordar efetivamente as mulheres nas STEM, é **essencial a implementação de políticas de equilíbrio entre a vida profissional e a vida privada é essencial.** Além disso, estabelecer **programas de tutoria** e iniciativas específicas podem melhorar significativamente a retenção destas profissionais talentosas dentro da força de trabalho.*

Conclusions

Career segment

5/

The gender pay gap in Portugal stands at 13.1%, above the European average of 12.7%, according to data from Michael Page.
Recommended measures to reduce this gap include career development programs, flexible work arrangements, and fair selection processes. The disparity becomes more pronounced with age and motherhood, placing women at a disadvantage compared to men.

6/

In Portugal, several awards are granted each year to recognize the work of women in STEM. A very positive aspect is that 41% of initiatives have been acknowledged for their efforts in empowering and supporting women.
These awards are crucial if we truly want to change the statistics, as they promote equality and highlight the academic, professional, and personal excellence of women.

Career segment

5/

*A disparidade salarial de género em Portugal é de **13,1%,** acima da média europeia de **12,7%,** de acordo com dados da Michael Page. As medidas recomendadas para reduzir a diferença incluem **programas de desenvolvimento de carreira, trabalho flexível** e uma **seleção justa**. A disparidade é mais acentuada com a **idade** e a **maternidade**, o que coloca as mulheres em desvantagem em relação aos homens.*

6/

*Em Portugal, são atribuídos vários prémios todos os anos para reconhecer o trabalho das mulheres em STEM. Um ponto muito positivo é que **41% das iniciativas foram reconhecidas pelos seus esforços para as capacitar e apoiar**.*

Esses prémios são muito importantes se realmente quisermos mudar as percentagens, pois promovem a igualdade e tornam visível a excelência académica, profissional e pessoal das mulheres.

5. What’s next?

8 de outubro

SWC

Lisboa 2025

Auditorium Ciência Viva -
Agência Nacional Para a Cultura Científica e Tecnológica