



CIONET

# Women in command

CIONET Magazine, October 2019



# Sharing and caring

In a world where IT has become the nervous system of business and society, we believe that CIOs and their teams are the new heroes that drive **change and innovation** in their organisations. That's why we have built CIONET, the leading global community of IT leaders.

It is our mission to provide CIONET members and partners with **the best**

**possible platform** to help them to succeed in realising their ambitions. We do this by understanding the CIOs' needs and by fostering their development and growth.

We believe that **community and collaboration** are the heart of the organisations and society of the future. We are driven by the passion and ambition of our members.

## Contents

### EVENTS

- 4 **The power of predictive analytics**  
Data Science, Machine Learning and Artificial Intelligence leverage automated decision making.
- 7 **Diversity matters**  
Report from the first CIONET Annual Forum on diversity and inclusion in Germany.
- 10 **Female leaders show the way**  
DIY: learning how you can survive as a woman in a tech environment.

### THE NEXT CIO

- 14 **Make STEAM careers attractive for women**  
Why doesn't CIONET have more than 20% female members in any Spanish-speaking country?
- 17 **Look at Asian women!**  
How could we possibly survive in a tech world if we waste half of our workforce?
- 18 **Diversity boosts performance**  
To be successful, digital transformation requires a better talent mix.

- 21 **Introduce AI in a responsible manner**  
We should foster the huge benefits of AI but at the same time prevent malicious utilisation.
- 24 **GUATEMALA IN 5.0**  
CIONET supports the national IT employment initiative in Guatemala.

### CIO VISION

- 26 **Digital transformation is not a buzzword**  
For many years companies have been innovating and transforming to continue to thrive.
- 29 **Wow, a woman boss!**  
Female role models increasingly occupy leadership positions.
- 32 **Get the best of both worlds**  
A good gender balance in management and teams increases performance and innovation.
- 35 **Disruption or destruction?**  
The path to digital goes through analogue: people and lots of sticky notes.
- 36 **Business as usual?**  
Digital transformation has already happened and is now part of daily life.

- 38 **Transparency and trust**  
Absolute trust and full transparency are important principles for building value as a team.
- 40 **Vision of modern leadership**  
Modern leadership makes the team feel they have impact and are creating something valuable.
- 42 **Digital transformation, a must to stay alive**  
Total buy-in from general management is indispensable for the transformation process.
- 44 **Chronicle of a marriage foretold**  
Learnings from a real-life journey through the adoption of artificial intelligence.
- 45 **Reinventing urban mobility**  
Smart mobility fosters more sustainable transport and use of space in cities.

### CIONET PARTNERS

- 47 Have a look at the full list of CIONET's Premium Business Partners and Business Partners.

# Women in command

From Spain to Brazil, from China to the UK, women are seriously outnumbered in technology professions at all levels, increasingly so at C-level and in the board room. In this issue, we invert the dynamic and present a female-empowered magazine with articles from or about women in leading positions in tech.

As Sabine Everaet, CIO EMEA at The Coca-Cola Company and the first CIO to be interviewed in our brand new Leadership Deep Dive series, points out, it is scientifically proven that organisations with a mix of male and female personnel are more profitable and innovative. At the CIONET Annual Forum in Germany, the same conclusion was reached: "More diverse IT teams stand out for their varied and innovative approach. The potential of gender-diverse and inclusive teams outperforms gender-homogeneous and less inclusive teams by an average of 50%."

The use of quota to enforce diversity seems to divide opinion. Mostly it is seen as a necessary, temporary evil. In the meantime, as more women thrive and claim their seat on the board, they are the new role models for the diverse workplaces of the future.

At CIONET, we therefore celebrate initiatives like PrograMaria in Brazil (see p.29), Guatemala 5.0 (see p.24) or Technology wears a skirt in Poland (see p.38) because education is where it all starts. From a young age, we need to make careers in IT more attractive for women, because why would we want to waste half of our workforce? Asia seems to be leading the way, with over 25% women in STEM roles as opposed to 11% in the UK. In any case, a long way to go.

CIONET TV has launched! We are proud to present our Leadership Deep Dive series. Once a week, we will release an exclusive in-depth interview with one of the world's top digital leaders. Learn about their leadership style, their ambitions and experiences, professionally and personally. Find out what drives them and what makes them unique.

All Leadership Deep Dive episodes will be exclusively available on the CIONET app one week before they go public. No need to miss any episode as they will be posted on LinkedIn, YouTube, Facebook and Twitter. You can even listen to the interviews on Spotify or Apple Podcast, while you're stuck in traffic or working out at the gym.

"You need managers who believe in you and let you grow", says Inge Neven, Chief of Staff at imec, and at CIONET we agree. We believe in you, and we're here to help you realise your ambition!

See you next time.

Inès

PS. Don't forget to register for CIONEXT! Our Virtual Conference for Digital Leaders will go live on February 14, 2020. All finalists of the 2020 European CIO of the Year Awards will be featured in in-depth video interviews before the Award winners will be officially announced. Register now on [cionext.com](http://cionext.com).

▼ *Inès de Bien, Business Development Manager of CIONET International*



Data Science, Machine Learning and Artificial Intelligence leverage automated decision making.

# The power of predictive analytics

Last June CIONET Belgium welcomed over 60 digital leaders and business partners at the famous VRT radio and television building in Brussels. They enjoyed splendid keynotes from accomplished experts in exciting technologies such as Artificial Intelligence, Machine Listening, Data Science and Automated Decision Making.



Four experts shared their valuable expertise and insights with the audience. Kris Peeters, CEO and founder of Data Minded, pointed to the importance of making data accessible to the people in the organisation. Open data are a must to empower teams as they enable them to make better decisions.

He referred to the book 'Team of teams' by General Stanley McChrystal. In this book McChrystal explains how a classical leadership approach fails to deal with today's rapidly transforming business environment characterised by a continuous flow of information and the entrepreneurship of the digital generation. 'Team of Teams' provides a framework for leadership which brings the agility of a start-up into organisations of any size. The book is a pragmatic and strong argumentation for a decentralised management approach where teams have easy access to information. Acting like a team of teams means that small groups combine the freedom of experimentation with a natural drive to share their findings. Finally, as analytics is high on the corporate agenda, Kris pointed to the importance of digital feedback loops resulting in optimised operations, improved outcomes and reduced risks of failure.



◀ Eveline Hoekx, Mediahuis

## Digital first

Eveline Hoekx, Product Owner and Team Coach Data Team at Mediahuis, talked about 'A Digital First Data Platform'. Mediahuis is a fast growing publishing company with a 'digital first' strategy. Readers consume the news throughout the day on multiple online devices, such as smartphones, tablets or laptops, as well as on offline

'Open data are a must to empower teams as they enable them to make better decisions.'

printed newspapers and magazines. A big game changer for Mediahuis was to go from being a data-informed company, with hindsight reporting - typically organised per division, a metric-driven approach and scattered analytics to becoming a consumer-centric and data-driven company. This stands for organising data, analytics and models around the consumer, enabling predictive analytics instead of reporting, only having a few KPIs instead of multiple metrics, and using automated decision-making to continuously improve the customer experience

when using digital products.

A digital first, consumer-centric, data-driven strategy requires a new type of data platform that takes into account the behaviour of customers when they use digital content. The platform has a real-time database which feeds a traffic dashboard with real-time insights into the traffic to the digital products. It also has a data lake where the data is combined with the data of offline products to calculate e.g. the churn rate or subscription offers. The platform also enables real-time model calculation, for example content recommendations.

## Machine Listening

Peter Karsmakers, Assistant Professor at KU Leuven, talked about the possibilities and challenges of Machine Listening. Acoustic signals are a rich source of information enabling ample perspective to glean useful insights about a monitoring context. Furthermore, information can be collected at a distance from the acoustic sources without making physical contact. However, although microphones are integrated in all kinds of modern devices, typically for acquiring and analysing speech, their signals are not used to create situational awareness. This provides leverage

for having smart functionality for applications in assistive technologies, context awareness, surveillance, urban planning, predictive maintenance, multimedia information retrieval.

State-of-the-art software uses machine learning and more specifically deep learning to automatically predict the semantics of complex acoustic signals.

While talking about concrete applications of machine listening the current key challenges in the field and future research directions were set. One of the conclusions was that we can safely assume high accuracy in automatic sound scene and event recognition in the near future.

A consumer-centric, data-driven strategy requires a new type of data platform.



▲ Inès de Bien, CIONET

### A memorable visit

Following the presentations, the attendees were invited to a memorable visit of the VRT studios. Finally, the participants had the unique opportunity to take the elevator to the top platform of the impressive VRT broadcasting tower. From there they had breathtaking views over the Brussels skyline and the neighbouring areas. They could even see as far as the St. Rumbold's Cathedral near the CIONET International headquarters in the nearby city of Mechelen.

### AI4Belgium Coalition

Philippe Van Impe, CEO of DigitYser, explained that AI is not a new thing, think of the Turing test in the 1950s. Since the beginning of the present decade there has been a new AI hype boosted by the availability of more data and more computing power. We have been witnessing the emergence of deep learning, machine learning based on artificial neural networks, robotics, natural language processing, the success of AlphaGo, autonomous vehicles and weapons, etc. But we should not have unrealistic expectations which could ultimately lead to cuts in funding and a new 'AI winter' as we have already witnessed twice in previous decades.

It is obvious that digital leaders and their teams have to keep a close watch on these evolutions and keep their knowledge of AI and data science up to date. Events such as AI Meetups, Hackatons, Kaggle days, (Kaggle is an online community of data scientists and machine learners, owned by Google) offer the opportunity to exchange ideas and increase knowledge and experiences. Philippe Van Impe is actively involved in this domain and can help you to find the right projects. He is the CEO and Founder of DigitYser.org,

'Don't have unrealistic expectations about AI as they could ultimately lead to cuts in funding.'

the digital flagship of Brussels where communities gather to learn, co-create and implement digital solutions focusing on Blockchain, AI, IOT & VR. He is also a Founding Partner of the AI & Data Science Community, and the Founder of the European Data Innovation Hub.

What's more, Philippe contributes to the AI4Belgium Coalition by organising:

- the AI-Awards to find the best AI projects and most promising AI start-ups in Belgium,
- the diSummit, the annual conference of the AI & Data Science Community,
- the book 'AI in Belgium', an overview of practical AI projects implemented in Belgium.

Call for action: Philippe invites companies to cooperate more in the development of practical AI solutions and support them financially or in other ways.

Contact: [Philippe@digityser.org](mailto:Philippe@digityser.org)

Report from the first CIONET Annual Forum on diversity and inclusion in Germany

# Diversity matters

The first Annual Forum 'Diversity matters' was organised in July 2019 by CIONET Germany together with Microsoft Germany and supported by auticon GmbH and CIONET Germany's Business Partner PwC Germany. Anna Kopp, CIO and Tiffany Allen, Diversity and Inclusion Lead - both from Microsoft Germany - and Tobias Frydman, Founder and Managing Director of CIONET Germany, were passionate about developing this new event formula, in which they not only wanted to highlight gender-specific challenges, but also wanted to show how people with disabilities and others who are considered to be different or outside the 'norm' can contribute with their special skills and abilities.



▲ Anna Kopp, CIO at Microsoft Germany



▲ Tiffany Allen, Diversity and Inclusion Lead at Microsoft Germany

One of the highlights of the Annual Forum in Munich at the Microsoft Germany Headquarters was the Q&A session with an autistic consultant from auticon, who impressively described how his style of working differs and what he needs to excel in his tasks. It was really an exceptional experience and eye-opener to many of the attendees who had heard of but never met an autistic person. A phrase which describes very well the difference between an autistic and a non-autistic person is: "Autistic people just have a different operating system". The session left nobody unimpressed and made the participants think about how a diverse team can be so much more than just a group of different people. A key learning about 'inclusion' in general was that in a broader view 'disabilities' may well be considered

as skills as, for instance, only a blind person would be able to really test user interfaces designed for blind users. Another key learning was that digital technologies, as shown by Microsoft, can open a world for many disabled persons, allowing them to contribute and engage both in their private and work life.

In another presentation, a female partner of a consulting firm very candidly described her experiences and challenges in a male-dominated world - not just in her working environment. For many male attendees in the audience in particular, this was really something which they had never encountered themselves.

### Female panel

At the end of the first 'Diversity matters' Forum, there was a very impressive panel discussion with five female German Digital Leaders, led by Anna Kopp, CIO of Microsoft and co-host of the event, with Hanna Hennig, CIO of Osram; Vera Schneevoigt, CDO of Bosch Security and Safety Systems; Kathrin Braunwarth, Head of Infrastructure Operations at VKBit Betrieb; and Johanna Laurer, CIO of



▲ At the end of the first 'Diversity matters' Forum, there was a very impressive panel discussion with five female German Digital Leaders. From left to right: Kathrin Braunwarth (VKBit Betrieb), Vera Schneevoigt (Bosch Security and Safety Systems), Anna Kopp (Microsoft Germany), Johanna Laurer (Siemens Gas and Power) and Hanna Hennig (Osram)

Siemens Gas and Power. All five female CIOs gave us valuable personal real-life insights into the special challenges of being a female (technology) leader in various businesses and working cultures. Unfortunately there was one common denominator which was that females always had to go the extra mile before being treated equally to their male peers. Each of the female CIOs had encountered situations, which made the male audience at the Annual Forum aware of how much more women have to fight to get equal chances to advance their careers. But at the same time they also sent out a very positive message, because they were all five excellent role models of what females can achieve if they persist in overcoming all the extra hurdles. The audience was impressed by the frankness of the female CIOs who, together with panel moderator

'The examples of female role models are a manifesto for not giving up and daring to challenge the status quo.'

Anna Kopp, shared their, sometimes unbelievable, experiences on their journey to become an IT leader. And while their experiences unfortunately bore witness to a reality which is still very much dominated by male prejudices, their testimonies were also a manifesto for not giving up and daring to challenge the status quo. One of the panel's female leaders was a very special role model. She explained that she went for an IT leadership role while her child was still very young, which a lot of people (not only in her working environment) considered as 'not the done thing'.

We have to get away from labeling people and see them for what they are: individuals.



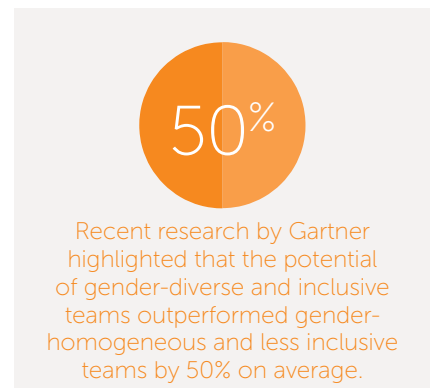
And she impressively described how she managed her career even while having a second child. Maintaining your ambition, while the outside world is telling you that it's not possible – that is a common experience many female (IT) leaders very often have to go through and shows how

much more extra determination and tenacity they have to come with compared to their male peers. One of the major recommendations of the panelists was that - for female employees - it is of great importance that their leaders not only have but also express their trust in their abilities and that their management is supportive when female employees aspire to leadership roles - equally as they do for male employees. While many of the shared experiences of the female speakers at the event made the attendees shake their heads in disbelief, the reactions of the male CIOs in the audience gave a strong positive sign. They expressed their support to create more diverse teams and were happy that a slowly but constantly growing number of women leave their footprint on the German CIO community.

More diverse IT teams stand out through the power of their diverse and innovative approach.



▲ The first Annual Forum 'Diversity matters' highlighted not only the challenges of female leaders, but also those of others who are considered to be outside the 'norm'.



### Recurring topic

Given the tremendous insights and experiences that were shared at the first annual 'Diversity matters' Forum this summer, CIONET Germany plans to make it an annually recurring event. It was and is important to CIONET that, when we talk about diversity, it is not only about female leaders or people with disabilities, but also about the need to accept and appreciate the tremendous positive power of each individual person. CIONET's goal is to encourage CIOs to shape a strategy on how to create more diverse IT teams, as they will be able to deliver outstanding results through the power of their diverse thinking and innovative approach. Research by Gartner recently highlighted the potential of gender-diverse and inclusive teams, which outperformed gender-homogeneous and less inclusive teams by 50% on average. Taking all this into consideration, we can conclude that diversity is much more than a buzzword. We have to get away from labeling people and see them for what they are: individuals. Diversity matters to all of us!



DIY: learning how you can survive as a woman in a tech environment.

# Female leaders show the way

Last June, in collaboration with CIONET, Exellys organised its first 'Women in Tech' event and invited four top leading ladies to have a round-table session. Jocelyn Darbroudi, CIO at DKV Belgium; Caroline Van Rompuy, CIO at Agfa; Vicky Buyse, CFO at Exellys; and Annemie Depuydt, Director at ICTS KU Leuven, took the time to share their experiences and stories on leadership, career progress and gender equality.



Unfortunately, I cannot hand you a guide that says how to become CIO of a major firm. It's not that simple. If it were, then I wouldn't be sitting at my desk writing this article, but I would be on a plane to Abu Dhabi as a CIO of a multinational company - #sorrynotsorry. However, based on the insights of these power women, I can and will - you're welcome! - give you some tips and tricks on how to handle yourself as a woman as you pursue your career in tech. Here we go!

## Stay a woman

The tech sector is, sad but true, still a predominantly male sector. Because the few women that work in tech are mainly surrounded by men, they sometimes have the tendency to act 'more male' or 'man up'. When they do so, they will mirror the behaviour of the men at the office because they think that's the way to get accepted by their male environment. Don't you ever do that! You should always stay yourself, stay a woman. Everyone has their own qualities and it's the mix of these qualities and this diversity that makes a perfect match. We have to stop seeing sex and gender as binary. Researchers have

affirmed that not only gender but sex as well sits on a spectrum. In the end, it shouldn't even matter whether you are a man, a woman or whatever you want. You use your brain to say something, not your sex. The ultimate goal? Everyone should talk about leaders, not female or male leaders. Just leaders.

### Stop the self-censorship

Ladies, we are in big trouble! The biggest problem women have is self-censorship. We don't always say what we think or feel. Women are often too controlled in what they say, they overthink too much. This can block yourself and your career. We don't always dare to say something, because we don't feel entitled to or are even afraid to. If you take this self-censorship too far, you may be faced with the impostor syndrome. If you suffer from this syndrome, you underestimate your own performance and qualities and have the idea that you've only accomplished something due to luck. Recognise this? Be conscious of this impostor



▲ From left to right: Jocelyn Darbroudi, CIO at DKV Belgium, Caroline Van Rompuy, CIO at Agfa, Vicky Buyse, CFO at Exellys, and Annemie Depuydt, Director at ICTS KU Leuven

syndrome and do something about it! Don't let your doubts control your actions. Accept your qualities, but your flaws as well. Dare to speak up and don't consider yourself less than anyone else. It's all in your head, you just need to get rid of it!

### Make mistakes

Everyone makes mistakes, no matter on which level you work. This doesn't change over the years, experience has nothing to do with it. It's all about the learning process. If you want to learn something, you'll have to try it and see where it gets you. Mistakes are very important in growth. If you are afraid to make mistakes, you won't get anywhere. Dare to fall and if

'Everyone should talk about leaders, not female or male leaders. Just leaders.'

If you take the self-censorship too far, you may be faced with the impostor syndrome.

it hurts, you will learn. Try not to take it personally when someone points out your mistake but rationalise and analyse what went wrong instead. Do you get emotional when you feel like you've messed up? Don't feel ashamed to show emotions, just remove yourself from the situation. Not everyone can handle emotions in a business context, so some people might respond poorly with 'don't get emotional'. When this happens, don't let your head down, go away from the situation by taking a break or using humour. It requires some practice but the more mistakes you make, the better you can cope with them.

'If you don't get chances to grow, it's time to go.'

### Invite yourself to the table

Opportunities don't come along that often. But if they do, you'll have to be ready to grab them. Don't just sit by and allow opportunities to pass

by. Don't let life happen to you, take control and speak up. There's no point in waiting for the invitation, create opportunities by inviting yourself to the table. Dare to express your opinion and ideas. Once you've done that, you will feel empowered!

### Fuck the quota (but not just yet)

30 years ago, when a woman got a higher position, people asked: "Who did she sleep with?". Maybe it happened, maybe it didn't. We're not here to judge, but you don't want this way of thinking. We all want to be measured equally, but we're not there yet. At this moment, women still need quota to be considered for a high-level position. Although quota should disappear in the end, for now it's necessary. It can accelerate the process of considering women

for higher positions in general. The more females we see on the board, the more this can be an example to younger females to feel empowered and motivated to get out of their comfort zone and take the leap.

### Find the right company

All the above steps may be useful, but only in the right company. You can sit at the table as much as you like, but if your boss doesn't want to listen, it's game over. If you don't get chances to grow, it's time to go. Make sure that everything you do is driven by passion and motivation and have a good attitude. If this is not noticed by your boss, you are better off somewhere else.

■ This article was written by Krizia Bedeer, Brand Experience Marketeer at Exellys.



▲ From left to right: Caroline Van Rompuy, CIO at Agfa, and Jocelyn Darbroudi, CIO at DKV Belgium



*Securing  
Amy and Kate's office that isn't  
an office.*

*Unisys enables the workplace of tomorrow with the productivity and support tools that allow people to work and collaborate anywhere, securely. Which means out of the office Fridays aren't just a dream anymore.*

*Find out more at [Unisys.com/DigitalWorker](https://www.unisys.com/DigitalWorker).*

Why doesn't CIONET have more than 20% female members in any Spanish-speaking country?

# Make STEAM careers attractive for women

Three years ago, at a meeting of CIOs of major Spanish companies, we were putting together working groups on innovation and digitisation when we suddenly realised that the presence of women in these areas was less than 10%... and we were talking about the future of technology.

Faced with this reality, we decided to launch a working group of specialists, men and women, with the aim of understanding and increasing the representation of women in STEAM (Science, Technology, Engineering, Arts and Mathematics) areas, particularly in technology. The goal was to make STEAM careers attractive for women.

I have the pleasure and the fortune of representing this working group that started its journey with bleak data. Statistics come in handy here and, to mention only one number, when we started our project, only 18% of the technology professionals in Spain were women. Despite outnumbering men in universities, where 54% of the students are women, only 25% of engineering students are women.

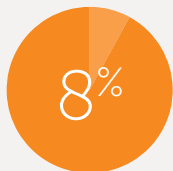
## The causes

When we looked at the causes of female under-representation in STEAM careers, we found out that at the age of 15, already 23% of the boys intend to study technology, compared to only 8% of the girls. From there to the university, the gap only grows bigger. In 2015, research by the ITA (Information Technology Association), including an opinion poll for the factors behind the low female presence in technology, found the following causes:

- Lack of role models in schools and universities:

There are no known women who have made a substantial contribution in these areas of knowledge. Women are not visible, students do not know them, and girls and young women are not encouraged to develop these areas of knowledge. The contribution of women, such as the mathematicians Ada Byron, Hedy Lamarr, Josephine Garis Cochrane and Mary Anderson, as well as others who are playing a significant role in today's society, such as Sheryl Sandberg, Susan Wojcicki or Pilar Machón, is largely ignored;

- Male image, male profession:  
This cause is closely related to the previous one. If all people who are dedicated to STEAM are men, there is a problem;
- Geeky image:  
STEAM professions have a geeky image that fails to appeal to female talent. This hurdle is easy to tackle if the various institutions involved in STEAM-related career paths avoid this stereotype;
- Poorly explained profession:  
The role of people who have a technology-related profession is not really well known. We need to explain how they contribute to



At the age of 15, already 23% of the boys intend to study technology, compared to only 8% of the girls. From there to the university, the gap only grows bigger.

‘The diversity of mixed teams enhances wealth, innovation and good results.’

society, how technology helps improve the quality of life of citizens, etc.;

- Glass ceiling:  
There is a perception that companies do not really value the contribution of women in STEAM areas, which would suggest the existence of glass ceilings - one more factor dissuading women from entering STEAM professions;
- Difficult work-family reconciliation:  
Both men and women agree on the difficulties of balancing family and work life, but women in particular have the greatest difficulty. According to the data, 70% of men and 82% of women consider that STEAM professions make the reconciliation difficult. And yet a good balance between family and work life is highly valued by young people. Companies and governments should encourage it as the only way forward in a pluralistic, diverse society.



▲ Idoya Maguregui: “We have to provide the means and the information so that our girls can participate and flourish in the future.”

‘Girls should know the STEAM professions and what they can achieve in these fields.’

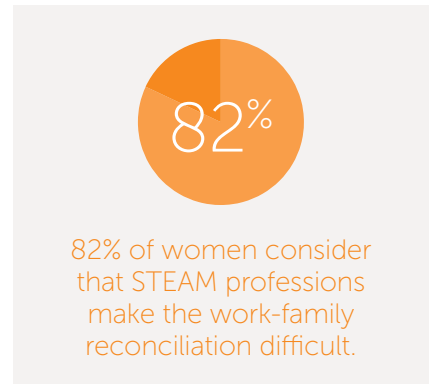
### Recruiting for diversity

A very important aspect that has given us the strength to continue with this project is that companies are increasingly recruiting for diversity, building mixed teams of men and women, and integrating cultures, ages and genders. This diversity enhances wealth, innovation and good results.

We believe it is useful to mentor girls before they choose their university degree, before they decide whether to finish their high school with a science, technology, humanities or arts focus. Girls should know the STEAM professions, what they can achieve in these fields, become aware that they are part of the society of the future and that they have to take part in this future.

The ‘Inspira STEAM’ project, led by the University of Deusto and implemented across Spain, is communicating via mentoring programs to girls, and now also to boys from the age of 11 years, that the reason for the difference in the number of women and men in STEAM areas is not related to ability, but to multiple factors, such as stereotypes, self-perception, the environment, social perception and ignorance.

The Inspira project brings female professionals working in the science and technology sector in touch



with girls, thus creating a bond between girls and mentors. Some men have also joined the initiative and are mentoring boys in the idea of mixed-gender teams.

This project is so exciting that the number of mentors is doubling year after year, with a very positive response from schools. We, STEAM professionals, are convinced of the importance of increasing the female presence in companies. We want our daughters and sons to understand this concept. We believe it is the responsibility of businesses, institutions, universities, colleges, families and the civil society at large to provide the means and the information so that our girls can participate and flourish in the future.

■ *This article was written by Idoya Maguregui, Deputy General Director for People and Resources at Sareb, and President of the CIONET Spain Advisory Board.*

The reason for the difference in the number of women and men in STEAM areas is not related to ability.



How could we possibly survive in a tech world if we waste half of our workforce?

# Look at Asian women!

According to the World Economic Forum, by 2030 around 70% of tasks will be replaced by technology. At the same time, females in STEM roles are a minority, both on the C-level and lower echelons. But how could we possibly survive in a tech-dominated world if we waste half of our workforce?

Dr. Bijna K. Dasani, FRSA, emphasises “The future of jobs is technological and we need more women to achieve diversity of thought. Asian countries show us the way to go with a rapid increase of women in STEM roles – at the moment females already occupy 25% of them. Over recent decades,

## More digital literacy

Asian countries also take the lead in digital literacy. In China, widespread apps such as WeChat and Alipay foster a cashless society. We see similar technologies emerging in India with, for example, an app to pay for fuel using a barcode and other apps for mobile payments. One could say that – at least in the developed part of the Indian society – there is more digital literacy than in developed Western countries.

both in China and India females have been actively encouraged by governments to become savvy and to choose for tech and scientific careers. This share is considerably lower in developed Western economies such as the UK where only 11% of STEM positions are occupied by women.”

“Indian families strongly believe in education and the Indian society is celebrating female engineers and women in other STEM roles”, Bijna continues. “In India companies and organisations show a better understanding of female needs, such as flexibility in favour of the employee. Furthermore, Indian women are more driven and more confident to step into the boardroom arguing that they represent half of the workforce.”

“Unlike the West, the Indian economy doesn’t suffer from a long male-dominated tradition. We can expect that achieving a better gender balance will take more time in Western economies.”

## More leadership skills

According to Harvard Business Review, recent research revealed that women score higher than men in most leadership skills. Bijna: “The researchers found that female leaders show more resilience, integrity, honesty and a greater willingness to develop themselves. When, for instance, a man matches with two or three out of the five criteria of a job description he will go for it thinking he will learn the other things on the job. Women have a less direct approach and will first choose for further self-development until they meet 90% of the criteria.”

“The authors also explain how unconscious bias plays a significant role in hiring and promotion decisions, which contributes to the lower number of women in key positions”, adds Bijna.



▲ Dr. Bijna K. Dasani, FRSA, has a robust track record in global Banking and Financial Services. She serves the Boards of FinTech Connect, CIONET, IPQC CDO Exchange, and the Inclusive Companies Network. She has received numerous national and international Honours and Awards.

To be successful, digital transformation requires a better talent mix.

# Diversity boosts performance

Digital transformation is being led from most boardrooms by a fairly homogeneous board made up of men with the same cultural background. You usually have to use a torch to look for women, young people, people with different cultural backgrounds and people with a technical background.

How does the lack of diversity affect decision-making on the digital transformation? How come women, for example, have difficulty in finding their way into the boardroom? How important is it to bring more technical knowledge into the boardroom? And can the digital transformation succeed if there is not enough diversity and IT knowledge in the boardroom? Artie Debidien, CIO, Managing Director, IT & Operations Director and member of advisory boards, and Antje Kuilboer-Noorman, Supervisory Director, Director, entrepreneur, lawyer, economist and acting Head of Legal Affairs at the University of Amsterdam, two women who have reached the top, explain their vision of the importance of diversity and IT knowledge for decision-making on the digital transformation.

## Digital world

Debidien and Kuilboer-Noorman agree that IT knowledge is important. "The whole world is digital. That greatly

influences the way we organise contacts with customers, for example", says Debidien. "To innovate, you must not only carry out the paper process digitally from now on. The customer simply expects an organisation to do things differently compared with the past." Debidien emphasises that the digital transformation involves more than digitisation. "The whole world is changing. As a company, you must make sure that your business strategy is aligned with the changes."

To make good decisions about digital transformation, there needs to be sufficient knowledge of IT. According to Kuilboer-Noorman, this does not necessarily mean that all board members must have an IT background. "I don't have a background in IT, but I have always familiarised myself with the subject. As a result, I have sufficient understanding of IT to be able to join in the discussion about it."

Debidien, who does have a background in IT, concurs and adds: "Knowledge of IT is very important. Although it's obviously not necessary for everyone in the boardroom to have a technical background, it would be good for the CIO to have a place on the board. The CIO brings to the table some very essential knowledge to improve strategy and operations proactively."

Kuilboer-Noorman regards IT knowledge as pivotal to being able to ask the right questions. "Sometimes I see that a board does not possess sufficient



▲ Artie Debidien

knowledge. You notice that because the right questions are not being asked. That knowledge is really required in order to get good, organised counter-arguments. What you see is that organisations sometimes simply can't cope with certain processes." In addition to knowledge, Debidien considers an open mindset particularly important. "To be able to make sound decisions about digital transformation, you must be open to the changing world and be able to interact with it creatively. Proactive CIOs make an impact on both sides of the balance sheet: reliable and streamlined operations on one side so as to lower the revenue-cost ratio, but digitisation and new business for top line growth on

'On boards where there is more diversity, people look at things with a far broader perspective.'

the other side. Board and business can still grow in absorption and adoptive capability when it comes to innovation and growth by using technology. Organisations that recognise the importance of technology to their corporate strategy tend to position CIOs at board level."

### Short term

Kuilboer-Noorman is not surprised that many boards are composed homogeneously. "It's just easier in the short term. It's easier to reach a decision with a group of people who are alike in terms of background and age. It has advantages at times of crisis and acute pressure."

But she notes that, in the long term, a homogeneous board does not deliver the best results. "On boards where there is a representation of young and old men and women from different backgrounds, you see that people look at things with a far broader perspective. That's essential for creating value."

Kuilboer-Noorman: "The advantage of young people is that they can look at things without baggage. A fresh way at looking at things is very valuable. What's more, young people have far greater knowledge of the new ways of working and organising, and that too

is very valuable knowledge."

Debidien would also like to see boards with a more diverse composition.

"I see no reason why young lateral thinkers should not join a board. Not enough attention is being devoted to people's potential. If boards are receptive to active creation, collaboration, challenge and coaching, they will automatically select people with diverse and complementary profiles. This works, and there are already some good examples. Entrepreneurial CEO's, such as Marco Keim, Frans van Houten and Tex Gunning choose women as CIO."

Debidien observes that change and entrepreneurship are important for a company to stay relevant. "In practice,

Perhaps a temporary quota might be a good way to getting more women on the boards.



The Social and Economic Council of the Netherlands ('SER') states that there should be a female quota for listed companies, so that in due course women will account for 50 percent of board members.

you see that entrepreneurial personalities are not considered for management board positions. Most directors have a behavioural style that leans towards maintaining stability and avoiding risks. It hinders innovation, digital transformation and experimenting with new business models."

### More women on the board

The discussion about women in supervisory boards recently flared up again in the media. The Social and Economic Council of the Netherlands ('SER') now states that there should be a female quota for listed companies, so that in due course women will account for 50 percent of board members. The SER further wants the largest companies in the Netherlands

to start working actively on getting more women and people from different backgrounds higher up in their organisations.

Debidien and Kuilboer-Noorman both used to oppose a female quota, but they have changed their minds. Debidien: "I am a woman with an ethnic background and self-made, so I always thought that if I can get this far, anyone can do it! Unfortunately, in reality it's not that simple. That's why I think a temporary quota would be a good way of turning the tide. My estimation is that the first women or CIOs in the boardroom will exhibit many similarities with the current profiles in the boards. This will clear the way for authentic, complementary professionals." Kuilboer-Noorman agrees that things are moving too slowly. "Apparently, there is not enough pressure on companies. In the past year, men again accounted almost exclusively for all appointments at listed companies. The time has come to stop talking about it and to simply get on with it."

### In action

Besides a female quota, they say it's time for women to take action themselves. Kuilboer-Noorman: "Make yourself available for a board.



▲ Antje Kuilboer-Noorman

Lots of people are wanted. It does not immediately have to be at a listed company. Consider joining the board of a school or a housing association, for example." She sees her own management experience as an enrichment of her personal development. "You learn to reflect more, to oversee, to ask questions and to look critically at an organisation and at yourself."

■ This article was written by Maaïke Verschuren, Tech Editor.

Do you want to learn more about boardroom dynamics and how to talk to a board as a digital leader? Register for the Dutch CIONET Masterclass 'CIO as a board member' ('Leergang CIO als Commissaris') by sending an email to: [marita@cionet.com](mailto:marita@cionet.com).

'The time has come for women to start taking action themselves.'

We should foster the huge benefits of AI but at the same time prevent malicious utilisation.

# Introduce AI in a responsible manner

Artificial Intelligence is the 4<sup>th</sup> Industrial Revolution, the new electricity, the new hype. AI will have a strong impact on our lives. Actually, AI is already all around us, as with electricity, we use it every day without even noticing it. Every time we use Google Maps or Waze to find directions, we listen to music on Spotify, we watch TV on Netflix, we interact with a customer service through an automatic response system, we use AI and we feed the algorithms with new data, our data.

Like most technologies AI has a dual quality: there are impressive benefits that are brought into our lives, but there are also some threats and risks that need to be addressed to avoid malicious usage. As most people don't know what AI is and don't know how it will impact our daily lives, the 'fear of the unknown' starts spreading and people start focusing on the threats and fears regarding AI. Governments, policy makers, companies and experts have a social responsibility to bring AI into our society in a responsible way, to make sure that everybody will benefit from the enormous opportunity and to prevent malicious utilisation.

'Europe doesn't capitalise enough on the results of its excellence in research.'

## Europe is lagging behind

If we compare the development of AI in Europe with that of the United States and China we see that Europe is lagging behind in several AI areas, such as venture capital investments in AI, the number of AI start-ups, AI education in schools and universities, the number of AI conferences and participants, the adoption of AI by companies, ... On the other hand, Europe is the largest publisher of academic papers on AI, which means that European AI researchers are among the best in the world. Furthermore, Europe has a strong industrial base, producing more than a quarter of the world's industrial and professional service robots (e.g. for precision farming, security, health, logistics) and is leading in manufacturing, healthcare, transport and space technologies, all of which increasingly rely on AI. But AI initiatives remain fragmented and the low investments in research



▲ Emanuela Girardi: "Europe still has a good chance of becoming a global leader in AI, by proposing the European model of a human-centric trustworthy AI."

AI will improve the quality of life of people in Europe and throughout the entire planet.

by European governments and private companies don't enable to capitalise on the results of the excellence in research and transfer them into the European industry and society.

### European AI initiatives

To solve this situation, EU member states signed the Declaration of Cooperation on AI in April 2018, where they agreed to work together to develop a European AI ecosystem, and the European Commission published a European AI strategy, the Communication on AI, with three main objectives:

- Boost the EU's research investments, fostering collaboration between academia and industry in Europe and transferring the benefits of AI technology to the whole of society;
- Prepare for sociology-economic changes, with a human-centric approach;
- Build an ethical and legal framework based on the Union's values

and in line with the Charter of Fundamental Rights of the EU.

The EU Commission appointed an independent AI high-level expert group with the task of developing an appropriate framework for a European human-centric AI. The group proposed the concept of 'Trustworthy AI': people and societies must gain trust in the technology to accept it and use it. Trustworthy AI should be lawful, ethical and robust. Through Trustworthy AI, Europe aims to become the home and leader of ethical technology aligned with our foundational values of respect for human rights, democracy and the rule of law.

AI is a global game changer. If Europe were to fall behind in AI technology, we would likely face challenging economic consequences, academic brain drains, reduced transparency and increasing dependency on foreign technologies, products and values. To avoid this, the European AI community united to develop CLAIRE: a pan-European Confederation of Laboratories for Artificial Intelligence Research in Europe, an initiative for AI similar to CERN. The CLAIRE initiative aims to strengthen European excellence in AI research and innovation with a human-centred approach that augments human intelligence rather than replacing it and applying the Trustworthy AI guidelines. The CLAIRE network today consists of 321 AI associations and institutes with over 19,000 employees in 34 countries and 3,177 individual supporters who signed CLAIRE's vision for a European

AI. Moreover, the CLAIRE initiative already received the support of 8 European governments.

Furthermore, the new President of the European Commission Ursula von der Leyen declared AI a top priority on her agenda and the Digital Europe Programme has allocated €2.5 billion between 2021 and 2027 for developing AI and making sure that all Europeans will have the skills and the infrastructure needed to meet a full range of digital challenges.

Considering all these initiatives, Europe still has a good chance of becoming a global leader in AI, by proposing the European model of a human-centric trustworthy AI.

### Main risks of AI

Europe is on the right track to develop safe AI for its citizens, but there are some contemporary risks - related to the creation of fake content and the utilisation of our personal data - that need to be addressed urgently.

AI technologies allow for the creation of fake videos or audio recordings that look and sound as if they were real. These are deepfakes: a forgery created by a neural network that analyses video footage until it is able algorithmically, e.g., to transpose the skin of one human face onto the movements of another (as if applying a latex mask). So far, deepfakes have been limited to hobbyists. However, it would be just as easy to create a deepfake of an emergency alert, or influence a closely contested election by publishing a fake video or audio recording of a candidate.

Imagine combining the alleged wrongdoings of Cambridge Analytica with malicious usage of deep fakes. Cambridge Analytica used personal data collected from the social networks to microtarget individuals with personalised news and content that confirmed their biases and fears in order to influence their voting-behaviour. That practice would become even more effective. In Europe, personal data is well protected by the GDPR but almost everybody, when using social networks, surfing on internet or using an app, gives his/her data away for free, accepting the privacy policies - mostly without reading. Misusage of AI can be very dangerous for the freedom of information, and for the future of our democracies.



## ‘European governments must define a legal and ethical framework to control AI risks and exploit its huge opportunities.’

European governments must regulate the development of these technologies and protect us from these threats.

### Positive impacts of AI

Besides the risks related to the unethical use of AI, there are several positive opportunities that AI brings into our society.

The development of new drugs typically cost billions of dollars and takes many years to complete. Machine learning and other AI technologies are expected to make the drug discovery process quicker, cheaper and more effective. Last December the latest neural-network algorithms of DeepMind, already world famous for beating the Go champion with AlphaGo, entered the drug discovery race and beat highly specialised biologists in predicting the shapes of proteins, the basic building blocks of disease.

Also in the health industry, AI can help to increase the inclusiveness of people with disabilities. Disabilities can be related to vision, hearing, mental health, learning, cognition, or mobility. AI technologies are helping to solve general accessibility, transportation and communication problems and enabling more people to live independently. Speech-to-text services and virtual assistants can help people with visual and hearing impairments

to improve communication. When self-driving cars become widely available, it will enable people with disabilities to go independently anywhere they want to.

AI can also help to tackle climate change, but technology alone is not enough - political will is needed. AI could be used to support governments in developing and monitoring sustainable policies, such as building flexible and autonomous electric grids, monitoring agricultural emissions and deforestation, predicting extreme weather events, ...

### Tremendous potential

AI has a tremendous potential to improve society, but European governments must define a legal and ethical framework to control AI risks and to exploit its huge opportunities. As an AI expert, I do feel a social responsibility in contributing to the development of a European AI that will improve the quality of life of people in Europe and throughout the entire planet. Let's build the CERN for AI.

■ *This article was written by Emanuela Girardi, Founder of Pop Ai and AI Expert at the Italian Government.*

CIONET supports the national IT employment initiative in Guatemala.

# GUATEMALA IN 5.0

On October 18<sup>th</sup>, 2019 in Guatemala City, a collaboration alliance was signed between CIONET and the 'GUATEMALA IN 5.0' initiative. Its objective is to promote the creation of 500,000 jobs in Information Technology IT over the next 30 years.

Guatemala has a population of almost 17 million. 23.36% are living in an extreme poverty situation - they survive with less than one dollar per day. 35.93% of Guatemalans are in a poverty situation. The illiteracy rate is more than 20% of the population (Source: Banco de Guatemala for the year 2018).

The lack of employment makes it very difficult for a family in this situation to bring even the basic livelihood to their home. This is causing massive emigrations where many times people put their lives in danger and thousands are deported every year. For example, in

2018, more than 92.524 Guatemalans were deported trying to change country, seeking an improvement for their future. (Source: General Directorate of Migration of Guatemala).

Within the context of this scenario GUATEMALA IN 5.0 emerged. Its objective is to promote the creation of 500,000 jobs in Information Technology over the next 30 years, generating 80% of them in the countryside (Quetzaltenango, Huehuetenango, San Marcos, Rehutaleu, etc.), where labor shortages are much more severe than in the capital Guatemala City.

## National initiative

GUATEMALA IN 5.0 is a national initiative that involves the entire country, including the government and local authorities, associations and institutions, universities, training centers and companies. This is inspired by the model and effort that India adopted for several decades to become a relevant place in the current globalization scene in the software area. GUATEMALA IN 5.0 has the support of AGEXPORT (Association of Exporting Companies of Guatemala) and those companies that are associated to the AGEXPORT technological area SOFEX, where more than 1,300 IT Engineers are working on software development, engineering and quality assurance projects for Banking and Insurance, Industry and Utilities, Telecommunications and Government, in several full-stack technology areas (Java, JavaScript, .Net, C#, C++, PHP, Oracle, Natural/Adabas, iOS, Android, etc.), and in areas such as Big Data, Blockchain, Artificial Intelligence, Cybersecurity, E-commerce, BPM, CRM, ERP, etc. More than 100 million dollars are already being exported annually to countries such as the USA, Mexico, etc, of which 38 million are made by projects of AGEXPORT member companies. (Source: Banco de Guatemala for the year 2018).

To increase the number of qualified programmers and IT engineers in the country, with skills in digital talent, according to the objective of



Photo: David Rojas Fotografía Guatemala





▲ Gaby Soberanis, Member of the Advisory Board at GUATEMALA IN 5.0



▲ Fanny Estrada, Institutional Relations Manager at AGEXPORT



▲ Alma Cottom, Project Director in Salcajá at GUATEMALA IN 5.0

GUATEMALA IN 5.0, five intensive training centers called Job Training Developer will be opened in five departments of the country.

In these five Job Training Developer centers, professional job practices will be taught via a tutoring process in IT and software development through incremental training cycles. The plan is oriented towards training and creating skills for people who lack job opportunities, in order to prepare them to start their careers as a software developer, quality assurance specialist or other IT-related jobs.

### First Job Academy

A first Job Academy has already been opened in the Salcajá municipality (Quetzaltenango) with 43 people in different labor situations: unemployed computer engineers, computer science students who have not yet completed the university and, on the other hand, also people without any computer science knowledge (university or other high school studies) who can't get a job and want to orient their professional career towards the world of technology. It is planned to admit in the future young people in homeless situations, who will follow a special program to help them. GUATEMALA IN 5.0 has chosen the Salcajá municipality to open their Operations Center for the western side of the country. An alliance was made with the local authorities, who

**'GUATEMALA IN 5.0 is inspired by the model that India adopted.'**

are offering all their support. This center's capacity will expand gradually to reach 200 participants in training. CIONET is very sensitized by what the GUATEMALA IN 5.0 initiative is bringing and has the desire and motivation to make its contribution to help this beautiful country, Guatemala, which, with enthusiasm, hope and effort, wants to move forward by creating job opportunities for its people. CIONET, within its Corporate Social Responsibility program, wishes to sponsor GUATEMALA IN 5.0. Therefore, CIONET wishes to make this alliance known to all CIOs and Digital Leaders in their community, so that they can consider this initiative, in their needs for IT outsourcing or other software development projects. We can help in many ways, but we think that for this kind of situation, offering a job opportunity is much more valuable than financial aid.

### Offshore services offering

GUATEMALA IN 5.0 offers different models of collaboration, highlighting offshore services such as Functional Increase and Corrective Maintenance of Software, Quality Assurance Services, Software Factory, Outsourcing on a day-wage basis,

Web, Mobile and console Application Development, etc.

This initiative also guarantees the implementation of quality methodologies and standards used in Europe - requirements engineering practices, commitments, deadlines, etc. - as the Spanish company SIGEL Servicios Tecnológicos is located in Guatemala. This company has been working as Software Factory for more than 5 years in Guatemala and can manage and perform the Nearshore strategy in each country.

■ For more information and possible collaboration, please contact Mr. Miguel Ángel Fernández by email: [miguelangel.fernandez@cionet.com](mailto:miguelangel.fernandez@cionet.com)

### More information

GUATEMALA IN 5.0:  
[www.guate5.com](http://www.guate5.com)

AGEXPORT:  
[www.agexport.org.gt](http://www.agexport.org.gt)

Meet Guatemala:  
[www.visitguatemala.com](http://www.visitguatemala.com)

Bank of Guatemala:  
[www.banguat.gob.gt](http://www.banguat.gob.gt)



For many years companies have been innovating and transforming to continue to thrive.

# Digital transformation is not a buzzword

Claudia Alvarez Henríquez, CIO of Toyota Chile (Mitsui&Co Group) has led and was involved in major innovative and transformational changes. In her eyes digital transformation is not just a buzzword but a critical journey companies must go through in order to adapt to our fast-changing world and continue to thrive.

*What does your company's IT budget look like?*

**Claudia Alvarez Henríquez:** "In general, it's distributed between investments (30%) and costs (70%), but this depends on planned projects and the technology investment strategy. The biggest costs are related to maintaining services, support and software licenses. The highest investment is currently in the sales, marketing and aftersales areas as we are implementing a new SAP platform (Hybris). This will allow us to integrate and standardize industry practices related to the Automotive platform where we collect Marketing, CRM and Commerce data for the dealer relationship management."

*Which project are you most proud of?*

"During my career, I have led and was involved in major innovative and transformational changes. The first was helping to decide, evaluate and implement the technological platforms that created the new Banco de Chile, after the merger with Banco Edwards during the 2000s.

At Correos Chile, I was involved in its modernization, together with our SAP provider - a great team and leaders who understood the need to evolve towards technological innovation. This was achieved through the automation of the parcel distribution center (Courier), the modernization of the branches, the Citybox terminals and by equipping postmen with technology that allowed customers to track their deliveries online."

*Imagine you could have all the company resources available for the IT department. What would you implement?*

"I dream of creating a portal for end customers where they can instantly request a quote, interact online with our executives, simulate a trip with our vehicles using virtual reality, access financial information and various



▲ Claudia Alvarez Henríquez, CIO of Toyota Chile (Mitsui&Co Group)

online credit platforms and have all information consolidated - all in one click. No paper, forms or bureaucracy. This would be a cozy new virtual world to shorten distances, reduce time and enable the fulfillment of customer needs they hadn't even thought of. Like this we create value, markets and satisfaction, as well as experience and innovation."

*Security is one of the most critical challenges for companies. Is it really a problem?*

"In my view, it's an opportunity, but one that requires us to actively take

the lead and be responsible for. The exponential growth of new technologies, the ease of access to media and platforms and the evolution of the ability to use new technology - as seen in children who seem to be born with these capabilities - have made security an issue we can't afford to dismiss.

**'Security is an opportunity that requires us to actively take the lead and responsibility.'**

It's essential to be continuously vigilant with regard to vulnerabilities and attacks from anywhere, including our own company. Trusting that nothing serious will ever happen has never been a solution and even less so now. Currently, private information and data are the largest seemingly intangible investment companies have."

*What is your opinion regarding teleworking?*

"It's a valid option that improves the work-life balance, but current social and working conditions make this an unlikely first choice for most companies. As humans, we need relationships, to interact with our teams, collaborate, exchange ideas and focus on the company's goals. A working relation based solely on teleworking would lack the benefits of face-to-face communication. This is not straightforward, but in the end, I think it comes down to each person's role in the company."

*Do you think digital transformation is just a buzzword or an inescapable journey?*

"It's not a new concept nor a mere marketing construct. For many years

companies have wanted to transform and innovate to continue to thrive. So, as I see it, digital transformation has been around for a long time and is a critical journey companies must go through in order to adapt to our fast-changing world."

### Professions of the future

*Let's now focus on Education. Do you think Artificial Intelligence has a role in education?*

"It can be a great solution for certain students, but I believe that a real-life teacher cannot be fully replaced. Young people will always need mentoring and motivation during their school years and the value of human experience, emotions and interactions can't ever be replaced by a robot. AI can be a valuable asset to support teachers in their vast tasks

Digital transformation has been around for a long time.

### 'Education can be a very conservative sector.'

and activities. Using virtual reality to motivate, artificial intelligence to facilitate the comprehension of concepts and experimentation instead of focusing only on theoretical education, is where I see the greatest value for students, teachers and society."

*Do you think we are preparing students for the professions of the future?*

"Education can be a very conservative sector. Students are rarely given the space to pursue non-traditional careers or to develop the capabilities required of the future workforce. Biotechnology and biomedicine are just two examples of these types of future careers. When the future lies in researching and enhancing people's autonomy while we continue to encourage children to follow traditional professions, the concern is very real and rather troubling."

*Is finding the right profiles for your IT department a problem?*

"Yes, mostly because the profiles I need are not that easy to find. In my experience, asking for recommendations from people I know and trust has yielded better results than using headhunters or posting job offers in the traditional channels."



- **Name:**  
Claudia Alvarez Henríquez
- **Job title and company:**  
CIO of Toyota Chile (Mitsui&Co Group)
- **Birthday:**  
January 31
- **Hobbies:**  
running and traveling
- **Studies:**  
Computer Execution Engineering, Industrial Civil Engineering (USACH)
- **Leading a team of:**  
7
- **Seniority in the company:**  
5 years
- **Previous positions:**  
*Corporate Assistant Manager of Innovation and IT Processes at TurBus (2012 - 2013), Assistant Technology Manager at Correos Chile (2007 - 2012), and IT Project Coordinator at the Bank of Chile (2000-2007).*

Female role models increasingly occupy leadership positions.

# Wow, a woman boss!

“Wow, a woman is the boss!” That is how some employees and other IT managers still react when facing a female leader. Nevertheless, culture is evolving and leadership positions are increasingly being occupied by women. These female leaders can be seen as role models for other women.

According to the NGO PrograMaria, by 2020 Brazil will have a shortage of 408,000 skilled IT professionals. These numbers come from the Association for the Brazilian Software Excellence Promotion (Softex). PrograMaria also declares that even if you are not going to work in the IT area, learning how to program is already considered as a 21<sup>st</sup> century skill because it enhances logical thinking, creativity and problem solving. But for a girl, the challenge of programming starts before she even tries to learn. We lack examples that inspire and we are left with prejudices and stereotypes that discourage and reinforce the idea that technology is a male field. PrograMaria states that it is not about a lack of interest or ability. The NGO believes it is necessary to review the cultural narratives that tell us what a woman can or cannot do and to provide tools and opportunities for women to learn. This is the

work they do in order to change this culture which, oddly enough, is still the prevailing practice in various companies in the 21<sup>st</sup> century. Nevertheless, there are female role models who give us some insights into the journey they have been going through to become a leader.

## Lilian Hoffmann

One of them is Lilian Hoffmann, Director of IT and Operations at the Beneficência Portuguesa de São Paulo, an important hospital in Brazil. “Very early in my career I faced a difficulty. I’ve always loved the exact sciences, also computer science.



▲ Lilian Hoffmann, Director of IT and Operations at the Beneficência Portuguesa de São Paulo

Stereotypes discourage and reinforce the idea that technology is a male field.



▲ Renata Marques, CIO of Whirlpool Latin America and Vice President of the CIONET Brazil Advisory Board.

When I was a senior in high school, my parents suffered a financial setback due to a robbery and lost a great deal. I was afraid I could not go to a public university that they did not need to pay and chose a course that would accept me with lower scores. The option was nursing and I thought that from there I could migrate to the engineering field, this due to lack of information.

I went ahead and started to enjoy the course. And from the third to the fourth year, there was an internship opportunity at the Oswaldo Cruz German Hospital. It was my first job. Oswaldo Cruz was implementing a new billing system and I started to develop in technology. Then I was invited to be part of a group to train nurses. After that I received an invitation to play a greater role in this development and training and even to take over the area of technology. It was at that time that I realized the non-acceptance by the team. I was rejected and one of my former colleagues resigned and said he would not answer to a woman. That to me was quite hurtful and I realized that I would have to fight hard to be a leading technology woman. And, in meetings with suppliers, where I used to take a teammate with me, at certain times it was very common to have to introduce myself as CIO of the company. I think that over these more than 30 years of career this has been changing significantly, but many times I have had to say: "I am the leader of this team".

I have always tried not to use the arguments that women are more docile and skilled. I think men and women have their own way and attributes and I have always treated everyone as equals. Today there is a very large proportion of women in my team. My colleagues are half men half women, but I hire according to the skills, the expertise, not the gender.

I cannot say I experienced any kind of discrimination coming from the corporate leadership level. It was a woman who offered me my first opportunity in technology. Next, at Oswaldo Cruz, where I stayed for 22 years, I reported to two CEOs without any problems. Later I went to Rede D'Or, where my boss was a woman. Today at BP, Beneficência de São Paulo, I report to the same woman who was CEO of Rede D'Or. And in our board, which reports to the CEO, there are ten directors of whom six are women. As the CEO says, this was happening naturally, without any question of quotas, but thanks to the skills displayed by

408,000

By 2020 Brazil is expected to have a shortage of 408,000 skilled IT professionals.

these women. At the infrastructure department of BP we created a system enabling us to receive the same number of résumés from men and women. And in the engineering and maintenance area, my executive engineer is a woman who deals with several men.

### 'Some female role models use gender barriers as a lever.'

A curious fact is that when I left the Oswaldo Cruz Hospital I was approached by a headhunter for the position of CIO of a large company in health. He told me I would be the candidate they would like to hire, but eventually the company preferred a man. I said that if there were any skills that I could improve, develop, I would. But I could not change my gender and I love being a woman, being a mother and a professional.

#### Renata Marques

Another example is that of Renata Marques, CIO of Whirlpool Latin America and Vice President of the CIONET Brazil Advisory Board. "I never felt discrimination for being a woman in an IT leadership role, although I have seen some sexist situations. In the company where I worked for a long time, Monsanto, the issue of diversity was something highly valued. And Monsanto encouraged me a lot, invested in my development and paid for my

international MBA - I was expatriated by the company. I think it has to do with management, because sometimes the company has the issue of diversity present but the manager does not.

When I was expatriated, I realized that there was some kind of resistance, such as 'who does she think she is, a Brazilian and a woman'... I went there to take care of a project of an acquisition of a Mexican company. There were several Mexican managers and I felt a little resistance from those who did not believe in me. But I have always seen these barriers as a lever and the more people didn't believe in me, the more I wanted to prove I was good enough, and so this enhanced my motivation instead of discouraging me."

#### Luzia Sarno

Luzia Sarno is Corporate IT Director of one of the largest diagnostic groups in healthcare in Brazil, the Fleury Group. She says she has never

had problems with her team, nor the leadership of the companies where she worked. Yet she is a woman in an area where most are men. She explains she did not suffer any kind of discrimination in these companies and that in some of them she had female bosses. In others, according to Luzia, there were no women in leadership neither in IT, nor in other areas. But she emphasizes the fact that she never felt discriminated against for being a woman in a more technical and mostly male area and that she never faced obstacles because of that.

#### More female leaders

Although attitudes vary according to the culture of companies and people, the examples above show that leadership positions are increasingly being occupied by women.

▼ Luzia Sarno, Corporate IT Director of Fleury Group

Attitudes vary according to the culture of companies and people.



A better gender balance in management and teams increases performance and innovation.

# Get the best of both worlds

Are there really big differences in leadership styles between women and men? Some say that women would have a more empathetic approach whereas male managers would have a more direct style. Yet for every female team player and for every self-centred male many counterexamples to the common stereotype can easily be given. Let's ask what four accomplished female leaders think of this.

*Why do our companies and organisations need more female leaders?*

**Annemie Depuydt**, Director of ICTS KU Leuven: "The answer is simple: 'diversity'. The whole spectrum between 'women and men' is a continuum of personalities. There is no big 'exclusive OR' between the two sexes. Women are equally qualified as men to be good leaders. Some of the qualities you need are often more likely to be found in persons of one of the two sexes but it is a continuum. The biggest benefit of a better gender balance is that you get the best of both worlds. That applies not only to leaders but also to management teams."

According to **Sabine Everaet**, CIO EMEA at The Coca-Cola Company, it is scientifically proven that diverse organisations are more profitable

and innovative. "This is not just driven by diversity - gender, race, nationality or age differences - but more by inclusiveness and being open to diverse contributions to ideation and decisions. 'Inclusive' is one of our four formal growth behaviours, helping us to drive culture change.

At Coca-Cola, we also want to bring more women in leadership positions because we want to reflect society, and consider that 70% of our products are bought by women. Hence the importance of having women who participate in decision-making."

**Inge Neven**, Chief of Staff at imec, agrees: "I think it is good to have a gender balance in all teams and leadership positions. Men and women have a slightly different approach, which makes discussions and

decisions richer. In ICT the number of female leaders is lower than in other sectors. So yes, we definitely need more female leaders in this area.

This starts from the very beginning of the education ladder, by getting girls enthusiastic about technology and IT - like our RVO-Society is doing - and encouraging these studies at high schools and universities. We see some good evolutions but there is still a very long way to go."

**Brigitte Buyle**, CIO at Ethias: "The huge demand for skilled IT talents is an additional reason for organisations to hire more diverse teams including people with different cultures and educational backgrounds. And when teams are becoming more diverse, it is inevitable that the leaders are also becoming a more diverse group of people than before. At the same time we see in younger generations that gender differences have declined. We now see e.g. more ambitious young women as well as young men who value a good work-life balance. There seems to be a cultural convergence between genders."

## Obstacles and challenges

*What are the obstacles and challenges for women to grow into top IT roles? How do successful female IT leaders overcome these obstacles?*





◀◀ *Annemie Depuydt, Director of ICTS  
KU Leuven*

◀ *Sabine Everaet,  
CIO EMEA at  
The Coca-Cola Company*

"I see many young women doubting", states **A. Depuydt**. "I hear reasons, such as 'Perhaps someone else is better than me', 'Perhaps now is not the right time' or 'I did not expect this and have to think, so not now'... It's not their problem to look for someone who is better than them but they do, as they are wonderful team players. As for so many things in life, it will never be the right time. Yet they instantly care about everything around them. They need some time as they don't take decisions lightly. All great qualities! But women really have to say 'yes' more easily when an opportunity knocks on their door. Fortunately, this culture is changing and women are inviting themselves to the table more often, they speak up and let everybody enjoy the qualities they bring. But this is a message to male leaders too: if you really want more women to grow in whatever role and you believe in a female candidate, take some time, listen, encourage and have two or perhaps even three conversations with your female candidate before deciding."

"The biggest obstacle is unconscious bias", explains **S. Everaet**. "This means that leadership roles today are still too much linked to male characteristics. Women need to have the guts to break through this. We don't

have to become like men, we have to stay authentic and be role models as female leaders.

Another concept still seen in many organisations, is the boys club, where men tend to have informal gatherings without women, whilst taking business decisions. I therefore consciously participate in golf and car racing events with them - but I do not become a man..."

**B. Buyle** adds to this: "It's a known fact that women are not as active in networking as their male colleagues. But building a network is very valuable for advancing your career. Therefore women should put in more efforts and perhaps even support each other in this by paying more attention to networking, especially with their female peers."

**I. Neven** continues: "As IT still is a male world, it is always more difficult to get to the higher positions in the organisation. Without willing to generalise, I think that males tend to recruit and promote other males more easily and probably females do the same for other females. There is nothing wrong with this, but we

need hence to take gender balances into account.

Until recently there were not that many female leaders in IT and males were often the 'hard working part of the couple', so it was not that easy for females to combine family life with work life and to climb the management ladder. But fortunately this has been changing recently and everyone is getting more concerned about and respectful for a good work-life balance. So this is an opportunity for females. For the rest I think that there is no magic about how to become successful. You need talent, hard work, commitment and managers who believe in you and let you grow."

**B. Buyle** also sees the positive evolution: "The good news for women is that IT professions are becoming more attractive to them. There are, for example, increasingly more jobs in consultancy, which is a good match for many females. Furthermore organisations offer more flexibility, e.g. homeworking and flexible working times, so that there is a better balance between family life and work life. The trend to give more flexibility in favour of the employees is actually a

*'It is scientifically proven that diverse organisations are more profitable and innovative.'*



► Inge Neven,  
Chief of Staff at imec

►► Brigitte Buyle,  
CIO at Ethias



reflection of societal culture change. This change of culture can also be seen in the younger generations where there is a growing number of ambitious young women. Undoubtedly they get more chances than ever before to grow in their job to higher positions. But of course they will have to make choices to grab the opportunities and go for it.”

### Leadership styles

*What are the differences in the leadership style of female and male IT leaders? What are the benefits of female leadership?*

“This is a question I find difficult to answer”, says **A. Depuydt**. “It’s so polarising, dividing males and females into two opposing groups. We really

have to get rid of this. We all know there are differences. Perhaps the question should be ‘Why is more diversity so important?’ Then the answer is simple. To have a good representation of the society we also need women and their qualities. Moreover, mixed teams just perform better.”

**S. Everaet** sees some difference: “Women bring different leadership skills to the table. I believe we are more focused on getting more out of the teams, aligning them towards the same goal, and supporting them in the journey, rather than mainly being focused on our career. I’ve heard a male HR director say: ‘Women care about the teams, the business, the company, while men are busy with themselves’. But I don’t want to talk in stereotypes because obviously there are many exceptions to this.”

“The stereotypes are commonly known”, confirms **B. Buyle**. “But, I agree, for every female team player and for every man with a more direct style I can give you many counter-examples. Within the pool of female leaders there is a huge variation of different leadership styles and the same applies to the male counterpart. What’s more important than gender is to have a good mix of people with different styles. When they come

together they will have stronger problem-solving capacity as they look at things from more and different perspectives, which leads to more creativity and better solutions.”

*‘Females should pay more attention to networking, especially with their female peers.’*

Finally, **I. Neven** gives an example of how a more female leadership style could sometimes be beneficial. “Without willing to start a gender discussion - females are, for example, by nature a little bit more attentive to other people’s feelings and have more insight in what is needed to make people change their behaviour and talk about it. At the same time change management and user adoption are becoming more important as IT is evolving rapidly and gaining more presence in everyone’s life. Female leaders can make the difference by adding this female touch to the big implementation programs, and ensure more people come on board.”



Mixed teams look at things from different perspectives, which enhances creativity and better solutions.

The path to digital goes through analogue: people and lots of sticky notes.

# Disruption or destruction?

Disruption is a successful Digital Transformation, which profoundly changes work processes and company culture through the adoption of innovative technologies, while building on the company mission and values and protecting the business continuity. On the other hand, destruction is what people fear when changes appear on the horizon - especially in a company with experienced employees and a history of success.

Antibodies to change are quick to develop and grow stronger if tangible results are not delivered rapidly, if a phoenix is not born immediately from the ashes of the 'good old days'. In such a context, driving a Digital Transformation is - ultimately - managing a series of paradoxes. First of all, to disrupt today and anticipate tomorrow, we need to rediscover values and habits of the past: people at the centre, multifunctional work, iterative development, ... It's how we used to develop IT systems years ago, before a blind search for efficiencies resulted in indiscriminate outsourcing and offshoring, creating tragic friction between the business and IT. But it's through the application of modern methodologies such as Design Thinking and Agile that these old techniques gain the speed and

effectiveness that are a MUST for a successful Digital Transformation in today's economical context.

The other paradoxes are posed by the new technologies themselves, which require deep business mastery to be established and tuned and then make that same mastery redundant - requiring the employees to develop new competencies.

It's through the involvement of the same people who are touched by the introduction of new technologies that the new opportunities these generate can be identified and an effective transformation plan for roles and competencies developed.

AI is another paradoxical story, as extracting value from it requires trusting a black box. The challenge is evident in Business Intelligence: Senior Management is used to

reading numbers through the eyes of their experience and gut. But Machine Learning takes the gut away, provides insights they were not expecting, giving answers which may seem counterintuitive. Yet this is exactly where its value resides: in disrupting the decision-making and forcing people to think outside the box.

## Reconciling people with systems

In a nutshell, Digital Transformation is about reconciling people with systems - creating a shared ownership of the solutions and the associated process changes and helping users overcome the good old days.

Yes, the path to digital goes through analogue: people and lots of sticky notes.



▲ This article was written by Francesca Vergara Caffarelli, CIO.

Digital transformation has already happened and is now part of daily life.

# Business as usual?

Ana Carllinni, CIO at MetLife for Argentina and Uruguay, is constantly involved in major transformational projects, such as e.g. the migration of local computer centers to a global center, the implementation of a Data Hub and Data Quality processes. She considers digital transformation as something that has already happened and now is part of our daily life.

*Where does the main part of your company's IT budget go to?*

**Ana Carllinni:** "The most important part of the local budget is devoted to transformational projects. The MetLife IT strategy is based on the fact that CIOs put their effort and focus in new projects. In 2015 we migrated the local computer centers to a global computer center from which we are providing most of our Infrastructure services."

*What is the area in which more is being invested this year?*

"The most substantial investments of 2019 went to data - to the construction of a Data Hub and to Data Quality processes - and to the development of omnichannel engagement programs to be closer to customers."

*Which project are you most satisfied with?*

"The data project, which is more than a project, it is a process within the company. We started it from IT as a way of having centralized, standardized information about our clients, and the business information was added after a regional data management project."

*You may have once dreamed of having all the company profits going to the IT department. If this happened, what would you like to implement?*

"I would work on two different levels, first to improve the customer experience with the company, using much more artificial intelligence, but also working on process simplification and efficiency using RPA. On another level, I would like to

simplify the technological architecture and break down the central systems that are supporting the businesses. They are never prioritized, but as years go by they add complexity to the operations."

*Security is one of the greatest challenges for companies at the moment. Is it really a problem?*

"MetLife is a company whose focus is to protect customers against risk. That is our reason for being. Yet computer security is a more complex risk for us, one in which the company has been investing for years. Security administration is global - it was one of the reasons why data centers were unified into global data centers. Our security policies are very strict, and the global CSO (Chief Security

The professions we see today as part of the future may not be there tomorrow.



▲ Ana Carlini, CIO at MetLife for Argentina and Uruguay



- **Name:**  
Ana Carlini
- **Job title and company:**  
CIO at MetLife Seguros for Argentina and Uruguay
- **Date of birth:**  
20 November 1967
- **Hobbies:**  
music, pop rock concerts, running, street racing
- **Studies:**  
Bachelor of Administration in Accounting, Master in Business Administration
- **Leading a team of:**  
35
- **Seniority in the company:**  
4 years
- **Previous positions:**  
Zurich Argentina, 4 years as CIO, and 4 years as COO and CIO

Officer) has authority over CEOs to implement changes in less than 24 hours.”

*What do you think of teleworking?*  
“Telecommuting has already become a common form of work. In MetLife, where the quality of most of our activities involves global, regional and offshore teams, we began to apply teleworking technology long before implementing the home-office human resources policy. It is a necessity in the globalized world, and a form of work that is no longer discussed, but actually required to attract and retain talent.”

*What is digital transformation about? Slogan or need?*  
“The digital transformation has already happened, that is, it is already part of daily life. Last year when my daughters heard about digital transformation, they asked me what it meant. When I explained what it was all about, they just replied that it

‘The company has been investing for years in the complex risk of computer security.’

had already happened and couldn’t understand what we wanted to transform. Digital transformation is business as usual at the moment.”

*Let’s talk a little about education. What do you think of Artificial Intelligence in the educational environment?*  
“Education is not my field of expertise, however it is a key issue for the development of a country like ours. Although I don’t know about AI applications today in schools in Argentina, I believe that in the future they can help create a much more personalized education for each student, focusing on improving their abilities and maintaining their attention.”

*Do you think we are preparing students for the professions of the future?*  
“The professions we see today as part of the future may not be there tomorrow. The most important thing is to prepare our students to be open to change, to be curious, to learn how to cope with frustration, to be transformative and committed to society.”

*Do you see a robot teaching classes?*  
“I don’t know if classrooms will still exist...”

*Do you have any problem finding the right profiles to work in your company?*  
“In Argentina there are very good professional profiles. The most difficult thing is not to find them, but to motivate and develop them so that they can be retained.”

Absolute trust and full transparency are important principles for building value as a team.

# Transparency and trust

I have my goal set. It's to make people want to provide value for the organisation and motivate themselves towards new ideas. As a leader, my task is to create an effective work environment.

My most important principles are absolute trust and full transparency of what we do. I couldn't function as a manager without it. If there is no transparency, we need to think about what went wrong and what had a negative impact on the team. It is also important that people are not afraid of mistakes and failures, but act. I want employees to be enthusiastic about their work and to let everyone find something special that motivates them. These can be different



▲ Monika Nowak Toporowicz

things, e.g. interesting technology, teamwork, acquiring new skills, ... You must find a key for each employee.

## The best team

I always look for people who have an attitude of independence, who need a lot of freedom and feel good in an environment with limited control. I rarely work with people who require hierarchical organisation. You can simply deal with other problems in the team. I change roles in the organisation, whether they are global or local, and I work with people from different cultures. Every time I create a good team and together we build value. I focus on what we have and I create as much as possible. It always works very well. Regardless of the position you occupy in the organisation, you can always do something extra, something more.

## Women in IT

There are still too few women in IT. In my team, they account for only 11%. These proportions result partly from social stereotypes that are still alive and can already be seen at the stage of raising children. Girls are expected

to behave differently than boys and they are prepared for the so-called women's occupations. I don't know why IT is in the group of men's professions. To change it, education is needed. It is necessary to make it easier for young women to function at universities and at the beginning of their professional careers. In IT, you can give them huge support, for example by offering them a remote form of work so that they can reconcile maternity and professional duties. In the IT industry, it is difficult to allow yourself a break of several years during your career because technologies change so quickly.

**'Women should cooperate better and support each other more intensively.'**

Women should cooperate better and support each other more intensively. There are so few of us in the technology sector that we should not compete, but rather share knowledge. That is very important. I am a co-founder of the Technology wears a Skirt association and one of our goals is to raise the Gender Diversity Index. We run, among others, a mentoring program for young female managers, which attracts high interest.

■  
*This article was written by Monika Nowak Toporowicz, CTIO at UPC Poland and Slovakia.*



# What every banking CIO should consider to streamline KYC procedures

**Know Your Customer (KYC) procedures are becoming increasingly important for banks and other financial institutions. Every customer must be screened in order to comply with anti-money laundering (AML) and counterterrorism laws. Rob van Dijk, expert in finance transformation and strategy at Capgemini, explains the challenges and possibilities for realizing efficient and cost-effective KYC procedures.**

Many financial institutions have responded by putting a lot of effort into KYC. However, they are often confronted with a backlog of millions of existing customers that have not been properly screened. "Banks as well as insurance and trust companies need to attract people with specific KYC expertise to update their files and introduce proper screening for new customers. At the same time, they need to implement and improve KYC monitoring systems to safeguard their daily operations. In many cases, this had led to KYC procedures with limited efficiency at considerable cost."

## **Artificial intelligence**

For banks, the most challenging aspect of KYC is gaining control of the data flow. But, according to Rob van Dijk, this in itself is not the only issue. "Screening the millions of banking transactions per second can be achieved efficiently and cost-effectively through data governance and by automating manual processes using artificial intelligence (AI). Adverse Media Screening systems can further improve KYC procedures by scanning for and collecting all kinds of customer data from public sources. Obtaining data is no longer the problem. Banking, insurance and trust company CIOs need to decide how to balance the conflicting interests between data monitoring activities and the acceptance of customers, while adhering to the General Data Protection Regulation (GDPR)."

## **360-degree client view**

What is more difficult to pull off is the 360-degree client view. "The same client may have different roles within the same bank, such as high net worth investor, guarantor or controlling shareholder of a business client. Especially for internationally diversified financial institutions that use different administrative systems, this may require an overhaul of their IT architecture. For the CIO, this results in the need for a strategic outlook in which the higher KYC standards are translated into functional IT requirements."

## **Staying one step ahead**

In the end, one of the most effective KYC measurements is proper screening of new customers at the gate, according to Rob van Dijk. "After that comes a clever system of risk assessment for industries more susceptible to fraud and appropriate tracking techniques. Simply following regulations, such as the obligatory reporting of cash deposits of more than 10,000 euro, is not enough. For AML, it is far more effective to look at actual behavior, such as regular deposits of round figures and other activities that derogate from normal business operations. These can be identified in near real time by AI-powered pattern recognition. Using such systems, we aim to level the playing field and try to stay one step ahead."

[www.capgemini.nl](http://www.capgemini.nl)

Modern leadership makes the team feel they have impact and are creating something valuable.

# Vision of modern leadership

Finding and retaining qualified IT staff is a huge challenge today. My observations show that, regardless of the generation, both those who are just entering the labour market and those with many years of experience look first and foremost at the leader. They do that to see if it is a person with authority, someone they feel like working with, who has the courage to implement innovative solutions, even if there is a risk involved.

It is important to give people responsibility, independence, and develop their different talents and passions. I give freedom to people and I also focus on the power of diversity. I try to show empathy and support the team on their way to success. I want developers and testers to feel that they have impact and create something valuable, and then together we can celebrate success. Without this, we will not be able to develop long-term motivation. We often say that we employ people for their hard competences, and we lose them because we don't develop soft skills.

## Innovations and mission

In the age of Artificial Intelligence, Big Data and the power of information, innovations are very important. I want my team to have clear goals and be aware of them. Regardless of whether someone works closely with clients or far away, or in a specialised niche, it is important that they feel they make the life of the end user easier, more interesting, with better access

to products and services. Design thinking and a behavioural approach are very useful as a management style as they let you check what people need and not impose your own ideas. Ongoing feedback and conversations with people are also important, as one of my mentors used to say: "Tell me one thing I don't want to hear".

## Work together with business

In order to be competitive, it is not enough for companies to break down silos and to create smooth business cooperation with IT, but also with the HR, cybersecurity, as well as the legal and compliance areas. Project implementation will be much slower without them on board.

## Passion and work

Combining modern technologies with the world of human emotions and needs is my passion. I try to anticipate future technology trends, being the leader who inspires the team. In addition, I launch volunteer projects. As a team we are open to new experiences.

It is worth getting away from everyday life and doing something good for others. Then, we can return to our daily activities with more effectiveness. One of the things we do is help people get out of digital exclusion by imparting our knowledge.

■ *This article was written by Daria Sorówka, Digital Transformation Director, Co-leader Responsible Banking, Santander Bank Polska*



▲ Daria Sorówka





# build once.

One operating environment.  
More choices. More ways to  
innovate. We've now combined  
the technology and scale of IBM  
with the open source leadership of  
Red Hat. Let's unlock the world's  
potential. Let's put smart to work.™

Explore the next-generation  
hybrid cloud at [ibm.com/redhat](https://ibm.com/redhat)



# deploy anywhere.

Open software. Open standards.  
An entirely open culture. We've  
now brought together the hybrid  
cloud portfolio of Red Hat with the  
scale and breadth of IBM. Let's  
unlock the world's potential.  
Let's put smart to work.™

Explore the next-generation  
hybrid cloud at [ibm.com/redhat](https://ibm.com/redhat)

Total buy-in from general management is indispensable for the transformation process.

# Digital transformation, a must to stay alive

Rita Galeano, Director of Teleinformatics at El Espectador y Cromos sees digital transformation as a must if you want to stay alive in the market. She has set up a process of digital transformation across all company areas. To carry out this major project successfully, total buy-in and support from general management is crucial.

*What does the main part of the company's IT budget look like?*

**Rita Galeano:** "The capex budget is versatile. This year it went to software licensing and purchasing of fixed assets. Next year it will go to the renewal of the data center. Our opex budget is more stable in terms of allocation, generally intended for the payment of services, fees and maintenance."

*What is the area in which more is being invested this year?*

"The Digital area. We started a process of digital transformation across all company areas and want to provide the necessary support to carry out our project successfully."

*Which project are you most satisfied with?*

"Without a doubt, our digital transformation project. It is a before and after in the evolution of our companies.

Additionally we have total buy-in and support from general management, which has allowed all areas of the companies to be involved and committed to understanding and applying the transformation process."

*You may have once dreamed of having all the company profits going to the IT department. If this happened, what would you like to implement?*

"I would like to have all the profits going to training in the various disciplines that we deploy within our companies, not only the technology team, but also all other areas of the organization so that they acquire greater skills in the use of different technology tools."

*Security is one of the greatest challenges for companies at the moment. Is it really a problem?*

"Yes, historically it has been a challenge that we must face day after day. As a

hybrid company, we need to guarantee our security even more rigorously. It is not easy because we must protect, update, and patch our processes, apply best practices and be ready to face the next risk alert. Fortunately, we have managed to move forward without major complications."

*What do you think of teleworking?*

"It is a very good alternative that helps us improve the quality of life of our employees. We are prepared to address any regulatory issue and implement internal and technological processes so that we can enable it reliably. Even though we know that teleworking can help improve the life of the worker, we also know that it can cause family or social problems. This is why we have organized ourselves to carry out respective

Transformation is not necessarily accompanied by a technological innovation.



▲ Rita Galeano, Director of Teleinformatics at El Espectador y Cromos

monitoring and avoid the opposite effect. The technology area will lead the process and become a reference in the organization.”

## Digital transformation

*What is digital transformation about? Slogan or need?*

“It is a must if you want to stay alive in the market. Digital transformation achieves four primary objectives: to optimize processes, save costs, be more competitive and deliver more added value to our customers. It should not necessarily be accompanied by a technological innovation. Any area can generate transformation. If Accounting reported that a process could be optimized from 10 steps to 7 or 8 steps and that this would make us more competitive, adding value for our customers and saving costs, we would implement the transformation.”

*Let’s talk a little about education. What do you think of artificial intelligence in the educational environment?*

“Artificial intelligence and augmented reality will have a huge impact on

‘Teleworking helps us improve the quality of life of our employees.’

education in the short and medium term. Learning pilots are already combining theory with augmented reality. Simulating the sensory experience of what was learned ensures 360-degree learning.”

*Do you think we are preparing students for the professions of the future?*

“Currently no. Universities should provide shorter and more practical degrees, and focus on educating students to face the labor market and the experiential challenges of the future. That is hardly the norm today. I would not eliminate the current method entirely. I would not take away the engineering classes in mathematics that helped me develop deductive and structured thinking. I would like to invigorate the current university curriculum with new forward-looking education methods.”

*Do you see a robot teaching classes?*

“I do not see a robot or a human, I see a future with people in the process of self-learning and clearly self-taught for the most part, using their augmented reality device, at any time in any space. There may be human mentors supporting the emotional and cognitive process of learning.”

*Do you have any problem finding the right profiles to work in your company?*

“So far I have not had any problems. In our area of technology, staff turnover is low. Many people have made a long-term career here. We have a fairly structured recruitment process to identify the best profiles in terms of educational and social skills. We guarantee that your time in the company will be rewarding and productive.”



- **Name:**  
Rita Milena Galeano Wadnípar
- **Job title and company:**  
Director of Teleinformatics - El Espectador y Cromos
- **Date of birth:**  
July 05, 1984
- **Hobbies:**  
traveling, reading, theater, cinema
- **Studies:**  
Professional in Systems Engineering, Specialization in Engineering Project Management, certifications in SCRUM, PMP, ITIL, SAP-ABAP, Internal Quality Auditor ISO 9001-2000, among others
- **Leading a team of:**  
16
- **Seniority in the company:**  
11 years
- **Previous positions:**  
Quality Software, Interphysics

Learnings from a real-life journey through the adoption of AI

# Chronicle of a marriage foretold

For a company such as TIM, adopting AI has been like getting married for a confirmed bachelor.

## September 2016 - A strong initial push

Relatives and friends describe it as the right choice for you, comedy directors depict it as the best day of one's life and digital advisors foresee a relentless decadence for your company if you don't say "I do" to AI.

Day after day, you're convinced that this marriage will improve every aspect of your company and everything will be just perfect, like newly-weds.

## March 2017 - The dismay

As days go by, you start to realise what such a decision implies. You're haunted by scenarios in which AI will take over full control, making decisions on your behalf.

There are a few other questions, though, that you should definitely be asking yourself: "Will I live up to expectations? Will I be able to feed AI with the necessary data?" If the answer is "No", and your company is not willing to invest significantly in that direction, just forget about it. Unless you are prodigal with shiny data, AI will not stand by you.

## January 2018 - Beyond the fear

While struggling with consolidating and harmonising data, you look forward to the Big Day, and finally it comes with expectations magnified by the long and demanding preparation.

## September 2018 - The Honeymoon

The first amazing results convince you it was the right choice. Why did we wait so long to marry AI? We should have done this before! This AI knows how to anticipate wishes, to predict what will happen and suggests the best way to act... How did we manage without so far?

## April 2019 - The first argument

It happens on the first night out. You realise that AI is not that popular after all, customers don't understand virtual assistants and vice versa, AI makes mistakes too, some of its predictions and prescriptions seem obvious... While returning home you're discouraged, having wasted so much time, money, dedication. Disappointment is bitter, you start rethinking the whole thing over.

## September 2019 - Rekindling the flame.

Perseverance pays off. Day after day, interaction after interaction, AI blooms, leaving you speechless. The virtual assistant keeps learning and provides you with clear information and unexpected insights, predictions improve slowly but unremittingly, and when future faults are predicted and avoided, even the most sceptical surrender to AI's charm. Yes, that's the one you married!

## December 2019 - Silicon Wedding

You are a well-rehearsed couple, and you know you've done the right thing. Of course, AI demands attention, dedication, care and, so much more, you will need to learn from each other. But, as promised, AI is playing a key role

in turning your company into a better version of itself.

And it is not just about improving the usual KPIs: this marriage is radically transforming the company's processes and culture. Now everyone pays more attention to the data produced, employees store them cleanly and tidily so that they are easy to use by everyone at the company. Departments no longer think in vertical silos and projects have a systemic scope. And the management is aware that, despite an initial clumsiness and shyness, bringing AI on board and into society, among customers, is the only way to make it effective.

## Happy ever after

Now AI is running day-to-day operations with a snap of the fingers and the daily processes flow smoothly and efficiently. You have more time for yourself, you can read inspirational books or travel the business world to broaden your mind and learn new things, so that company innovation never stops.

Heading towards the Quantum wedding anniversary, you know that the effectiveness will keep improving even in the long term, leading the company to exceed customers' expectations - the most important reason behind the whole story.



This article was co-written by Marina Geymonat, Leader Center of Excellence on Artificial Intelligence at TIM, and Elisabetta Romano, Chief Technology and Innovation Officer at TIM.

Smart mobility fosters more sustainable transport and use of space in cities.

# Reinventing urban mobility



The development of large cities and their population growth, often associated with the disorderly urban sprawl characteristic of older cities, has as its main consequences insufficient urban infrastructure and services, ecological concerns, and a multiplicity of means of transportation.

Smart mobility, being one of the segments of smart cities, can solve these problems as it enables a constant and efficient flow of people and goods in the most automated way possible. Technology works in this segment as a facilitator, integrator and aggregator, generating a new way of thinking and managing cities. Market response to this equation is common today, through Mobility Platforms which are being developed to successfully integrate a set of systems and entities, providing a 'single view' of cities. The use of millions of data generated by sensor technology, combined with artificial intelligence and video analytics are a powerful tool in city management, but only if used in a conscious, ethical manner and without compromising the freedom of individuals.

Another concern associated with these platforms is the issue of information security. With the convergence of today's cloud platforms as well as the ever-increasing use of IoT solutions, the issue of data security forces organisations to invest heavily in security.

The automotive sector is also undergoing a major transformation today, exploring new technologies such as vehicle interconnection using sensor technology, signalling systems or electric mobility. The introduction



## 'Technology is generating a new way of thinking about managing cities.'

of self-driving cars is bringing a whole new world of legal and ethical challenges and opportunities to cities, such as how to combine an algorithm with the unpredictability of human decisions.

The financial aspect clearly still has more room for evolution, considering that the new electric mobility means are still more expensive than the previous solutions. The market tends to move towards a mobility renting concept rather than the acquisition itself. Also the mindset of the urban population has changed. Ownership of transportation means is becoming less important as sharing solutions offer a good alternative.

### Reinventing the city

All these challenges and developments represent the opportunity for cities to reinvent themselves in how to manage all these means. The

Lisbon is nowadays a laboratory of excellence for mobility.

Municipality of Lisbon has translated this opportunity into opting for an aggregator platform of services and information. The use of an Intelligent Management Platform will enable the interconnection of information, services and procedures from the various municipal services and the application of intelligence onto these same processes. This will result in useful information for the citizen on how to use urban space and means of transport in a more sustainably, efficient and convenient way.

This aggregation of information and its consequent exploitation by intelligent engines, coupled with an open-data concept brings to the municipality vast knowledge about the way of living the city with the aim of improving the service provided to the citizens.

As a result, Lisbon is nowadays a laboratory of excellence for mobility and the creation of various technology hubs. The size of the city (compared to other European cities) and the openness of its citizens towards new technologies allow for new concepts and business models to be explored. The creation of information silos according to a concept of services that may or may not be shared via open data and a correct initial structuring oriented to services and objects, coupled with the latest cloud trends,

should ensure an until now difficult to achieve agility on which the artificial intelligence component should be based.

There are already proven technologies for anyone to move from point A to point B without ever having to touch a steering wheel or parking a car. These technologies will ensure efficient mobility for citizens and industry, generate new mobility experience and open up the perspective of new business models

For this to happen it will be necessary for the major mobility players - municipalities and their municipal companies, the private sector, the automotive industry, consulting and technology companies - to work together and overcome ethical and moral issues together, e.g. by changing restrictive and outdated laws in order to stay in line with the maturity of emerging technologies. In a business that will soon be more profitable than the communications business, aligning these players will be key. Correct use of technology and the bundling of services will clearly bring more advantages than the associated inherent risks.

■ This article was written by Paulo Nunes, CIO at EMEL, the Lisbon Municipal Mobility and Parking Company.

# PREMIUM BUSINESS PARTNERS

|   |   |   |   |   |
|---|---|---|---|---|
| <br>High performance. Delivered. |  |  |  |   |
|                                  |  |  |  |  |
|                                  |  |  |  |   |
|                                  |  |  |  |  |

# BUSINESS PARTNERS

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |   |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

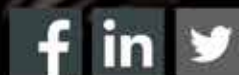
CIONET Magazine - Publishing director: Hendrik Deckers ([hendrik@cionet.com](mailto:hendrik@cionet.com)) - CEO: Luc Hendrixx ([luc@cionet.com](mailto:luc@cionet.com)) - Editor-in-chief: Luc Franco ([luc.franco@cionet.com](mailto:luc.franco@cionet.com)) - Lay-out & digital: Mieke Smalle ([mieke@mmmieke.be](mailto:mieke@mmmieke.be)) - Printed by: Baillien-Maris ([www.baillien-maris.be](http://www.baillien-maris.be)) - Operations: Halima Sylla ([halima.sylla@cionet.com](mailto:halima.sylla@cionet.com)) - Advertising: Luc Franco ([luc.franco@cionet.com](mailto:luc.franco@cionet.com)) - Business Development: Inès de Bien ([ines.de.bien@cionet.com](mailto:ines.de.bien@cionet.com)) - [www.cionet.com](http://www.cionet.com)

# CIONET.TV



Learn from world-class digital leaders how they guide their organisations through business transformation, how they drive their teams to success and what makes them tick.

PREMIERES ON  
CIONET APP



SOCIAL MEDIA



PODCAST



VIDEO



LEADERSHIP  
DEEP DIVE

