generation b
WOMEN IN STEM

BÜHLER

Women in STEM

A Generation B initiative for a diverse STEM world and workplace

“Nothing in life is to be feared. It is only to be understood”

- Marie Curie

Content

Prologue

by Beatrice Conde-Petit.

I was a very shy, young woman, grown up in a different culture, and due to that I lacked a lot of confidence in the beginning of my studies in Switzerland. At the same time I enjoyed learning, and as I evolved in the academic world, I realized that connecting the dots was something that I like. Bringing together things lead me onto the Food Science journey where today I have the privilege to drive the Future of Food Program at the interface of science, technology and business.

But what does it mean to work in this field, this is very often the question that I get, what are the challenges you address in your work? And how did your career evolve? I think that is something that people are very often curious to hear, so you'll find a few of exactly these experiences of brilliant women in this booklet.

Based on my own experience I'm convinced that STEM disciplines are needed more than ever to address the big challenges of our society, for instance how to nourish 10 billion people by 2050 within the limits of our planet.

We are living in times of the biological and the digital revolution, and it is our opportunity and responsibility to use the discoveries and new tools wisely for a better world. And yes, it also means engagement, perseverance and life-long learning, but it comes with the reward of a fulfilling purpose.

Especially women are interested in addressing system challenges with an interdisciplinary approach. In this sense, I would say women have a huge potential to become the enablers for digitalization as a means to revolutionize food supply, health, mobility and much more.

The bottleneck I would say is not the technology itself, but the skills to make it happen at the interfaces, to act as integrator between the stakeholders and connect the dots.

The reality that you see worldwide is that women want to have a self-determined life, be independent, they are well educated, and they are out there. I thought ten years ago that we would see a bigger change at this point, meaning more women in STEM also in leading positions. And yet I'm optimistic. I think we're at the tipping point for leveling the playing field for women in the workplace. On one hand the number of female graduates with STEM degrees is steadily growing. On the other hand, organizations are focusing on diversity and inclusion for leadership positions, simply because diversity significantly improves the performance. And we better get prepared also in our own company, industry and ecosystem to offer attractive environments for a new generation of talents with strong education, different views and passion to make the world a better place.

Beatrice Conde-Petit, Food Science Officer

Welcome!

just getting started.

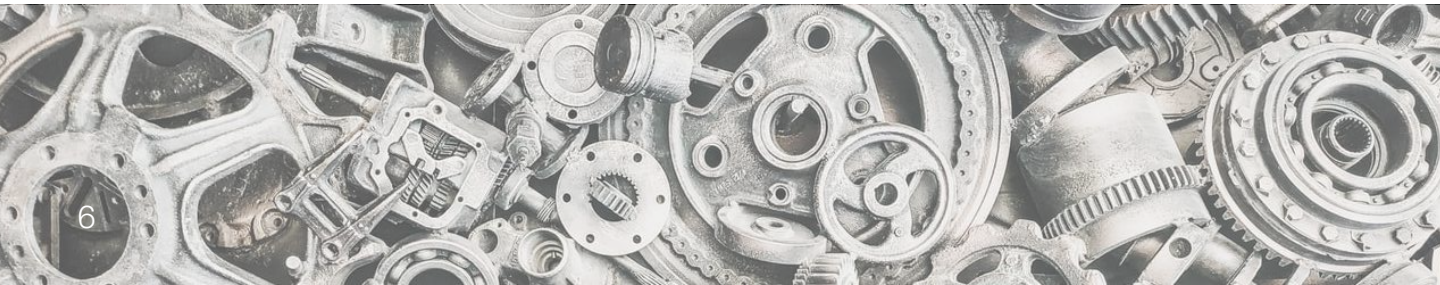
Upon opening this booklet, you might be thinking to yourself: “Is this even for me? What do I get from perusing through these pages?”.

You don’t have to look far for an answer, because this booklet is for:

- people who work for or collaborate with Bühler and would like to learn more about how they can actively engage in our Women in STEM initiative – or develop their own, similar program!
- Bühler colleagues and supervisors who want to find out how they can be an ally to the STEM women in their network.
- anyone who’s generally curious to learn more about the topic and to get to know inspiring STEM women at Bühler!

No matter what group you belong to, throughout this booklet you will find an introduction to what STEM is and why it is important to foster gender diversity in its fields, you will learn about the Women in STEM program at Bühler, explore stories from inspiring women throughout history and from Bühler, and much more!

Now without further ado, let’s get started!



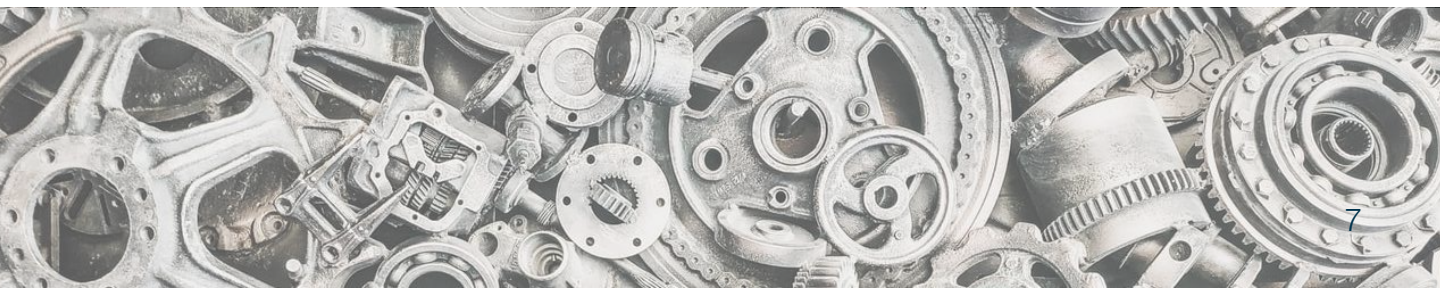
STEM

what it stands for.

STEM is an abbreviation that stands for **S**cience, **T**echnology, **E**ngineering, and **M**athematics. It is commonly used when talking about academics or careers in these four fields.

Bühler has various career and business opportunities in STEM, which is why this term and the four fields it consists of are essential for the company's success.

While there are no unified rules about which professions or businesses fall within STEM and which don't, there are common viewpoints. At Bühler, STEM and non-STEM jobs are not yet categorized, but can mostly be identified by looking at the job title and the department.



Women in STEM

opportunities and challenges.

30%
of the global STEM workforce are women

15
Is the age when girls lose confidence in STEM subjects

75%
of women over 16 draw a man when asked to draw a scientist

17%
of the Bühler workforce are women

Few female employees at Bühler work in typical STEM fields:

IT: 12%
R&D: 12%

Many female employees at Bühler work in “gender-typical” fields:

HR: 79%
Finance: 62%

Checking the numbers, women are clearly underrepresented in the STEM workforce. Gender stereotypes, unconscious biases, and a lack of role models are some of the aspects that might discourage girls and women from pursuing a STEM education and career.

To tackle this, we founded the Bühler Women in STEM initiative under our employee-driven change-making platform Generation B.

While it is a challenging task that lies before us - as we want to help defeat gender stereotypes and roles that have been around for decades and sometimes even centuries - we believe that it is worthwhile pursuing. And if we can inspire more people to come onboard and collaborate with us, a gender-inclusive STEM world is on the horizon!

Crunching the numbers

a lack of gender diversity equals a lack of profit and growth.

50% of the population is female – to cater to their needs as customers, it's indispensable to have women's perspectives in the workplace, especially as women drive 70-80% of all purchasing decisions.

According to McKinsey, companies with high gender diversity are 21% more likely to be highly profitable.

Companies with women on their executive boards have a 10% higher return on investment than firms with all-male boards.

Closing the STEM gender gap would increase the expected European GDP in 2050 by 0.8%, translating into roughly 700 billions GBP.

Role models galore!

awe-inspiring STEM women throughout history.

Ada Lovelace, England

Augusta Ada King, Countess of Lovelace, was an English mathematician born in 1815. She is believed to be the first person to discover that computers can do more than just pure calculations, and is therefore regarded as one of the first computer programmers.

Hedy Lamarr, Austria

Born as Hedwig Eva Kiesler in 1914, Hedy was famed for her beauty and acting in big screen films, but her brilliant mind went unnoticed for a long time. That was until she met George Antheil in 1940, and the two – worried about the coming war – invented a communication system to guide torpedoes. Later, their system significantly contributed to the development of wireless communication technology, such as GPS or Wi-Fi. This is why Hedy is often called the “mother of Wi-Fi”.

Katherine Johnson, USA

Katherine was born in 1918, and already loved to count as a child. Being both female and African-American, it was challenging for Katherine to pursue her passion. She enrolled in the mathematics program at West Virginia University right when the college abolished desegregation in 1939. Katherine later started to work for NASA in 1953, and made significant contributions to space exploration, be it the first American human spaceflight or the Apollo 11 mission. Katherine died at the age of 101 in 2020.

Youyou Tu, China

Tu was born in 1930. Her parents encouraged her to pursue an education, and she chose to study medicine. During the Vietnam War, North Vietnam lost countless soldiers to malaria, and asked China for help. Tu was then appointed the head of the project to find a cure. Leaving her family behind, Tu travelled into Chinese rainforests to study the disease. Her research – which also included the study of traditional Chinese medicine – led Tu to discover artemisinin, the cure for malaria. With her work, Tu was able to save millions of lives across the world and she was honored with the Nobel Prize in Medicine in 2015.

Adriana Ocampo, Colombia

66 million years ago, a giant meteor hit the earth, abruptly ending the era of dinosaurs. Due to Adriana Ocamp and her team's research, an enormous crater found in Mexico was linked to the meteor that struck so long ago. Adriana was born in 1955 in Colombia and moved to the US at 14, where she started an internship at NASA. She later earned her PhD in planetary science and now leads the program for major robotic missions at NASA.

Mae Jemison, USA

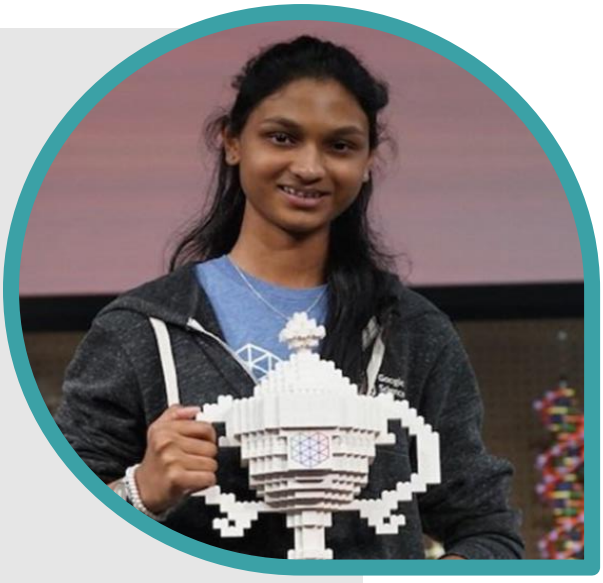
Born in 1956, Mae already loved science as a child. While watching the Apollo videos on TV, she got upset about the lack of female astronauts. After high school, Mae decided to study Chemical Engineering and African and African-American studies. After her graduation, she attended medical school and went on to become a doctor. With Sally Ride becoming the first American woman in space in the early 80s, Mae was inspired to also apply to the astronaut program at NASA, where she was accepted. Working as an astronaut for six years, Mae took part in various missions, one of them on the space shuttle Endeavor in 1992, making her the first African American woman in space.

TED

Maryam Mirzakhani, Iran

Maryam was born in 1977 in Teheran and became the first and so far only woman to be given a Fields Metal - often considered the mathematical Nobel Prize – in 2014 for her research in geometry and dynamics. Already as a teenager, Maryam won various mathematical competition, and she went on to study mathematics, ultimately earning her a PhD from Harvard. In 2008, Maryam took on the position as a professor at Stanford University. Maryam died from breast cancer in 2017, but her immense contributions to various fields in mathematics will live on.

Kiara Nirghin, South Africa



Born in 2000, Kiara was only 13 years old when she witnessed the worst drought her home country had seen in 30 years. This made Kiara think about how she could support her country in this challenging time. She began to experiment, focusing on superabsorbent polymers. These polymers are usually expensive and contain harmful chemicals, but Kiara found a way to make them out of orange peels and avocado skins. When the substance she discovered is added to soil, it absorbs water and slowly releases it, which can keep crops hydrated during droughts. In 2016, Kiara won the Google Science Fair with her idea. Since then, she has been named one of the most influential teens, has been invited to several UN meetings, and is now studying computer science.

Our purpose

mission and vision.

"All sorts of things can happen when you're open to new ideas and playing around with things"

- Stephanie Kwolek, famous chemist

Our purpose is what drives us, what gives us energy and perseverance when times are tough. The purpose of our Women in STEM initiative is reflected in our mission and vision.

‘ We inspire and support girls and women to pursue a STEM career at Bühler. ’

‘Inclusion for a better STEM world. ‘

Our goals

a goal without a plan is just a wish.

Global Women in STEM activities

We plan and organize global events and activities that are widely accessible and help us raise awareness of Women in STEM topics and challenges.

Local Women in STEM activities

The beating heart of our movement are the many local activities carried out by our regional ambassadors. While these activities are smaller in scale, they can be more specific and impactful for our various target groups.

Interactions about Women in STEM

When organizing our activities, we track the number of interactions we were able to generate. Most of the time, the number of participants equals the number of interactions. We set ourselves a goal of a number of interactions every year.

Our organization

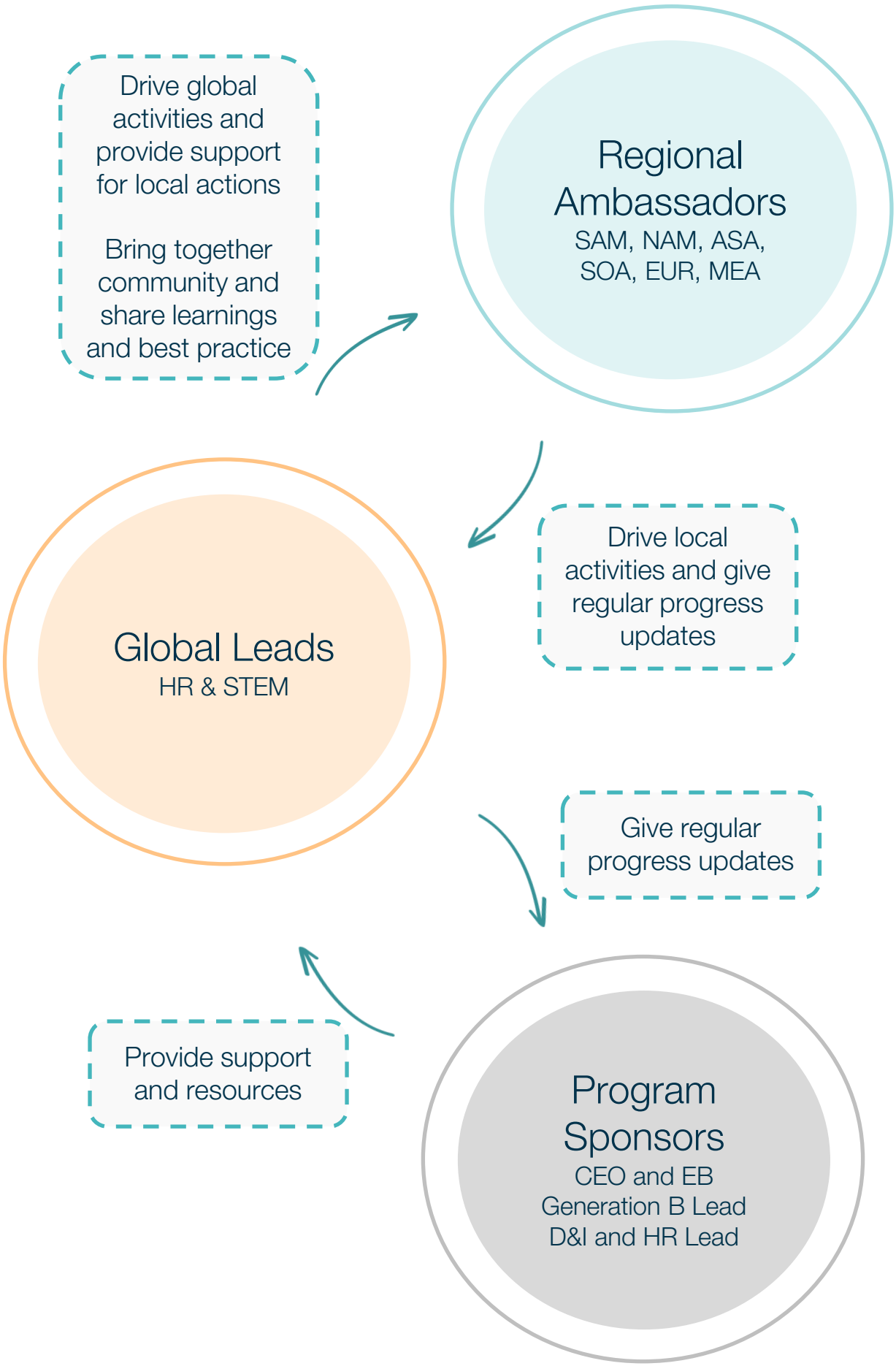
global structure – local execution.

The Women in STEM initiative is global. We want to drive impactful actions in all our Bühler regions and locations, which is why we are building a strong global network of regional ambassadors – as well as commitment and support by our leaders.

While we are a global initiative and team, we want to enable great autonomy and flexibility to our regional ambassadors as they know best what is needed and effective in their respective region.

To build up this organization with a global direction and alignment, but local execution, we need to have a sound and clearly communicated structure.

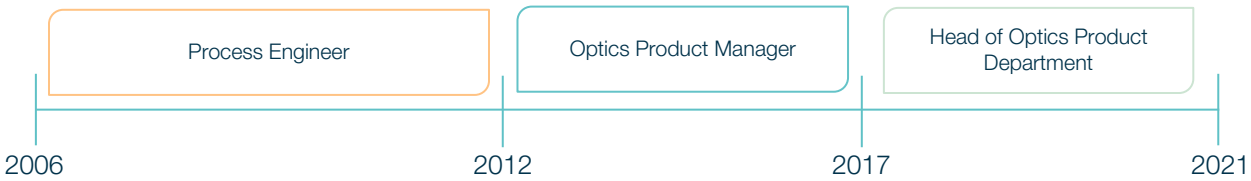
On the next page, the organization of the global Women in STEM initiative is shown.


Drive global activities and provide support for local actions
Bring together community and share learnings and best practice
Regional Ambassadors
SAM, NAM, ASA, SOA, EUR, MEA
Drive local activities and give regular progress updates
Global Leads
HR & STEM
Give regular progress updates
Provide support and resources
Program Sponsors
CEO and EB
Generation B Lead
D&I and HR Lead

My Story

Karida Li.

Role:	Optics Product Manger
Location:	Beijing, China
With Bühler since:	2006
Role model:	Tu Youyou



What inspires you to get up in the morning?

There are many new things that we can feel, enjoy and learn in this amazing world, which makes me very excited and energetic. I am so surprised to find my growth in little things everyday. I love my life and my work, especially because I can improve people's lives by doing it.

When and how did you first realize that you want to be in STEM?

When I was very young, I often traveled with my father. I became interested in his car and found that STEM is an interesting language, which can tell us a very attractive story. By continuously learning new knowledge, we're able to find all the answers and solutions we want. When I grew up, I was lucky to study Optical Engineering.

What obstacles did you have to overcome along the way?

Firstly, it was important to constantly strive to learn new knowledge. This is not achieved overnight, it needs careful studying, thinking again and again and a lot of practice. Secondly, in case of project failure, I had to learn not to give up! Calculate, check and test carefully and repeatedly until you find the right way, which may take a lot of time and energy, but pays off in the end. Lastly, I am the only female Engineer in the team, which was challenging at first. But once I have learned how to build trust with my male engineering colleagues, I now feel a great sense of achievement with the support of teamwork.

What advice would you give to girls and women who are unsure about what career to choose?

STEM is not only for boys. Girls also have many unique advantages, for example they often pay more attention to detail and show more patience. So find a job that you are interested in and develop yourself step by step. For STEM, the accumulation of experience is very important. As long as you stick to the work that you think is meaningful, you will get the best rewards.

What can each of us do to foster a supportive environment for girls and women in STEM?

More popular science trainings and education should be carried out for girls and women, so that they can understand the meaning of and become interested in STEM. We should increasingly encourage them to participate in relevant practical activities or work. The sense of achievement will inspire their potential energy and provide them with relevant employment opportunities, also in leadership positions.

What can I do?

getting started as an ally or ambassador.

As a colleague

- ☑ Ask STEM women in your area what challenges they face and how you can support. Make sure to listen actively!
- ☑ Educate yourself! Find out with this booklet and online resources about topics like gender diversity/equality or unconscious bias. A good first step is to join the Bühler Beyond Bias workshop!
- ☑ Speak up when you witness unfair/discriminatory behavior – be it a sexist joke, an all-male panel discussion, or a biased promotion decision.
- ☑ Ask for feedback. No one is perfect, and we rely on our peers to let us know how we can improve our behavior and communication.

As a leader

- ☑ Do all the things mentioned in the “as a colleague” section, and make sure your team is also adhering to these principles.
- ☑ Be open to being a mentor and sponsor to STEM women in your area to help them develop their career.
- ☑ Review the recruitment/talent management processes and statistics in your area – are male colleagues more likely to be hired and promoted? Is there gender bias at play?
- ☑ Ensure visibility of your female STEM employees – include them in important presentations, events, or communications.
- ☑ Allow for flexible working in your area, as this is proven to be an important factor for many (STEM) women.

As a parent/uncle/aunt/grandparent

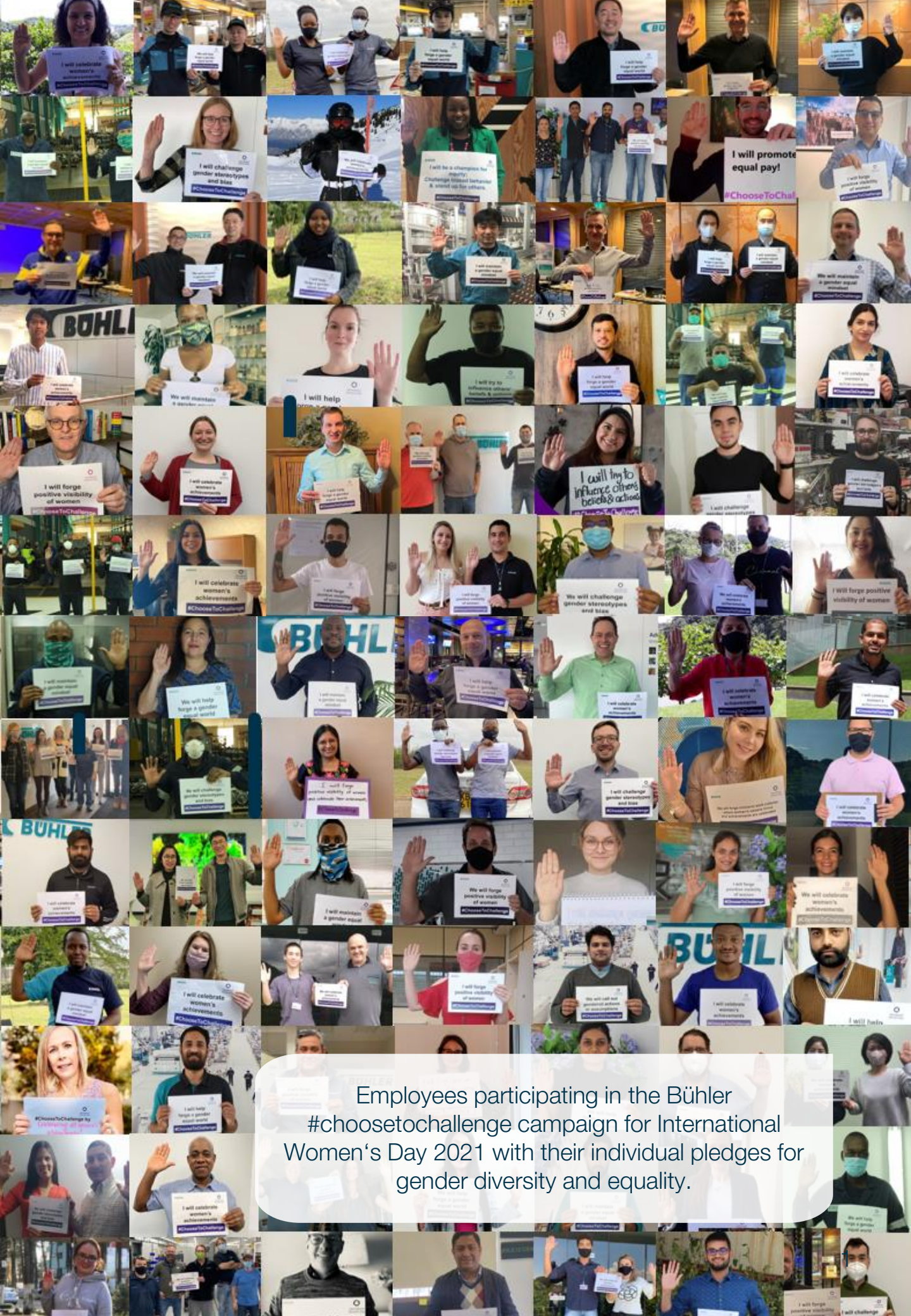
- Don't put children into gender-boxes. Avoid buying all-pink wardrobe for girls, and make sure they have access to toys that spark their curiosity in more technical areas (Lego and science kits, instead of only dolls and beauty sets).
- Choose children's books that highlight diversity and show the opportunities that girls have. You can find one example on page 41.
- When spending time with your daughter/niece/granddaughter, why not try out some creative science experiments? There are a lot of easy and exciting ideas and instructions online!
- Give your daughter/niece/granddaughter a STEM experience she won't forget! You can take her to a science museum or even bring her with you to work. Make sure to also introduce her to some awesome female STEM role models!

As an ambassador

Check out pages 24 to 35 in this booklet to get to know some sample activities and communication you could implement in your location/department.

For more support, the Women in STEM team is here for you.
Get in touch with us: generation.b@buhlergroup.com


BÜHLER
I will help forge a gender equal world
#ChooseToChallenge
I will call out gendered actions
I will challenge gender stereotypes and bias
I will celebrate women's achievements
We will maintain a gender equal mindset
We will forge positive visibility of women
I will help forge women's equality by
We will challenge gender stereotypes and bias
I will promote positive role models



Employees participating in the Bühler #choosetochallenge campaign for International Women‘s Day 2021 with their individual pledges for gender diversity and equality.

Activities

planning meaningful actions.

The Women in STEM initiative is all about developing meaningful activities that raise awareness and inspire, so that more girls and women will consider a career in STEM, and to reduce the related obstacles they might face.

But what is an activity? According to the Cambridge Dictionary, an activity is “the work of a group or organization to achieve an aim”. It is therefore a very broad term that includes many different things, be it organizing an internal employee engagement event, going to a school to give a lecture about a STEM-subject, attending a career fair, or even conducting a survey among STEM women to identify the most pressing challenges.

As you can see, there are so many different ways we can tackle this initiative together! On the next page, we have some ideas for activities you can plan in your region! The list of activities is by no means conclusive but serves as a starting point for you.

Check out pictures of past events and activities about or involving women in STEM at Bühler!

Activities

ideas.

Target: children & teenagers

Inviting a school class to Bühler/your company

One of the best ways to inspire girls and boys alike to go into the STEM fields, is to let them experience the creativity and fun these fields offer. Inviting a school class to Bühler, giving them an interactive tour of the site, and letting them speak to STEM women will help spark the children's interest and makes them realize that STEM careers are available to everyone – no matter their gender.

Target: children & teenagers

Visiting a school to give a class

Instead of inviting school kids over to Bühler, you can also get 1-2 STEM women together and organize an informative and interactive class for school children. A fun and inspiring class as well as amazing STEM women as teachers are sure to make a lasting impact on the kids!

Target: children & parents

Creating a brochure or event for parent employees

Not only do we need to target girls and women with our movement, but also people in their social environment that have an influence on them. It is therefore important for us to also educate parents on the impact gender stereotypes and a lack of role models can have on their children. To do this, you could for example create a brochure or an event for employees with kids, giving an overview of the topic and valuable tips how parents can help themselves and their kids stay open-minded and curious.

Activities

ideas.

Target: teenagers & students

Attending a career fair

Attending career fairs is one of the best way to connect with new talents. In some countries, there are even career fairs specifically for female job-seekers, sometimes even in particular for STEM professionals. Check out what career fairs are available in your country, and make sure to send some female STEM employees to represent Bühler at the event!

Target: students

Giving a presentation at or organizing an event with a university

Making Bühler visible as a cool and inclusive company to university students – many of which are female – is extremely important for our diversity efforts. With an engaging presentation or event with female STEM representatives from Bühler, female students not only learn more about Bühler, but also discover the opportunities they can have at our company.

Target: working STEM women

Participating in career “speed dating” events

In many countries all over the world, career «speed dating» events are offered to companies. At these events, companies can connect with female STEM professionals in short but intense interview sessions. This enables us to directly get to know potential female STEM employees and to introduce them to Bühler and our career opportunities.

Activities

ideas.

Target: employees

Planning an employee engagement event

Inspiring girls and women to pursue a STEM career is great, but the next step is to make sure they can then also have a successful career – preferably at Bühler. This includes creating an environment where biases and gender stereotypes are not obstacles to hiring or developing STEM women. We can help break these biases and stereotypes by raising awareness among our employees about these topics, for example with informative and interactive employee engagement events.

Target: children & parents

Organizing a “bring-your-daughter-to-work”-day

Gender stereotypes start to form at a very young age, which is why children need positive role models early on. With a «bring-your-daughter-to-work»-day, employees have a chance to bring their daughter (and maybe also son) with them to work, show them around the site, let them try different things, and introduce them to female role models. This could be accompanied by a general program for all participants with interactive and fun sessions to further deepen the learning and inspiration.

Target: STEM women at Bühler

Starting an exchange meet-up among STEM women

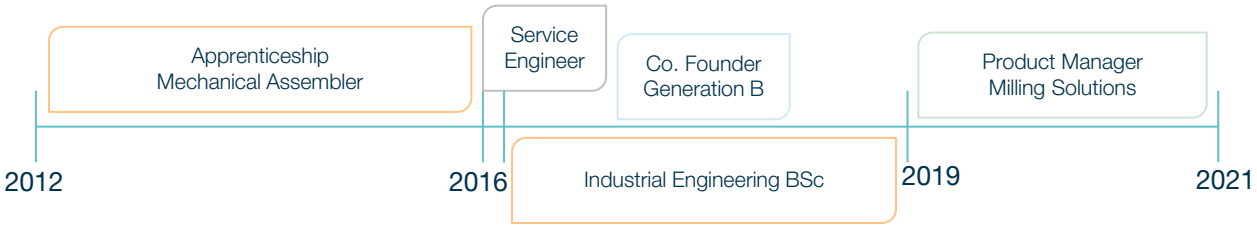
A strong network is often a key ingredient to have a successful career. This is also true for women in STEM, and possibly even more so, as they often face distinct challenges in the workplace. Starting an informal get-together with a couple of (STEM) women can help grow this support network and enable valuable exchanges between female employees. Maybe you can start with a monthly Women in STEM lunch in your location!

Do you have additional ideas for inspiring and impactful activities?
Let us know through *generation.b@buhlergroup.com*!

My Story

Sabrina Würsch.

Role:	Product Manger Milling Solutions
Location:	Uzwil, Switzerland
With Bühler since:	2012
Role model:	Ruth Bader Ginsburg



What inspires you to get up in the morning?

The fact that I know why I go to work. Isn't it amazing that I can go to work and know that what I do impacts the whole world! It impacts how people around the globe are fed. I am responsible to make sure that we use the newest technology available to use only as much resources as needed and make the most out of the raw material and turn it into food. I cannot imagine something more fulfilling than such a purpose ☺.

When and how did you first realize that you want to be in STEM?

I was always a very crafty kid. I enjoyed spending hours in our cellar and inventing something new. I think because I always watched my grandfather being able to have a solution to every problem as well being able to fix everything inspired me even more! So one day I asked my dad how I can become an inventor? He then said I should start with a solid base and do an apprenticeship as a mechanical assembler and study mechanical engineering afterwards. Somehow I stuck to it with the small adjustment of bringing the economical view into my education as well. That's why in the end I decided to become an industrial engineer.

What obstacles did you have to overcome along the way?

I always enjoyed to be challenged and choosing the harder path. I can definitely say that I felt lonely sometimes because all my work colleagues were men. I missed to talk to a woman. What was tough as well was the hard work standing all day long and then sitting down in the evening to do homework and studying.

What advice would you give to girls and women who are unsure about what career to choose?

I would look for someone that is doing what they would like to do but are unsure about and have a chat with them. They could also look whether they can explore the apprenticeship/school for a few days to decide whether it is something they like. I would also advise them to try something out in STEM and not being insecure about their grades in mathematics because it is just much more than only school grades. I think to enjoy and being passionate about what they do is much more important. I can tell you that a strong will can make the impossible real.

What can each of us do to foster a supportive environment for girls and women in STEM?

I guess a big part is just being there. I think for young girls looking up to someone that they admire to kind of lead them the way is a crucial part to show them it is actually possible being a successful women in STEM. The other part is to try and expand their horizon! Explain to them what different jobs there are and what's the coolest part about them. I try my best in just talking to them and sharing my STEM passion with as many as possible.

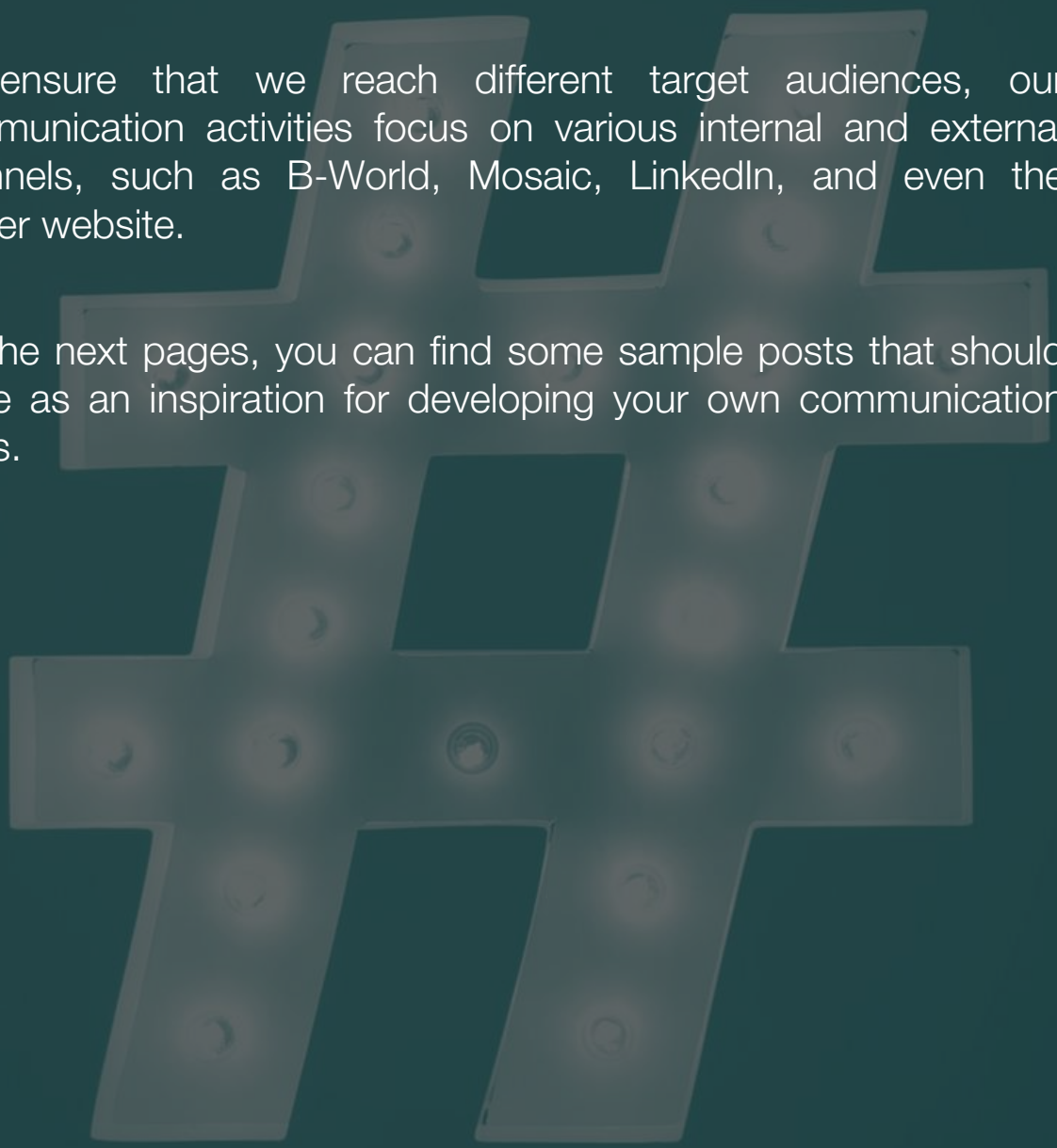
Communication

great communication begins with connection.

What, when, how, and where we communicate is a key component of our Women in STEM initiative. Regularly sharing inspirational articles, pictures and stories will help us raise awareness about the achievements and challenges of women in STEM and about our activities at Bühler.

To ensure that we reach different target audiences, our communication activities focus on various internal and external channels, such as B-World, Mosaic, LinkedIn, and even the Bühler website.

On the next pages, you can find some sample posts that should serve as an inspiration for developing your own communication ideas.

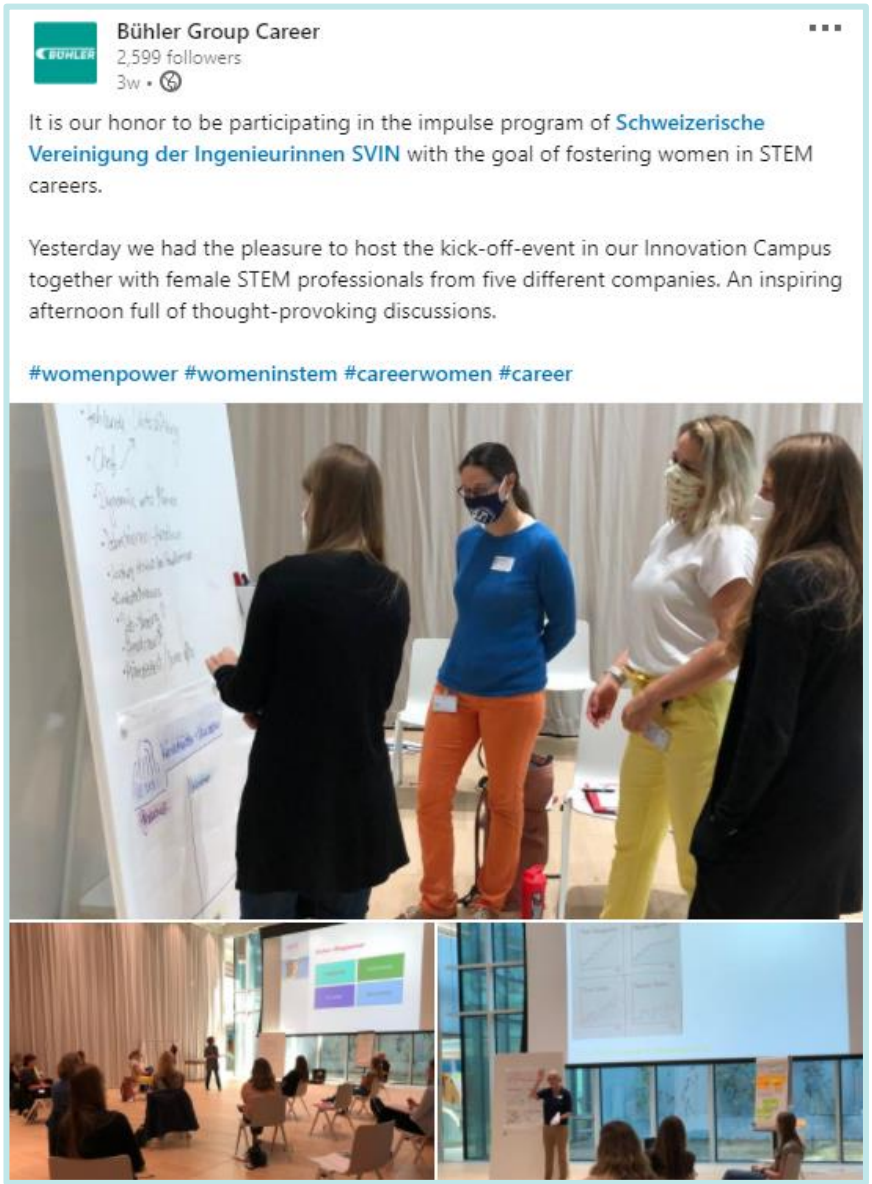


Communication

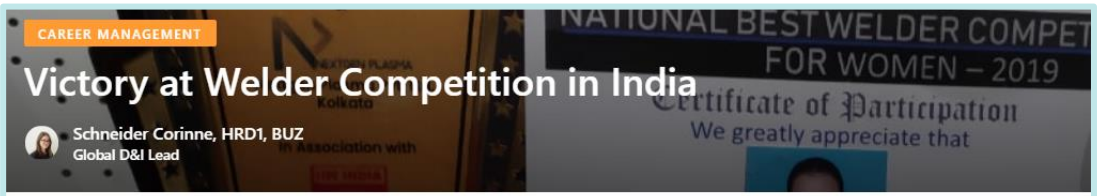
ideas.

Check out social media posts that were developed for the topic of Women in STEM in the past!

LinkedIn post for a women in STEM event in Uzwil



B-World post to celebrate a Bühler STEM woman's success at a competition



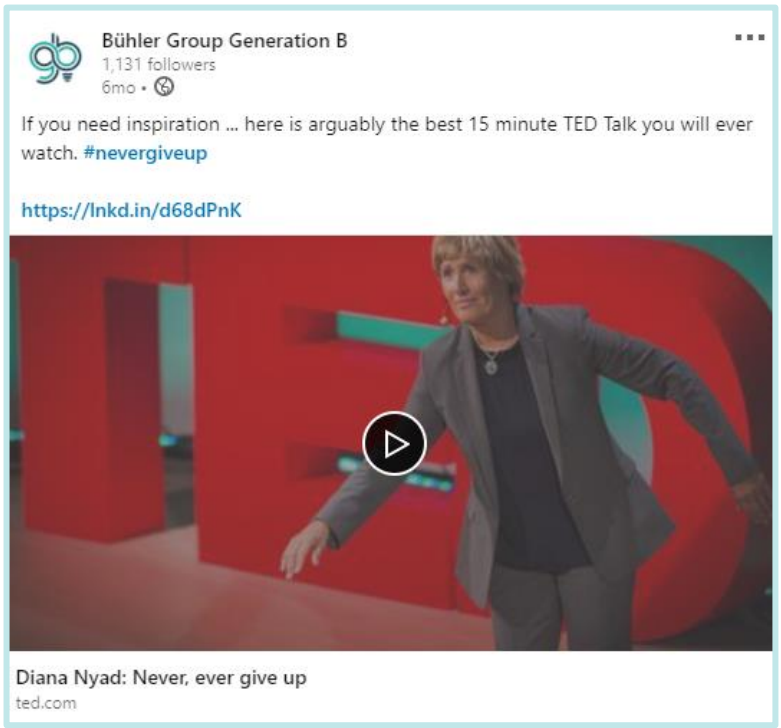
Our colleague Sagaya Mary won the Regional Best Welder Competition for Women in India.

On December 6, 2019, a competition for female welders took place in Chennai, India. A Bühler employee participated in this competition as well, and not only did she take part, she brought home a fantastic victory!

Sagaya Mary, who works at the MLS welding department at Bühler Bangalore, competed in the event together with 12 female welders from various companies. Only four participants were victorious, Sagaya being one of them: She successfully claimed victory in the «GTAW Process - Pipe» category. About her great performance at the competition, Sagaya says that it was a very proud moment for her to take the victory representing Bühler. She adds that her dedication and practice helped her to win and that working for Bühler has always been a great source of inspiration and motivation for her learning journey.

Congratulations Sagaya to your great success!

LinkedIn post to share an inspiring TED Talk



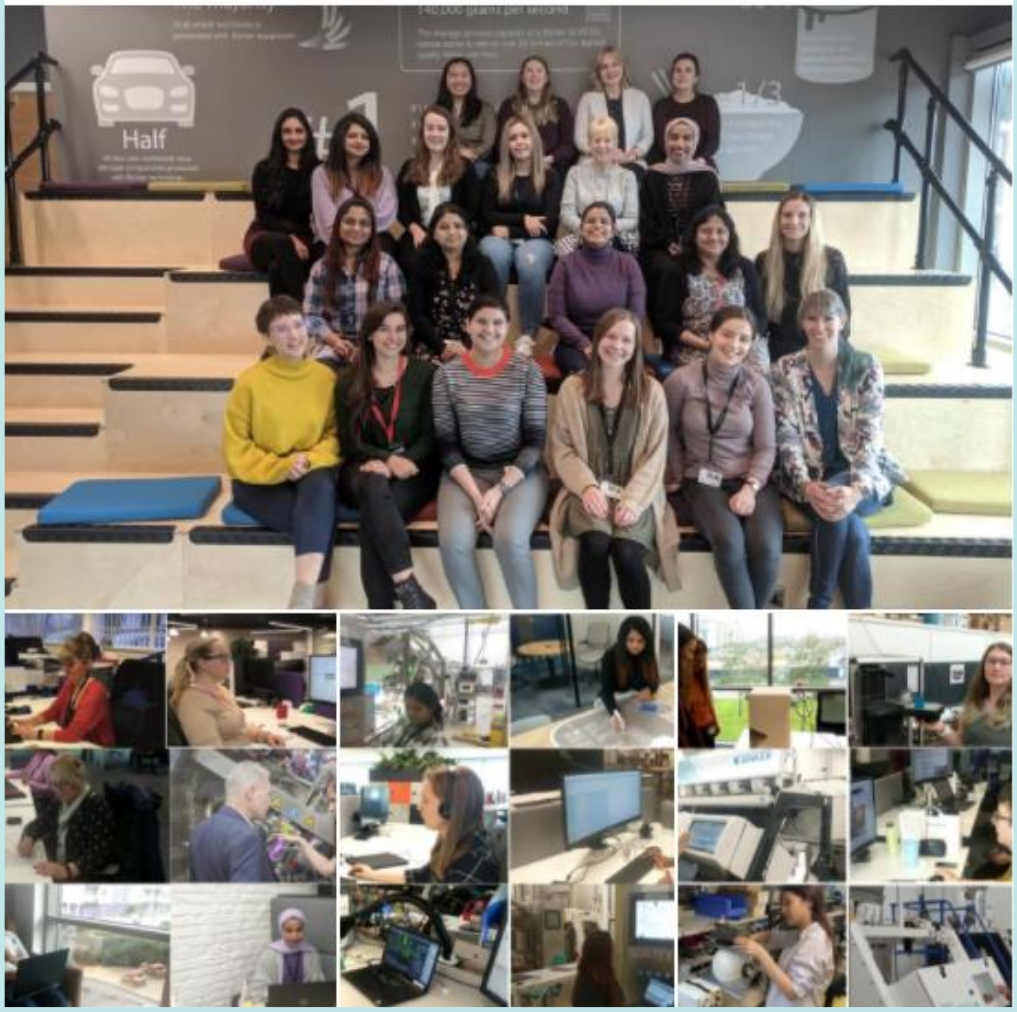
TED

LinkedIn post for the International Women in Engineering Day 2020

Bühler Group Career
2,599 followers
3mo • Edited •

Today is International Women in Engineering Day #INWED20!
Let's take this opportunity to celebrate our amazing female engineers, bright minds and innovators who #ShapeTheWorld every day with their strong power and drive which helps us fulfill our promise of Innovations For A Better World.

#womenpower #superwomen #career #engineering #buhlerpeople #buhlergroup



Calendar

important dates.

On these pages, you can find a collection of important dates that offer a great opportunity for us to communicate or plan an activity for Women in STEM.

International Day of Women and Girls in Science

When?

February 11th

Why?

A day to fight for better access for girls and women everywhere to participate in science, as less than 30% of researchers are women according to the UN. In addition, there have only been 20 female Nobel Prize laureates in scientific fields, compared to 587 male ones.

International Women's Day

When?

March 8th

Why?

A day to celebrate the achievements of women in society, economy, science, politics, and culture. And to raise awareness of gender-based challenges and inequalities women still face.

International Women in Engineering Day

When?

June 23rd

Why?

A day to celebrate the amazing achievements of female engineers globally and to raise awareness of career opportunities and development in engineering for women.

International Men's Day

When?

November 19th

Why?

A day to celebrate the achievements and contributions of men, to promote gender relations and equality, and to raise awareness about men's health.

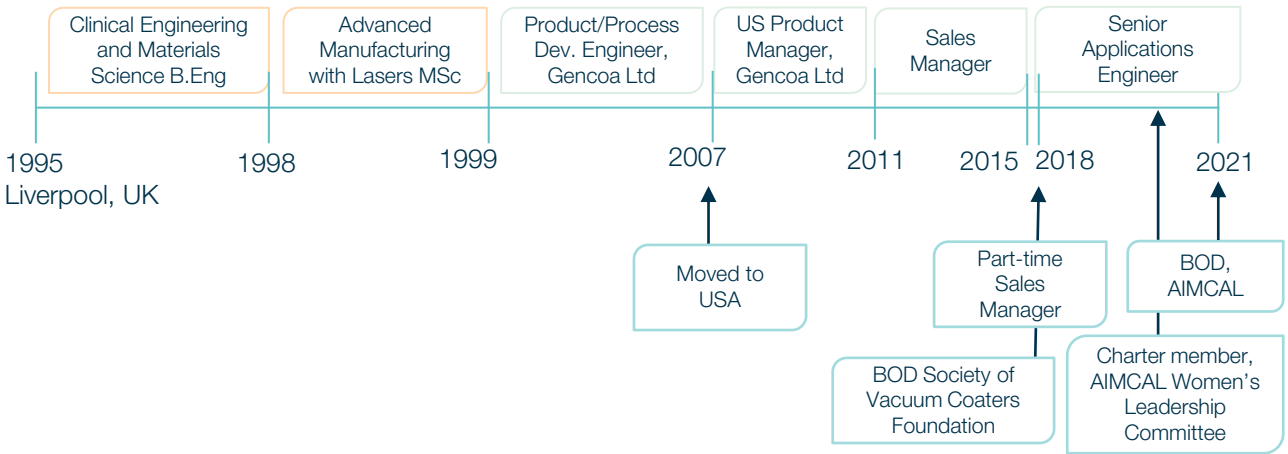
Other important days to mark in your calendar!

- International Day of Education, January 24
- Black History Month, February
- World Engineering Day for Sustainable Development, March 4
- International Day of Mathematics, March 14
- Pride Month, June
- International Youth Day, August 12
- International Equal Pay Day, September 18
- World Mental Health Day, October 10
- World Science Day for Peace and Development, November 10

My Story

Sarah Williams.

Role:	Senior Applications Engineer
Location:	Owatonna, USA
With Bühler since:	2011
Role model:	My Mum



What inspires you to get up in the morning?

Well, my children need to get to school in the morning but that really is a necessity rather than an inspiration! However, they certainly keep me going and for them to see me going to work and for me to feel like I'm making a difference in the world whilst providing my children with the best life I can is so important. I also serve on a couple of Boards and committees, two of which are focused on supporting young people just starting out or in early careers. Knowing I can help to positively impact their careers and especially working to expand the female representation in our industry is a huge motivator.

When and how did you first realize that you want to be in STEM?

I decided around the age of 16 that I wanted to be a dentist as I was interested in the medical field and science in general. Well, things don't always turn out as planned and I ended up studying Clinical Engineering and Materials Science, a course that was offered to me as an alternative. This was a fascinating combination of courses in the medical field combined with engineering concepts. Also, my Dad is a civil engineer and I used to go to the building sites with him from time to time and was always interested in the equipment and the drawings and structures they were building. Some of the processes studied in my degree led me into my first job in the field of physical vapor deposition and that is the field I remain in today, over 20 years later!

What obstacles did you have to overcome along the way?

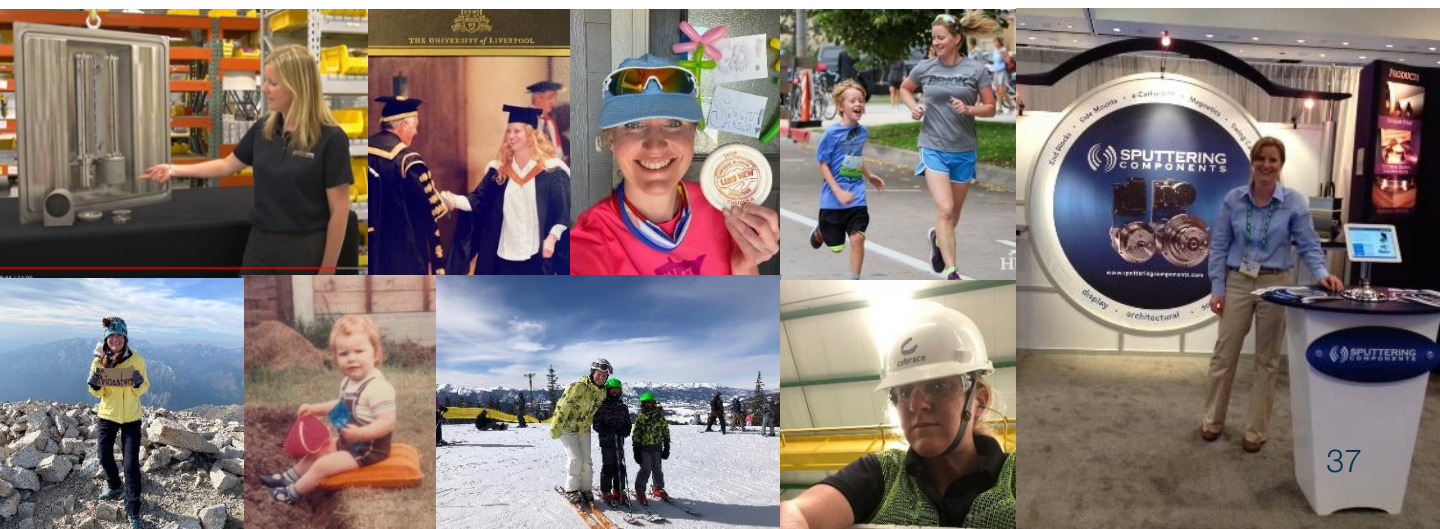
I think I've been very lucky in my career in that I have been supported by co-workers, managers, customers and many others along the way that have encouraged and inspired me to follow this path. Probably the biggest challenge was balancing my career with having children. I ended up going part-time for 3 years and am forever grateful to have been given that opportunity to keep my foot in the industry whilst having quality time with my children. You can't get that back! I guess another hurdle was overcoming cultural differences. I grew up in the UK and moved to the US and although we speak the same language, the culture is very different.

What advice would you give to girls and women who are unsure about what career to choose?

Research careers, be open to careers you may never have thought of. Gain work experience in different fields if possible. Take a career test. Make as many connections as you can in the industries you are thinking about. STEM jobs often offer higher salaries than non-STEM jobs enabling you to secure the financial freedom to better support yourself and possibly your family in the future. Have hobbies that you are passionate about, these will support your growth and work/life balance. Work hard, be strong, don't give up and know that it's ok to change careers if it doesn't work out the first time. It's a marathon not a sprint!

What can each of us do to foster a supportive environment for girls and women in STEM?

We need to start at the school level. As I understand, gender gaps in STEM subjects begin around middle school so we need to make sure we create awareness, encourage, educate and inspire at this age. This could be done in many ways. One is by having outreach classes such as the ones I have been involved in where women in STEM careers go into schools specifically to run courses for girls in STEM. We also need to be mindful of our own behavior and challenge our biases and ensure that boys and girls are treated equally and have equal opportunities. Women who are already in STEM careers need to be valued, supported and made to feel comfortable. A Deloitte study in 2017 showed that an increase in an individuals' feelings of inclusion translates into an increase in perceived team performance (+17 percent), decision-making quality (+20 percent), and collaboration (+29 percent). As women, we should acknowledge contributions by other women and we should push for equal representation in conferences, committees and the work environment. Diversity, equity and inclusion efforts should be a focus for companies today and these efforts should be recognized and rewarded. I read a statement recently, 'When we do not include girls in solving problems, we let potential remain undiscovered'.



Women in STEM library

resources to support you.

We are not the first ones to embark on the mission of making STEM careers attractive and accessible to girls and women, and we won't be the last. Because of this, there are countless resources available from which we can take learnings for our own Women in STEM program and activities.

On the following pages, we have some suggestions for you to check out to deepen your knowledge or gain some inspiration in women in STEM topics. Some of the suggestions might also be suitable to include in an activity you are planning.

Internal Resources

Diversity & Inclusion on B-World

Generation B on B-World

Women@ Bühler on MS Teams

TedTalk

"Inspiring the next generation of female engineers"
– Debbie Sterling

"Why do ambitious women have flat heads?"
– Dame Stephanie "Steve" Shirley

"Why you should make useless things"
– Simone Giertz

"Teach girls bravery, not perfection"
– Reshma Saujani

Youtube

Video showing that gender stereotypes are formed at a very young age.

Good introduction video on how to engage more girls in STEM fields.

Animated video about women in science who changed the world – but were rarely recognized for it.

Video about equal pay and how nonsensical it is not to pay the same for equal work.

Articles and Papers

Women and STEM
Shulamit Kahn, Donna Ginther

Scientific paper aiming to look into environmental factors – such as stereotypes – contributing to the gender gap in STEM fields. They focus especially on mathematics fields.

Why do so many Women who study engineering leave the field?
Susan S. Silbey

In this article, Silbey explores the culture within engineering in the USA and creates the link to the severe underrepresentation of women in engineering professions.

Women in Science, Technology, Engineering, and Mathematics (STEM); Quick Take
Catalyst

This short article provides a recent global overview of facts and figures regarding the gender difference in STEM fields in various regions and countries.

Outperforming yet undervalued: Undergraduate women in STEM
B. Bloodhart, M. M. Balgopall, A. M. A. Casper et al.

Research paper investigating the difference between academic performance and perceived competence in female and male students.

Websites

Catalyst
Global organization for gender equality in business.

Society of Women Engineers
Global organization to support women in engineering.

FEMTEC
Organization supporting women in STEM – with a focus on Europe.

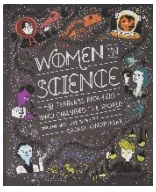
Swiss Association of Female Engineers
Swiss association for female students and professionals in technical fields.

Books & Movies

How to be a smart woman in STEM
Gabriela Müller Mendoza

Goodreads rating: 4.0

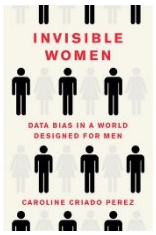
Gabriela studied IT and is now a speaker empowering people all over the world – even at Bühler, as she has worked with us for several workshops. Her book was even dubbed a “Swiss army knife for women in STEM”.



Women in Science: 50 Fearless Pioneers Who Changed the World
Rachel Ignotofsky

Goodreads rating: 4.48

Highlighting the amazing achievements to STEM of 50 women – many of whom have not been recognized for their contributions – alongside beautiful illustrations, this book is a joy for both children and adults alike.



Invisible Women: Data Bias in a World Designed for Men
Caroline Criado Pérez

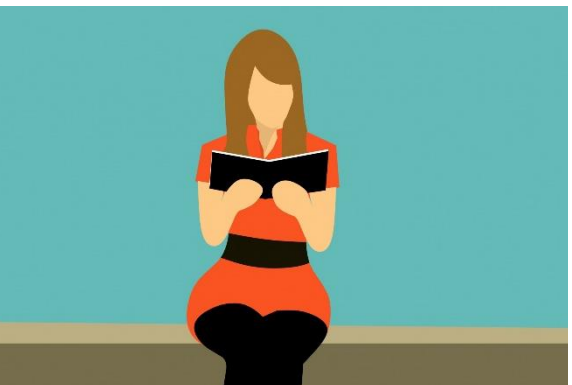
Goodreads rating: 4.40

Data is fundamental to the modern world, as we heavily rely on numbers to allocate resources and make crucial decisions. But because so much data fails to consider gender, as it treats men as the default and women as atypical, bias and discrimination are baked into our systems.

Hidden Figures
From director Theodore Melfi, starring Taraji P. Henson, Octavia Spencer and Janelle Monáe

IMDb: 7.8/10

This movie portrays the story of female African-American mathematicians Katherine Jonson, Dorothy Vaughan, and Mary Jackson, who served a vital role in NASA during the early years of the U.S. space program.



Do you know another video, article or website we should add to our library? Let us know!
generation.b@buhlergroup.com

A last word

strong leadership backing.

I support the women in STEM initiative simply because it is not only the right thing to do, but also out of sheer necessity. As a global leader in our business fields, we depend on being able to attract the best talents, with the required skills, to be able to thrive as an organization. Not only now, but also in the future.

In order to achieve our ambitions, we need to be attractive for female talents, on entry levels, as well as on top management levels. As a company, Bühler is guided by strong values and a fascinating purpose, which is to create innovations for a better world. This is a privilege and a responsibility at the same time, and for this we depend on the passion, dedication, and talent of all our current and future employees, on all continents of the globe.

Stefan Scheiber, Chief Executive Officer



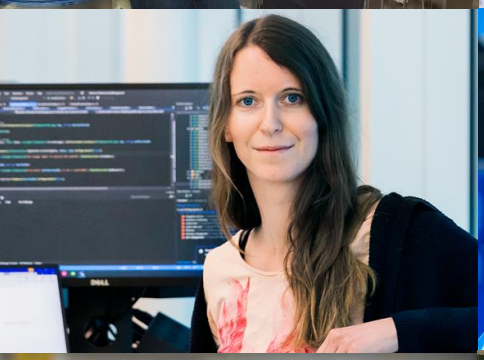















“Don't let anyone rob you of your imagination, your creativity, or your curiosity. It's your place in the world; it's your life. Go on and do all you can with it, and make it the life you want to live”

- Mae Jemison, first female African American astronaut in space

Want to engage?
Reach out to the Women in STEM team through
generation.b@buhlergroup.com