

The commitment chart

“Steering girls to STEM”

WIE . steer2STEM . chart

What is the “commitment chart”

The commitment chart: *“Steering girls to STEM”* is an OPEN DOCUMENT, annually updated, which describes the shared objectives and the targeted actions that the organizing committee and the supporting committee undertake to carry out in order to make the careers in STEM subjects more attractive for young women (Science, Technology, Engineering and Mathematics).

The associations involved in the PROMOTING COMMITTEE have long commenced the analysis of problems that represent a brake on this attractiveness and have promoted specific actions within their reference sectors. However, they share the idea that, in order to progress in a profitable and effective way, a coordination action is necessary to maximize the results and reduce the efforts put in the actions taken, so that the duplication of activities can be avoided. This document defines the intentions to support one another the initiatives proposed, highlighting the best practices and promoting a sharing of the skills. In this constantly evolving path, the organizing committee will be sustained by a SUPPORTING COMMITTEE, which will involve other associations willing to support this initiative with a commitment limited to a subset of the objectives and actions proposed.

The first writing (version 1.0) is based on what emerged from the 2nd meeting of the IEEE Italy Section Women in Engineering (WIE) Affinity Group, held in Palermo on September 12, 2018. This meeting was organized in two roundtables:

- the first one, aimed at identifying the initiatives, tools and best practices already shared to make careers in STEM (Science, Technology, Engineering and Mathematics) more attractive for young women;
- the second, with the aim of identifying any needs for the future.

The commitment chart has gathered these needs and has conveyed them into a list of objectives and actions that will have to be taken in the near future according to the times and methods indicated below.

The governance for the writing of the chart

The chart writing process is coordinated and managed by the coordinator, the promoting committee and the supporting committee. The coordinator and the organizing committee are confirmed or renewed annually upon the release of the new version of the charter. The composition of the supporting committee is dynamic and collects new members upon approval by the organizing committee throughout the year.

The COORDINATOR

- is appointed by the promoting committee
- is responsible for coordinating the activities of the two committees
- indicates the deadlines



Italy Section
WIE Affinity Group



- promotes the events related to the writing and updating of the chart
- maintains relations with organizations / associations / communities that want to enter the project

The PROMOTING COMMITTEE

- is composed of the promoters who participated in the writing of the commitment chart
- undertakes to implement all the objectives listed in this charter and to apply appropriate methods to measure their achievement, based on the proposed metrics
- manages the activities for the dissemination of the commitment chart and its updating on an annual basis during a dedicated event
- releases the annual version of the commitment chart
- establishes an annual calendar of updating activities, taking September of each year as end point
- appoints the coordinator for the activities related to the following year
- evaluates the associations requests of affiliation to the current version of the chart and membership in the supporting committee (and, only in first application, in the promoting committee)
- evaluates the adhesion requests of the associations in the promoting committee of the chart in the preparation of the next version, taking into account the relative role during the updating of the chart itself.

The SUPPORTING COMMITTEE

- is composed of the subjects that adhere to the current version of the chart, upon request to the promoting committee and subsequent approval
- undertakes to implement a subset of the objectives and actions proposed in this charter and to apply appropriate methods to measure their achievement based on the proposed metrics
- takes part to the management of activities for the dissemination of the commitment chart and its updating.

The composition of the governance for the writing of the commitment chart is still being defined. The current composition and contacts of the reference persons are:

- COORDINATOR: Patrizia Lamberti plamberti@unisa.it
- PROMOTING COMMITTEE
 - WIE AG IEEE Italy Section - Dajana Cassioli cassioli@ieee.org
 - AICA - Marina Cabrini mcabrini@sicef.ch
 - WWE - Manuela Appendino appendino.manuela@gmail.com
- SUPPORTING COMMITTEE
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The chart **WIE.steer2STEM.chart v1.0**

The Commitment Chart: "Steering girls to STEM" sets the objective of identifying on an annual basis what initiatives and instruments should be implemented in the near future to make careers in STEM subjects more attractive to young women.

The Palermo meeting, held on September 12, 2018, allowed the identification of specific points to take action about, namely the OBJECTIVES reported in the first column of the following table.

For each point, the table shows, in the second column, the concrete ACTIONS that the Promoting Committee and the Supporting Committee decide to undertake, identifying quantifiable elements (the METRICS in the third column) in order to trace the effectiveness of the path introduced, which will be verified annually with a view to improving continuously.

Being an open document, the chart will be constantly updated and new versions will be made available after the annual IEEE Italy Section Women in Engineering (WIE) Affinity Group meetings.

Objectives	Actions	KPIs
1) Sharing of skills	Create an interassociative task force <ul style="list-style-type: none"> - Each association provides a list of operational figures (at least 2) by skills / work area (university, company, school, research institution) 	Half-yearly update of roles and people
2) Sharing of own initiatives	Share information about own initiatives <ul style="list-style-type: none"> - each member association appoints a "communication referent" and makes available a website section - useful links - where to map the network initiatives - when organizing an initiative: the organizing association shares in its own "useful links" section the link to the initiative itself; the communication referent sends an e-mail to the referents of the network who in turn spread the initiatives among their members and update their "useful links" section. 	At least 50% of the organized initiatives are reported on the websites of the network
3) Emphasis on the role of the family	Organize meetings targeted at girls and their families to make them understand that there are not only "male" or "female" activities, especially in STEM, and that girls should be encouraged to experiment in STEM without fear. Help families to break down gender stereotypes that prevent girls from becoming passionate about technology (for example, helping them choose "technological" toys, such as meccanoes or building blocks).	At least 1 event per year At least 1 action aimed at breaking down gender stereotypes
4) Inspiring and mentoring	Involve "technological" women (such as astrophysicists, engineers, astronauts, ...) who can set as role models for the girls who are about to choose the direction of their studies, and who know how to transfer their passion for STEM.	Organize at least 1 event per year At least half-yearly update of the database
5) Orientation to women in schools since childhood	Encourage schools to open up to activities dedicated to girls and focused on technology (e.g. courses on coding, 3D printing, prototyping), even without specific financial support from ministerial tenders. Activate with schools to break down gender stereotypes in technology-oriented and STEM courses.	At least 1 contact per year At least 1 action aimed at breaking

		down gender stereotypes
6) Support to school offices to apply for funding	<p>Support schools in participating in tenders aimed at female orientation.</p> <p>Create a shared database for the territorial mapping of the contacts in charge of interaction with schools.</p> <ul style="list-style-type: none"> - A person for each association is appointed as responsible for collecting information about the tenders of interest, which are to be disseminated in a specific section of their association website. - Contact with schools can be in 1: 1 form, with direct contact between a member of the association and a school teacher, or in the form of contact between the association and the ministry / school offices. 	<p>At least one application</p> <p>At least half-yearly update of the database</p>
7) Search for financial support for the initiatives	<p>Apply for funding, e.g. tenders established by the European Commission, or PON regional tenders.</p> <p>Identify appropriate procedures so that companies, institutions and associations sensitive to the issue can provide financial support for the initiatives aimed at involving young women in STEM careers.</p>	<p>At least one application</p> <p>At least 1 contact for each event organized</p>
8) Demonstration of the advantages derived from female presence in working realities	<p>Define and apply methodologies to quantify the possible advantage gained in the working realities through the application of measures that reduce the gender gap.</p>	<p>Monitor a statistic in at least one sector</p>
9) Mapping of actions implemented by other subjects	<p>Creation of a shared database listing the subjects (institutions, associations, companies, political parties) who share the same objectives and/or who have put in place operations aimed at the same purposes. One person for each member association is responsible for updating the database upon request from a member.</p>	<p>Half-yearly update of the database</p>
10) Promotion of "best practices"	<p>Promote and advertize, where existing, social support for women who work in any field, and in particular in the STEM sector.</p> <p>Organize events in which existing initiatives, mapped as for point 9), are emphasized and promoted.</p>	<p>Organize at least 1 event/session per year</p>
11) Effective communication	<p>Identify the most appropriate communication channels, consider the activation of "specific headings" in journals that reach the different targets (children, young people, adults, companies), maintaining a list of the interventions, and adding a link to the "news" section of the member associations website, in order to maximize their dissemination.</p>	<p>At least 1 release every 2 months</p>
12) Involvement of institutions	<p>Identify the bodies and ministries of reference with which to start and maintain an ongoing dialogue.</p>	<p>At least 1 contact per year with each of the identified subjects</p>

The Chart **WIE.steer2STEM.chart v2.0**

The commitment chart: "Steering girls to STEM", known as WIE.steer2STEM.chart aims to identify, on an annual basis, which initiatives and tools should be implemented in the near future to make careers in STEM subjects more attractive to young women.

In the meeting in Palermo on September 12, 2018, 12 specific points to address were identified, namely the OBJECTIVES.

These twelve OBJECTIVES were included in version 1.0 of the charter, presented in Florence on September 11, 2019, during the 3rd annual meeting of the IEEE WIE Italy section, within IEEE RTSI2019.

Version 2.0 is released in November 2020, and reports a reorganization of the objectives in the light of the interventions collected in Florence.

For each point, the concrete ACTIONS that the Promoting Committee and the Supporting Committee commit to undertake are reported, identifying quantifiable elements (the KPIs in the third column) in order to trace the effectiveness of the path introduced, which will be verified annually from a perspective of continuous improvement.

Being an open document, the charter will be constantly updated and new versions will be made available after the annual meetings of the IEEE Italy Section Women in Engineering (WIE) Affinity Group.

Objectives	Actions	KPIs
1) Orientation to women in schools since childhood	Encourage schools to open up to activities dedicated to girls and focused on technology (e.g. courses on coding, 3D printing, prototyping), even without specific financial support from ministerial tenders. Activate with schools to break down gender stereotypes in technology-oriented and STEM courses.	At least 1 contact per year At least 1 action aimed at breaking down gender stereotypes
2) Inspiring and mentoring	Involve "technological" women (such as astrophysicists, engineers, astronauts, ...) who can set as role models for the girls who are about to choose the direction of their studies, and who know how to transfer their passion for STEM.	Organize at least 1 event per year At least half-yearly update of the database
3) Emphasis on the role of the family	Organize meetings targeted at girls and their families to make them understand that there are not only "male" or "female" activities, especially in STEM, and that girls should be encouraged to experiment in STEM without fear. Help families to break down gender stereotypes that prevent girls from becoming passionate about technology (for example, helping them choose "technological" toys, such as meccanoes or building blocks).	At least 1 event per year At least 1 action aimed at breaking down gender stereotypes
4) Effective communication	Identify the most appropriate communication channels, consider the activation of "specific headings" in journals that reach the different targets (children, young people, adults, companies), maintaining a list of the interventions, and adding a link to the "news" section of the member associations website, in order to maximize their dissemination.	At least 1 release every 2 months

**Italy Section
WIE Affinity Group**

<p>5) Demonstration of the advantages derived from female presence in working realities</p>	<p>Define and apply methodologies to quantify the possible advantage gained in the working realities through the application of measures that reduce the gender gap.</p>	<p>Monitor a statistic in at least one sector</p>
<p>6) Sharing of skills</p>	<p>Create an interassociative task force</p> <ul style="list-style-type: none"> - Each association provides a list of operational figures (at least 2) by skills / work area (university, company, school, research institution) 	<p>Half-yearly update of roles and people</p>
<p>7) Sharing of own initiatives</p>	<p>Share information about own initiatives</p> <ul style="list-style-type: none"> - each member association appoints a " communication referent " and makes available a website section - useful links - where to map the network initiatives <p>when organizing an initiative: the organizing association shares in its own "useful links" section the link to the initiative itself; the communication referent sends an e-mail to the referents of the network who in turn spread the initiatives among their members and update their "useful links" section.</p>	<p>At least 50% of the organized initiatives are reported on the websites of the network</p>
<p>8) Promotion of "best practices"</p>	<p>Promote and advertize, where existing, social support for women who work in any field, and in particular in the STEM sector. Organize events in which existing initiatives, mapped as for point 9), are emphasized and promoted.</p>	<p>Organize at least 1 event/session per year</p>
<p>9) Involvement of institutions</p>	<p>Identify the bodies and ministries of reference with which to start and maintain an ongoing dialogue.</p>	<p>At least 1 contact per year with each of the identified subjects</p>
<p>10) Support to school offices to apply for funding</p>	<p>Support schools in participating in tenders aimed at female orientation. Create a shared database for the territorial mapping of the contacts in charge of interaction with schools.</p> <ul style="list-style-type: none"> - A person for each association is appointed as responsible for collecting information about the tenders of interest, which are to be disseminated in a specific section of their association website. <p>Contact with schools can be in 1: 1 form, with direct contact between a member of the association and a school teacher, or in the form of contact between the association and the ministry / school offices.</p>	<p>At least one application</p> <p>At least half-yearly update of the database</p>
<p>11) Mapping of actions implemented by other subjects</p>	<p>Creation of a shared database listing the subjects (institutions, associations, companies, political parties) who share the same objectives and/or who have put in place operations aimed at the same purposes. One person for each member association is responsible for updating the database upon request from a member.</p>	<p>Half-yearly update of the database</p>
<p>12) Search for financial support for the initiatives</p>	<p>Apply for funding, e.g. tenders established by the European Commission, or PON regional tenders.</p> <p>Identify appropriate procedures so that companies, institutions and associations sensitive to the issue can provide financial support for the initiatives aimed at involving young women in STEM careers.</p>	<p>At least one application</p> <p>At least 1 contact for each event organized</p>