

DIGITAL TRANSFORMATION:

How can companies embark women and win the war for talent?

A STUDY CONDUCTED BY JUMP





-	s Europe in 2019 to better understand f digital disruption and what they felt conomy.
•	ort, we will share their feedback and os to ensure women and businesses ork.
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INTRODUCTION

40 to 60 million women globally may need to transition between occupations and skills level. (...) Navigating transitions could put women on a path to more productive, betterpaid work; failing to do so could worsen existing challenges.

The world is undergoing rapid change, and it will continue to exponentially change in the coming decades. Digital and technological disruption are at the very core of this process. Automation and Artificial Intelligence (AI) are transforming the way people work and impacting the very nature of jobs and skills required, leaving many obsolescent and creating huge skills gaps elsewhere. Managing this THE FUTURE OF WOMEN AT WORK, MCKINSEY (2019)

transition is the key challenge of today, for individuals, companies and governments.

Most countries, companies and societies are not yet prepared to deal with these major transformations. And amongst the four billion people excluded from the digital economy, women make up the majority (OECD, G20).

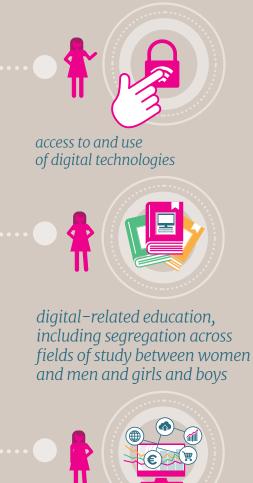
Research from leading organisations (European Union, World Economic Forum, OECD, United Nations, etc.) shows **gender gaps affecting women in the ongoing transformation at multiple levels**, in particular in:

40%

HOW MANY STUDENTS STUDY STEM?

Percentage of new entrants into bachelor's programmes by gender (2017)

	men	women
Germany		
Russian Fed.		35%
Korea		34%
Greece		34%
Austria		34%
Lithuania		33%
Latvia		32%
Estonia		32%
United Kingdom		32%
Poland		32%
Finland		31%
Ireland		31%
Hungary		31%
Ītaly		30%
Chile		30%
Czech Republic		30%
Slovenia		29%
Mexico		29%
Israel		28%
Iceland		28%
New Zealand		28%
OECD average	27	7%
Slovak Republic	27	
Switzerland	279	
Colombia	26%	6
France	25%	
Spain	24%	
Portugal	21%	
Australia	21%	
Sweden	21%	
Denmark	20%	
Luxembourg	20%	
Netherlands	20%	
Japan	19%	
Belgium	19%	
Turkey	18%	
Norway	16%	
Source: E	Education at a Glance 2019 OECD	



digital labour market: women's low participation in the digital labour market and in particular in high-quality jobs and top management positions



The 2018 European Commission study "Women in the digital age" shows that the share of men working in the digital sector is 3.1 times greater than the share of women. There are four times more men than women in Europe with ICT-related studies, and the number of women following ICT-related higher education is dropping. With demand for digital skills rising but fewer women in the EU interested in participating in the digital sector, be it higher education, jobs or entrepreneurships, gender equality risks going dramatically backwards in the next few years.

By 2030, in Belgium there will be 584.000 vacant positions, while 310.000 employees will need to be retrained to ensure they have sustainable jobs.

AGORIA, BE THE CHANGE (2018)

With digital transformation already at the door, society will need to adapt with new skills and new mindsets. New technologies will require increasingly specialist skills, and by 2022, businesses will require a proactive and inventive workplace strategy to help the 54% of the workforce who will require upskilling or reskilling. Employees will need to be responsive and agile, but also naturally capable of training and retraining throughout their career. Indeed, experts say that in the future an employee will need to retrain between 10 and 14 times on average throughout their working life and also in their own time.

"In this Skills Revolution, **learnability – the desire and ability to learn new skills to stay relevant and remain employable – will be the great equalizer**", according to Manpower. Learnability is one of the most highly valued skills in companies today.

SHAPING THE FUTURE OF WORK

If more women were to enter the digital jobs market, it could create an annual EUR 16 billion GDP boost for the European economy

EUROPEAN COMMISSION (2018)

PURPOSE OF THE SURVEY

SO WHERE DO WOMEN STAND IN TERMS OF UP-SKILLING AND RETRAINING FOR THEIR FUTURE AT WORK?

THIS IS THE KEY ISSUE WE INVESTIGATED IN THIS SURVEY.

JUMP, with the support of **Proximus** and the "**Fédération Wallonie-Bruxelles**", conducted a survey on how career-minded women perceive and are willing to take part in ongoing digital transformations. The study reflects the opinions of 1403 'career-minded' women across Europe who responded to the online survey. This survey was completed only by women.

The survey sheds light on the following questions:



ARE « CAREER-MINDED » WOMEN AWARE OF THE ONGOING DIGITAL TRANSFORMATIONS, AND HOW DO THEY PERCEIVE THEM?



ARE WOMEN WILLING TO UPDATE THEIR SKILLS IN ORDER TO ADAPT THE CHANGING TRENDS OF THE DIGITAL FUTURE?

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WHAT WOULD MOTIVATE THEM TO UPSKILL AND ADAPT TO THE TRANSFORMATION? WHAT IS HOLDING THEM BACK?



WHAT SUPPORT WOULD THEY NEED?

This report presents the level of women's awareness of the need to change and their readiness to adapt for the digital future.

It investigates women's motivations to take part in the on-going digital transformation, but also the barriers that they are facing and the expectations they have.

Finally, solutions are proposed to overcome the barriers that would need to be implemented by both women and organisations. We have included some best practices and tips from companies and experts, to tackle the digital gender gap and win the war for female talent in tech.

IN SUMMARY

94% OF CAREER-MINDED WOMEN ARE AWARE OF THE NEED TO DIGITALLY UPSKILL

BARRIERS FOR THOSE READY TO RETRAIN

51% LACK TIME

35% FEEL NO URGENT NEED

21% EXPECT EMPLOYERS TO DO SO

Women need to

TAKE OWNERSHIP ON THEIR LIFELONG LEARNING

CHOOSE THE COMPANIES THAT SUPPORT THEIR UPSKILLING

91% ARE PREPARED TO DO SO OR ALREADY DOING IT

MOTIVATIONS FOR THOSE READY TO RETRAIN

51% BY THE APPLICATIONS / THEIR PURPOSE

41% BY THE INCREASED SALARY

32% BY THE CAREER OPPORTUNITIES

Employers need to

IDENTIFY AND ATTRACT WOMEN WITH THIS LEARNING AGILITY

PROVIDE A **"WORK-LIFE-LEARN"** BALANCE

TACKLE THE NON-INCLUSIVE CULTURE OF THEIR DIGITAL TEAMS

THE FEMALE TALENT POOL IS THERE AND WAITING. COMPANIES NEED TO PROVIDE THEM A WORK-LIFE-LEARN BALANCE

KEY FINDINGS FROM OUR SURVEY

WOMEN ARE READY TO DIGITALLY RETRAIN AND UPSKILL

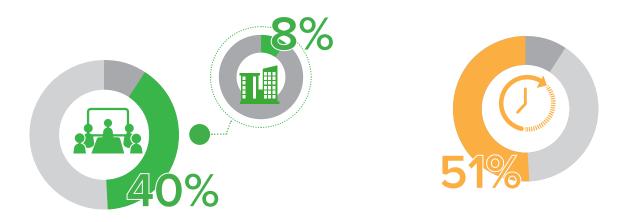
94% of career-minded women are aware that they will need to digitally upskill for their careers.



MANY ARE ALREADY INVESTING IN THEMSELVES (OR PLANNING TO DO SO)

40% of women are already investing in their digital upskilling, but only 8% are getting upskilling training from their employers.

51% of women who say they are ready to retrain would even be **prepared to do so in their own time**.





When it comes to their retraining, women seem to be left mainly to their own devices.

PURPOSE IS THE DRIVER

For women to be motivated to take part in the digital transformation, they need to see the bigger picture.



51% OF WOMEN ARE MOST INTERESTED IN THE APPLICATIONS IN TERMS OF NEW SERVICES, PRODUCTS AND SOLUTIONS.



41% ARE ALSO MOTIVATED BY THE INCREASED SALARY.



32% ARE MOTIVATED BY THE NEW CAREER OPPORTUNITIES THAT ACQUIRING NEW DIGITAL SKILLS COULD BRING. The survey shows that the number one driver for women is the **purpose,** rather than the technology itself.

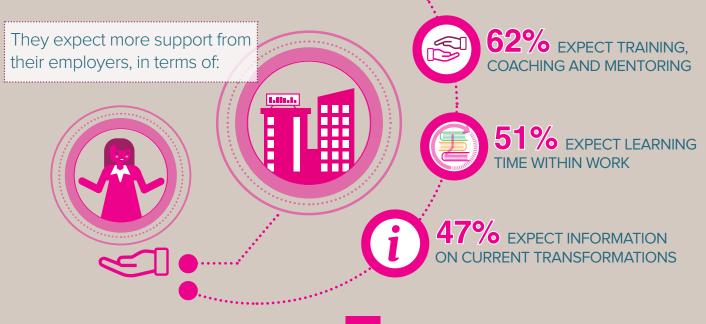
This suggest that they will be more inspired by a service or application – and go acquire the digital skills to get it – rather than simply learn to code.

LACK OF TIME AND SUPPORT FROM EMPLOYERS IS THE BARRIER.

Why are women not retraining then?

Time is the biggest barrier : 51% of those ready to retrain don't have time to do so, hardly surprising in today's world where women are still the main providers of domestic care. Money is another for 29% of them.

35% of those ready to retrain do not perceive the need to do so immediately for their jobs and 21% are simply waiting for their employers to take charge.



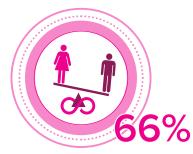
PERCEIVED GENDER-BIAS OF THE DIGITAL WORLD REMAINS AN OBSTACLE



65% of surveyed women perceive there to be a gender bias in digital technologies, (ie. in algorithms, search engine results, new products and services developed).

54% believe there is a gap between women and men in accessing and using digital technologies, as relates to digitalrelated education and the digital labour market.

The three main reasons for this perceived gender gap and bias are seen to be:



persistence of gender bias and stereotypes (e.g. "women are less good at tech")



cultural factors (e.g. male dominated cultures, "geek" culture)



insufficient information or awareness about digital technologies

There are around 20% women in tech, 12% women in AI, and it's getting worse. But the pipeline is not leaking, women are being forced out it. Women used to represent 30–50% of computing. As respect for programming and salaries improved, men moved in and changed the requirements for tech jobs. The field has been built into a hostile environment, with a culture of "women can't do tech".

> ALLISON GARDNER, FOUNDER WOMEN LEADING IN AI, TEACHING FELLOW AT KEELE UNIVERSITY



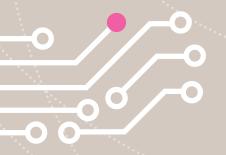
SOCIETY IS FACING A SKILLS REVOLUTION

Common effort needs to come from governments, companies and from the women themselves, in order to be ready for these changes.

Companies must provide real support in terms of offering more information and building a learning environment. They will also need to tackle the gender stereotypes and gender biases as well as their organisational culture to provide a work environment that is more inclusive and attractive to women.

Women, if they do not wish to be left behind in this race for digital and technological skills, need to take ownership of their future careers, build up their learning agility and open the discussion with organisations and companies to enable them to meet the challenges of the future of work. It's urgent to start doing things and there is a good business reason to do so. We cannot make our results anymore if we do not succeed in getting diversity and inclusivity. The financial models are at the end, we are pulling on an elastic. We can still make the next quarter and the quarter after, and maybe the dividends, and maybe the next elections, but then it's over. We need to start doing things differently now, we need to change the culture of organisations.

> SASKIA VAN UFFELEN GFI CORPORATE VICE PRESIDENT BENELUX, DIGITAL CHAMPION BELGIUM



MOVING FORWARD TO TACKLE THE DIGITAL GENDER GAP: TIPS FROM OUR EXPERTS

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Extracts from the JUMP Forums Paris and Brussels 2019 on **Digital Transformation: How to turn risk into opportunity for Gender Equality** (https://www.youtube.com/user/jumpforum/playlists)

HOW TO EMBARK WOMEN IN THE DIGITAL REVOLUTION AND WIN THE WAR FOR FEMALE TALENT

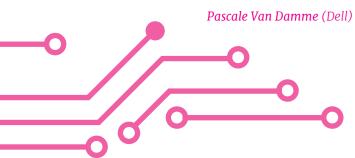
Rethink your communication for tech jobs to attract more women

How do we attract more women to technology? At Dell, we learnt to **adapt our communications**. In the job descriptions for example, we put **words that are really appealing to women**. It's also important that we make sure it's not about technology - it's not about the bits and the bytes anymore, **it's about the purpose** of what technology is giving back to our society and community.

Pascale Van Damme (VP & GM at Dell Technologies in Belux and Head of Nato Business, President Federation Agoria Digital Industries)

Make women in the candidate list a pre-requisite

When we have open positions, if we don't have women in the candidate pool, **I refuse to move forward**. I don't believe that for any open job description we have, it's not possible to find strong capable women.



Make sure your hiring panels are genderbalanced

The young women applying for tech jobs only see men and it's scary. They don't want to be the only female developer in a team of only men in a geek, basement culture where they might be the target of sexist jokes.

Céline Parsoud (Founder of Gender Busters)

Screen in rather than screen out for jobs

Not only do we make sure we have women in the candidate pool, we make sure we hire women by screening in vs screening out for the job. We used to assess experiences and knowledge; when you have a candidate, you usually make your decision on whether she or he doesn't fit the requirement on this and this angle. Then you get stuck, as not many women, let alone men, have the in-depth technological experience you need. When on these requirements the person is missing a certain experience, we look at which of them can we develop. So we reverse the screening out process by screening in. It's a fundamental shift.

Elke Jorens (Snr. Director, Head of Talent Acquisition EMEA at Microsoft)

We used to assess on experiences and knowledges. Now we assess for transferable competences such as learning agility, adaptability, growth mindset – which will help the person transfer to the next job.

ELKE JORENS SNR. DIRECTOR, HEAD OF TALENT ACQUISITION EMEA MICROSOFT

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Re-skill or up-skill your existing talent

There is a strong digital gap within the companies due to digital transformation, and when companies are starving for these competencies, they don't think about their own internal talent and they don't think about the women who could be candidates for IT and tech jobs. We are working on reskilling and upskilling programmes in companies to use their own talent, especially in banks at the moment, leveraging digital skills to empower women within banks to go from customer service front office to the IT department.

Frédéric Bardeau (Founder of Simplon)

Tackle the macho-culture of tech departments and organisations

We need to fight self-censorship and the machoculture in tech, both in the mindsets of women and men and in the companies trying to hire women.

Frédéric Bardeau (Simplon)

Use reverse-mentoring

You have digital talents within your organisation, and the younger generations can be an asset to develop the skills of the older generations.

Frédéric Bardeau (Simplon)

Develop an internal culture of learning and growth mindset

At Microsoft we have launched a culture of growth mindset. With growth mindset, it's no longer about knowing it all, it's now about learning it all - it's about life-long learning.

Elke Jorens (Microsoft)

Young women don't feel welcome in tech schools and don't feel welcome in tech companies. They have to develop an "avoidance strategy" and change their behaviours to prepare for sexism. In a world of only men, they stop being feminine to avoid attracting attention, they start acting like guys, they even play the game of sexist jokes as it's easier to tell them than to be the target of them.

> CÉLINE PARSOUD FOUNDER OF GENDER BUSTERS



Use the existing echo-systems of actors in women & digital

If you want to scale, you do not have time to waste waiting for the next generation to arrive on the job market or exploring the best practices. Use existing open-source resources - for example the Digital Ladies & Allies White Paper «Mixité et performance numérique». And connect with schools, associations and organisations - such as Simplon or Ecole 42 - that are already working on women and coding and that can help you get concrete results and scale quickly.

> *Merete Buljo* (Chief Digital & Customer Experience Officer, BPCE Eurotitres and President & Founder of Digital Ladies & Allies)

You need to start with your culture, building a culture from the top to the bottom, where people have the time to learn and to upgrade their skills. You need to create that time and support your people so they will be able to upgrade their skills.

> PASCALE VAN DAMME VP & GM AT DELL TECHNOLOGIES IN BELUX AND HEAD OF NATO BUSINESS, PRESIDENT FEDERATION AGORIA DIGITAL INDUSTRIES



Build a culture of inclusion

If we want more gender balance in ICT, we need different education and different culture in companies. When I started at Proximus, the company was very masculine, very hierarchical. The first thing I did was not about gender balance but about culture, to change the culture of the company and put in place a more inclusive, feminine, with values of collaboration, openness and transparency. And this takes time.

> Dominique Leroy (Former CEO of Proximus, Senior advisor)

Encourage a culture of appreciative understanding

Understand that everyone is different, that we do not always agree. I recognise and appreciate your difference of opinion, you appreciate mine. That's valid for gender, culture, generations.

Saskia Van Uffelen (GFI Digital Champion Belgium)

Measure and monitor to ensure impact

With HR, we have decided to look at the measures. We will make sure we measure how many women in the leadership team, ensure that on every succession plan we have at least one woman, look at how many women we hire, how many women we have in our ALD programme. And we will have an objective that we will monitor every year. This will ensure that things continue even when the top management changes.

Dominique Leroy (Senior advisor)

Be CEO of your own life and take responsibility for your own training

Everyone needs to be CEO of their own life and develop a skillset that they will need for tomorrow. Employers are not the only one responsible for the training of their employees, you are responsible for yourself too and need to develop the competence you will valorise going forward.

Saskia Van Uffelen (GFI Digital Champion Belgium)



HOW TO BEAT GENDER BIAS AND STEREOTYPES IN AI AND BIG DATA

One of the biggest risks that we face in the digital society is in Artificial Intelligence, where algorithms today are made by men, for men. The better balance we have created in society today will disappear in society tomorrow if we do not have enough women and non-white male men to programme the algorithms. For example, in job searches, there is a bias in the algorithms that favours men rather than women, and this could actively contribute to perpetuating the lack of women in ICT.

> **DOMINIQUE LEROY** FORMER CEO OF PROXIMUS, SENIOR ADVISOR



Understand where bias comes in at the different points of the AI development process

Algorithms will not solve bias because they are built through human decisions and biased data. The "black box" argument does not work. You need to be careful about the over-reliance on algorithms and thinking they are perfect. Datasets are 20% dirty and humans spend time cleaning them up. Humans select the features which the algorithm will consider more important and relevant than others, and they are the ones looking at the data coming out of the algorithms and making decisions based on them – where the cut-off points are, how many false-positive we allow... These are all points where bias creeps in.

> Allison Gardner (Founder Women Leading in AI, Teaching Fellow at Keele University)

Consider the ethics of your algorithms and ensure you have AI impact assessments

We need to create the environment where it becomes a requirement to stop these attitudes. This will happen through regulation in A.I., based on GDPR, algorithmic impact assessments, algorithmic audits, certification, A.I. Fairness stamps, citizen's panels... You can't just introduce AI and think this will be a "cure-all"; you're going to be expected to have some level of ethical production.

Allison Gardner (Women Leading in AI Keele University

Ensure you have diverse teams

Bias happens because of the lack of diversity in the development process for A.I. and you start building in unconscious bias because you do not have diverse teams.

Allison Gardner (Women Leading in AI Keele University

NOTE ON THE METHODOLOGY AND PARTICIPANT PROFILE



This survey was sent in Spring 2019 to the JUMP online community in Europe, mainly in Belgium and France. Women only were invited to respond to the questionnaire, available only in English.

In total the survey had 1403 respondents, of which 951 fully completed the questionnaire. The analysis was done on the total respondents for each question.

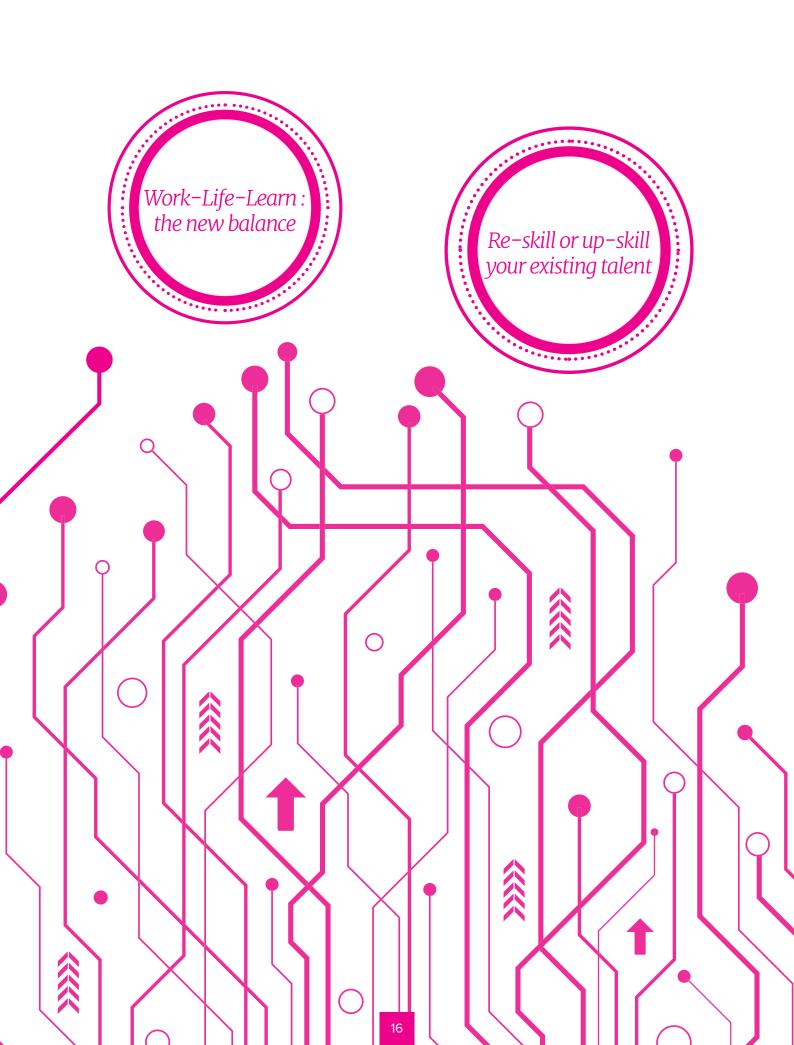
The profile of the female respondents reflects that of JUMP's online community, representative of "careerwomen" rather than of all women and with a higher level of education than the population average.

We also note a higher than average response of women educated in STEM (Science, Technology, Engineering, Mathematics), probably influenced to participate by the title of the survey itself.

The country of residence of the respondents is mostly (75%) Belgium and France . The over-representation of these two countries can be explained by JUMP offices location in Brussels and Paris.

Detailed profile of our "career women" respondents is as follows:

86% consider their career important or extremely important
62% are Employee/ Middle Managers
59% work in private sector
44% work in organisations with above 1.000 employees
67% have at least a master's degree and 92% have higher education
42% have a higher education in STEM (Science, Technology, Engineering, Mathematics)
42% are in 46-60 age group
39% are in 31-45 age group
47% have children under the age of 18



CONCLUSIONS

WHAT ORGANISATIONS CAN DO



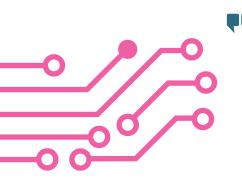
Companies can create an environment where the life-long learning is implemented and where **"work-life-LEARN" balance** is possible. This means allowing employees to invest time within their work hours for retraining and reskilling, to develop key skills that the company will need in the future - or even sooner!

The organisations can create the right framework by **changing the culture of the working teams** (by changing the internal working processes and methodologies, by

expanding the awareness within the organisation of the gender biases and stereotypes, etc). The company's culture is a way for attracting people.

Companies can develop **the right communication presenting the bigger picture** of the opportunities the digital transformation has to offer. Purpose of technology and what can be achieved with it needs to be part of the selling strategy.

Companies can be open-minded and **intentional in their hiring processes** and look for people who do not necessarily have a science degree for their IT missions but find those who have the learning agility. The Data News Salaries survey shows that only 6 out of 10 computer scientists today have received formal IT-related training, while others took the path of the informal self-education. The informal training should be recognised, accepted and praised during the hiring procedures.



On average, employees will need 101 days of retraining and upskilling in the period up to 2022. We will all need to become lifelong learners. A comprehensive approach to workforce planning, reskilling and upskilling will be the key for positive, proactive management of (digital) trends.

WHAT WOMEN CAN DO



Women can take **ownership of their careers**. Becoming pioneers, early adopters and change agents, will benefit their careers and the environment in which they operate, as it will affect others.

Women can take **time for learning**. Digital skills and learning should be part of women's development personal plan.

Women can **choose organisations** that can offer them the right environment for learning and for professional growth, as well as those with an inclusive work environment.

Women can **step into digital roles without a formal science degree**. Informal trainings, self-education can bring them valuable new skills needed for the digital roles. Business acumen, project management and teamworking skills can be useful for many roles in tech too.

LEARN MORE

THE FREE RESOURCES OFFERED BY JUMP



SURVEYS

ANALYSE WOMEN, MEN AND CORPORATE PRACTICES ON GENDER EQUALITY



Where do we stanc on sexism 2016 Do Men Want Equality in the Workplace 2015 Women leaders in the workplace 2012

www.jump.eu.com/studies

L'entreprenariat féminin en Belgique 2010

HANDBOOKS & POSTERS

JUMP FREE HANDBOOKS Free your company from sexism How to build an inclusive workplace JUMP FREE POSTER CAMPAIGN TO RAISE AWARENESS AGAINST SEXISM IN THE WORKPLACE



www.jump.eu.com/resources/sexism



www.jump.eu.com/resources/sexism



TOOLBOXES

SELECTION OF USEFUL READINGS ON CRITICAL TOPICS

Flexible and agile workplaces

- Mentoring & Sponsorship
- Assess your diversity programme and measure your level of inclusion
- Managing gender and generations: the end of "careers" as we know them?
- Inclusive leadership: What does it mean in practice?

www.jump.eu.com/resources-toolboxes

JUMP SOLUTIONS FOR EQUALITY AT WORK

UNIQUE SELLING PROPOSITION

Training		Consultancy
Content		Societal Studies
Knowledge plateform		Corporate Surveys
Opinion leader	PER DIVERSITY AND INCLUSION	D&I Network
Community	VERSITY AND INCLUST	Events

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JUM SOLUTIONS FOR EQUALITY AT WORK

In collaboration with Katja Legisa

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JUMP is the leading social enterprise working with organisations for more diversity, gender balance and inclusion to achieve sustainable corporate performance and a more equal society.

JUMP organises leading training events in Brussels, Paris and Lyon on gender equality, inclusion and women's career, as well as consulting and training services to businesses all over Europe seeking gender balance.

Visit our website: www.jump.eu.com



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Our founder Isabella Lenarduzzi is a Ashoka Fellow. Ashoka Fellows are social entrepreneurs who are recognised to have innovative solutions to social problems and the potential to change patterns across society.