



CONNECTIONS

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Connecting People and Ideas to Water Solutions

Inside

IDA World Congress, Voting and More	1
Joint Message from the President and Secretary General.....	2
Viewpoint	3
Countdown To São Paulo: IDA World Congress.....	5
Trendwatch.....	12
IDA News	14
IDA Welcomes New Members	16
Calendar of Events	17



IDA World Congress, Voting and More

This issue of IDA Connections previews our upcoming World Congress in beautiful São Paulo, Brazil. Our first World Congress ever held in Latin America, it promises to be an event rich with content, filled with networking opportunities and complemented by the unique flavor of Brazil, one of the top destinations in the world.

The panels are a highlight of this year's Technical Program, and we've spotlighted them in our Countdown to São Paulo in this issue. We've assembled an amazing roster of speakers, headlined by Ms. Sue Murphy, CEO of Water Corporation, Dr. Benedito Braga, State Secretary of Water Supply and Sanitation of the State of São Paulo and President of the World Water Council, and H.E. Saeed Mohammad Al Tayer, CEO of the Dubai Electricity & Water Authority. The final list of all speakers will be covered in our next issue but suffice

to say, it includes respected water leaders from around the world joining us to celebrate the 2017 World Congress.

In addition to the Technical Program and Exhibition, delegates can visit some of São Paulo's water treatment plants for an exclusive behind-the-scenes look. You can also take advantage of pre- and post-Congress IDA Academy courses as Leon Awerbuch outlines in his Viewpoint Column. Portuguese, Spanish and English simultaneous translation will be available in the Technical Program.

On the social side, no visit to Brazil would be complete without experiencing the famous Carnival and Samba Parade – a highlight of the World Congress Cultural Night. This issue also lists some of São Paulo's famous attractions that enhance your experience.

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JOINT MESSAGE from the President & Secretary General



Emilio Gabrielli
President

The start of the 2017 IDA World Congress is coming up fast! We hope that you have taken advantage of our early registration discount and made plans to join us on October 15-20 in São Paulo, Brazil, for a landmark edition of our signature event – the first IDA World Congress to be held in Latin America.

The IDA World Congress is widely recognized as the preeminent event for the global desalination and water reuse industry. Excitement about the Congress is palpable across the region!

With its robust Technical Program, nine panels and three plenary panel sessions led by well recognized speakers, Innovation Theater, exhibition and plant tours, Congress Week presents abundant opportunities to learn, exchange ideas and connect with colleagues old and new.

The World Congress is the perfect place to hear from utilities and other clients as well as technology providers. You can take advantage of the World Congress's extensive business networking opportunities to strengthen existing relationships and build new networks. This is what the IDA World Congress is known for: bringing together people, ideas and experiences to expand knowledge, perspectives and deepen our insights.

One of those insights is the tremendous market potential for our community that exists in Latin America.

Latin America – where modern desalination began and where desalination and water reuse needs are

set to grow exponentially – represents one of the largest future markets for desalination and reuse technology. With 80% of the population living in urban areas, Latin America is one of the most urbanized regions in the world, and it is expected to urbanize even further, with urban population projected to reach 674 million in 2050 according to the United Nations Department of Economic and Social Affairs' (UN DESA) World Urbanization Trends 2014.

Consider these facts: Brazil is already the frontrunner worldwide in programs to provide sustainable small desalination units to communities in remote areas. São Paulo has already concluded that reuse must be part of its planning. The States of the Northeast have also realized that they cannot go on without desalting their salty water supplies. This is why the Brazilian federal government and the local utility Sabesp are so enthusiastic about the IDA World Congress and are supporting it – the Congress is a unique opportunity for key decision-makers in the region to get acquainted with technologies and players from around the world.

Enthusiasm about the World Congress holds true for other countries in the region. Mexico will build the largest desalination plant on the Continent with future production of 380,000 cubic meters per day. Whether it is the Argentinian Patagonia or the Chilean and Peruvian desert coast, all have come to the same conclusion: the time has come for well-planned desalination and reuse programs.

continues on page 15

IDA Desalination Academy – Where Learning Never Ends



By Leon Awerbuch

As Dean of the IDA Desalination Academy, I believe strongly that the Academy provides unsurpassed opportunities for members of the desalination and water reuse industry to expand their knowledge while at the same time, it reinforces IDA's position as

the world's leading resource for information and knowledge in the field of water desalination and water reuse.

I am really encouraged that the voting on Constitutional amendments elevated the position of the Dean of the Desalination Academy to the rank of Officer of IDA. This is clear recognition by the Board and our membership of the important role that Academy plays in providing continuing education about all aspects of the desalination and water reuse industry.

Recognized around the world for its leadership and the excellence of its technical programs and specialty conferences, the IDA has created a sharp focus on education and sharing of knowledge. As the impressive growth in desalination and water reuse – with both now firmly recognized around the world – continues to expand, so does the need to provide high level, continuing education for all stakeholders. From plant operators to senior level executives, and from those new to the industry to seasoned veterans – all stand to benefit from expanded knowledge.

Desalination technologies are used extensively in treating water and wastewater in industrial markets including oil and gas, mining, power production, food and beverage production, and heavy industries. Desalination is now seen as a critical aspect of water resource management in over 150 countries around the world.

This is, of course, driving the need for more highly trained professionals engaged in desalination and water reuse, with a parallel requirement for ongoing educational and professional development opportunities.

That's where the IDA Desalination Academy comes in.

The mission of the IDA Desalination Academy is to provide the highest level of education and training for individuals, utilities, companies, institutions, universities and other organizations focused on the many aspects of desalination and water reuse. Our vision for the Academy is to be the world's foremost source for professional training and continuing education on desalination and water reuse.

To that end, we have created a curriculum and a structure that offers an exceptional learning experience – one that inspires innovation and fosters excellence in the field. The Academy courses provide an opportunity to expand knowledge in all aspects of thermal, membrane and hybrid desalination technologies and practices. We also offer advanced modules dealing with important topics such as environmental impact, use of renewable energy, pretreatment and post-treatment, as well as the management and economics of desalination. And with courses held around the world and online, the IDA Desalination Academy makes learning accessible.



Training around the World

The Academy provides a comprehensive set of training events around the world to expand our reach and local relevance, and equips trainees with an in-depth understanding of desalination and reuse technology. Courses are co-located at leading water events, including the IDA World Congress and IDA Specialty Conferences offered as standalone opportunities, and are also offered to companies to enhance the knowledge of their staff.

Master's Degree Program

One of the most exciting programs was established between the School of Built Environment, Heriot-Watt University (HWU) in the UK and the Academy, for the purposes of offering jointly a program of study leading to a [Master's Degree \(MSc\) in Water Technology and Desalination](#).

HWU, which will award the degree, offers scholarship for qualified participants in what is a very competitive price of 12000 British pounds for two-year program. Courses are offered in an online distance learning format as well as on-site [HWU's state-of-the-art campus in Dubai](#). In addition to its Dubai campus, HWU has campuses in the United Kingdom as well as one in Malaysia. The university enjoys an established reputation for world-class teaching and practical, leading-edge research, and is ranked among the top international universities worldwide.

Online Learning

In collaboration with David H. Paul, Inc. (DHP), the Academy also offers an online training program, the [International Reverse Osmosis Certification \(IROC\)](#). The IROC curriculum was developed by DHP, a recognized leader in advanced water treatment training programs for more than 25 years.

The IROC International Reverse Osmosis Specialist Certification Program offers four training levels for certification that provide optimal knowledge and proficiency to operate, monitor, troubleshoot and maintain RO water treatment systems in the most cost-effective manner. In addition to providing comprehensive training for individuals, the IROC program may provide a competitive advantage for companies / agencies.

Academy Faculty

The IDA Academy currently has [14 faculty members and visiting instructors](#). These "Master Instructors" are the leading experts in their fields, and they bring the dual benefits of theoretical knowledge and practical, hands-on experience that offers real-world insights to each course participant.

Academy Courses at the IDA World Congress

We see a great opportunity to expand the IDA Desalination Academy into Latin America, building on the excitement of the [IDA 2017 World Congress on Water Reuse and Desalination](#) in São Paulo, Brazil. The Academy will conduct four courses, two before and two after the technical program.

On Sunday, October 15, David Paul will conduct two training courses:

- 8:00 to 12:00 Using Traditional Reverse Osmosis & Membrane Filtration for Water & Wastewater Minimization
- 13:00 to 17:00 Using Non-Traditional RO & Emerging Membrane Technologies for Water & Wastewater Minimization.

On Friday, October 20, Dr. Graeme Pierce will conduct two training courses:

- 9:00 to 12:45 A Comparison of Manufacturers' Technology for Membrane Filtration used in Water & Wastewater Treatment
- 14:00 to 17:45 A Comparison of Manufacturers' Technology for Membrane Bioreactors (MBR) used in Wastewater Treatment

Click [here](#) for more details and to register for the World Congress courses.

I encourage you to take advantage of the many wonderful training opportunities provided by the IDA Desalination Academy. You can check our course offerings by visiting <http://idadesal.org/academy/academy-events/>

Leon Awerbuch is an IDA Director, Past President and Dean of the IDA Desalination Academy. President and Chief Technology Officer of Leading Edge Technologies Ltd. He can be reached at letleon@comcast.net ■

Region Profile: Other Latin American Countries

Beyond the main markets of Chile, Mexico, and Brazil, desalination and reuse are nascent markets in the rest of Latin America, and significant variation in water resource allocation and socioeconomic level throughout the region does not allow for a single unified narrative. As the final installment before the World Congress meets in October, this article presented by Global Water Intelligence details some remaining opportunities throughout the region.

Along with Chile, **Peru** has also adopted the use of desalination for mining projects, although on a smaller scale. The significant amount of time for approval, coupled with the decline in commodity prices has also caused this market to slow, although signs of increasing demand are beginning to emerge. Examples of desalination projects awaiting approval in the mining sector include: Southern Copper Corporation's Tia Maria project (20,000 m³/d), which faces local opposition but is being pursued with renewed optimism following the election of president Kuczynski; the Toquepala copper project, which will employ desalination techniques if the mine is proven to have a negative effect on the neighboring city of Tacna's water supply; and the SWRO plant to produce water for molybdenum processing in Metminco's Los Calatos project, which is currently undergoing a pre-feasibility study.

As part of its plan for the development of water PPPs, the Peruvian government has proposed two desalination BOT SWROs to serve the coastal cities of Talara and Ilo that are still in the conceptual stage. Since the government lacks a parliamentary majority, its potable water reform was unsuccessful, unlike its wastewater equivalent, and the Talara SWRO was initially rejected by the provincial municipalities. The project in Ilo is still awaiting approval from municipal authorities. Work on the Provisur SWRO in Lima, set to supply local municipal drinking water needs, is due for completion in 2017.

Although neither desalination nor water reuse are very prevalent in **Colombia**, some water-stressed parts of the country are considering desalination to satisfy their water needs. San Andrés Island in the northwest Caribbean, for example, has been experiencing serious water shortfalls. As a result a new 4,315 m³/d replacement SWRO project

is set to be built on a fast track design/build basis, and there has been talk of solving the issue of prolonged summer droughts in the rural regions of Guajira with desalination. To this end, a memorandum of understanding signed between the Netherlands and Colombia in 2015 outlines a scheme to install wind-powered desalination projects in the area, similar to those already present in the Netherlands.

Other desalination plants in the country serve industrial purposes, like that at the Colombian refinery in Barrancabermeja where a 21,950 m³/d brackish water RO plant has been serving the site since February 2014, or reuse water for irrigation, utilizing desalination technology, such as in the Pacific Rubiales oilfield.

Further opportunities may exist in the remaining countries in Latin America, such as recent funding for water-related projects in **Argentina**, or small-scale industrial projects by local OEMs in **Ecuador**. Overall, the potential for the development of non-traditional water resources in Latin America is steadily increasing.

As communities continue to expand their water and wastewater treatment coverage to meet the basic needs of their growing populations and industries, and simultaneously advance policy framework surrounding non-traditional water supplies, desalination and reuse are set to play a growing role in ensuring a reliable and stable water supply for the region. ■

IDA World Congress: Nine Panels and Three Plenaries in Four Days

Delegates at World Congress 2017 will have a rare opportunity to attend several panels and plenaries over the course of four days exploring water reuse and desalination with industry leaders.



Countdown To São Paulo: IDA World Congress

On Monday, October 16 delegates can explore:

- **The Water, Energy and Food Nexus, and the Impact of Desalination, Water Reuse and Circular Economics.** A moderated, interactive session featuring distinguished panel members from UNESCO, FAO, World Bank, Inter-American Development Bank, and the IHE-Delft Institute for Water Education, this session is designed to create discussion on the importance of Water, Energy, Food Nexus thinking and the role of Desalination, Water Reuse, and Circular Economics in satisfying the growing need for water security. This panel will be co-moderated by Dr. Stefan Uhlenbrook and Shannon McCarthy, 1st Vice President of IDA.
- **Water Reuse and Desalination World Changing Projects Explained by Developers. (Plenary Panel Session)** This session will present five cases from different world regions. Prominent CEOs have been invited from the Middle East, China, Australia, Europe and America, each coming from public utilities or private corporations to provide a 360-degree perspective of projects and planning. The session will be moderated by Mr. Carlos Cosín, IDA Director.

On Tuesday, October 17 attendees can examine:

- **Legislation and Regulation for Reuse and Desalination in Brazil.** This panel will be coordinated by the National Water Agency (ANA) with the participation of the Health and Metropolitan Areas Ministry, federal and state authorities as well as representatives of industry. This discussion will focus on how existing regulations and legislation may either facilitate or hinder the potential for a broader use of water reuse and desalination as a solution to the water scarcity in Brazil. There will also be discussion on what further legislative efforts may be required to complement or adjust existing regulations. The session will be moderated by Ms. Maria do Socorro and Christopher Gasson.
- **Desalination and Reuse in Northeast Brazil.** In this panel, coordinated by the Ministry of Environment, representatives from the States of Northeast Brazil will discuss the existing experience in water reuse and desalination and plans for the future (in particular in the States of Ceará e Rio Grande do Norte). Additionally,

representatives from the federal government and community leaders will discuss the Agua Doce (Potable Water) Program, which provides sustainable basic potable water supplies in remote communities. Because this project is focusing on the use of solar energy, the co-chairman of the Global Solar Council will reflect on the Agua Doce approach within the global perspective of increasing solar energy applications in remote communities. The session will be moderated by Ms. Sue Murphy and Mr. Renato Ramos.

- **The Water Challenge in the State of São Paulo.** High-level representatives of government, academia, public and private companies will discuss the challenges of providing a reliable and safe water supply to one of the largest – and still growing – cities of the world. Situated relatively close to the sea, but at 800 meters of altitude, São Paulo relies on reuse as one of the strategic solutions to its increasing water demands. Sabesp, one of largest utilities worldwide, has already taken the lead in Brazil in the application of UF for treating municipal water supplies, with MBR for sewage treatment in the iconic city of Campos de Jordão and by participating in the Aquapolo project providing reuse water to an industrial complex. However, this is seen as just the beginning of a much wider use of these technologies. The session will be moderated by Mr. Gesner Oliveira and Mr. Maurice Neo, IDA Director.
- **Energy and Environment Blue Paper: The Challenges of Desalination and Renewable Energies.** This session will focus on the main conclusions from IDA's International Energy and Environment Forum, which took place in late 2016 in Miami, Florida. The session, which will include discussion about the main topics from this conference, it will be moderated by IDA Directors, Dr. Richard Stover and Mr. Leon Awerbuch.
- **Water Reuse: Drivers, Innovations, and Public Perceptions. (Plenary Panel Session).** This session will introduce findings from a market research report produced by Water.Desalination + Reuse magazine. A panel of industry experts will provide discussion and insights into key market drivers, the latest technology innovations and leading-edge thinking on water reuse project design. Topics to be covered include water

Countdown To São Paulo: IDA World Congress

reuse markets: challenges and opportunities. The session will be moderated by Ms. Liz Bury.

On Wednesday, October 18, delegates can discover:

- **Transformation, Renewable Energy and the Future Direction of the MENA Region.** The panel will address the current trends and transformation in desalination strategies. It will focus on privatization of water and power utilities, address the use of renewable energy to operate desalination plants, and discuss the trends in technology and the future research and development needs in the MENA Region. This session will be moderated by IDA Director, Mr. Leon Awerbuch and IDA Director, Mr. Antonio Casanas.
- **Desalination and Water Reuse in the Water Security Agenda: World Bank Partner's Experiences.** Water security is at the center of economic and social development and therefore at the core of World Bank operations. Water scarcity, exacerbated by climate change, could cost some regions up to 6% of their GDP, spur migration and spark conflict. Desalination and water reuse technologies can significantly contribute to alleviating this situation, but only when used under appropriate governance structures and financially sustainable service delivery schemes. The panel, integrated by experts and government officials from Mexico, Peru, Israel and Cyprus, will present international best practices in the creation of such structures. The session will be moderated by Mr. Zael G. Sanz and Mr. Miguel Angel Sanz, IDA Director.
- **Meet the CEOs - Suppliers: Market Trends and Challenges for 2020. (Panel Plenary Session).** This important panel session brings together the CEOs of leading businesses in the desalination and water reuse industry to map out their contribution to the future and explore how we can create growth in this sector. Innovations from EPC contractors, membrane suppliers and other technology companies delivered the cost breakthrough that made desalination and reuse an economic alternative during the 2000s. Questions to be explored in this panel include: How will these companies contribute to the continuing growth of the industry in the 2020s and beyond? What

are the obstacles? What are the opportunities? The session will be moderated by Mr. Christopher Gasson.

Concluding panels on Thursday, October 19 include:

- **Meet the Professors.** A moderated, interactive session featuring distinguished faculty members from leading universities offering degree programs relevant to the desalination and water reuse industries. This session is designed to create lively discussion among panel members while inviting delegates to ask questions.

The panel will address the importance of education in satisfying the growing need for research professionals, engineers and managers in desalination and water reuse. This will include the needs for communication between industrial organizations and academic institutions regarding required competencies and identification of career paths in desalination and water reuse, current advances in education techniques, attracting more students to desalination and reuse relevant studies, guidance in career entry and development, and how the private sector can participate in education programs through sponsored research, guest lectures, and internships.

IDA has an active Young Leaders Program (YLP), including members from both academia and private sector, aimed, among others, to boost the exchange between these two sectors, and align both in the promotion of desalination and water. As part of its activities, the YLP has programs for high-potential entry-level professionals in desalination and water reuse with the purpose of facilitating their professional and career development. IDA is establishing the IDA Sustainable Water Resources Foundation to support education in desalination and water reuse through scholarships, fellowships, and programs for continuing professional education. The panel will be co-moderated by Ms. Shannon McCarthy, IDA 1st Vice President, and Ms. Blanca Salgado.

- **China Desalination and Water Reuse.** This panel will provide a comprehensive overview of China's desalination and water reuse market – one of the world's largest. Chinese authorities, industry players and main suppliers will be represented on the panel.

continues on page 8

Countdown To São Paulo: IDA World Congress

China offers opportunities for unique solutions including multipurpose utilization of seawater, industrial recovery and reuse, combined production of desalinated water and salt, and important steps in zero liquid discharge. This is combined with China's significant efforts to develop their own membrane and thermal technologies and UF/MF solutions. IDA's Chinese Affiliate, MIAC, is organizing this panel, which will be moderated by IDA Director, Dr. Guoling Ruan and Ms. Hattie Wang. ■

World Congress Opening Ceremony Sets the Stage for Success in São Paulo

When IDA President Dr. Emilio Gabrielli welcomes delegates at the Opening Ceremony at the IDA World Congress in São Paulo, his remarks will call attention to not only the growing importance of water reuse and desalination on the world stage but also Latin America's rich history and bright future regarding water reuse and desalination. With a theme of Latin America – Where It All Began, his opening remarks are sure to inspire attendees to think about the region's history and its growing impact on the water industry. He will be followed by a distinguished roster of business leaders and dignitaries who will welcome delegates while setting the stage for an inspiring and thought-provoking World Congress.

Confirmed speakers at the Opening Ceremony include Mr. José Sarney Filho, Brazil's Federal Minister for the Environment; Dr. Benedito Braga, State Secretary of Water Supply and Sanitation of the State of São Paulo and President of the World Water Council; H.E. Saeed Mohammad Al Tayer, CEO of the Dubai Electricity & Water Authority; Mr. Niu Bo, Head of Water Saving Section, National Development and Reform Commission of the People's Republic of China (NDRC); and Miguel Angel Sanz, Chair of the World Congress Technical Program. ■

São Paulo's Carnival Spirit Shines Bright at World Congress Cultural Night

No visit to São Paulo would be complete without enjoying a taste of the city's famous Carnival – a spectacle of music, dance and flamboyant costumes set to the lively rhythmic steps of the samba. One of the

city's famed Samba Schools will bring all the excitement of Carnival directly to the IDA World Congress at a special Cultural Night on Tuesday, October 17. Performers will light up the evening with the festive spirit and theme of the world-renowned Samba Parade. Held at the World Congress venue, the World Trade Center São Paulo, the Cultural Night is open free of charge to full registration delegates. ■



IDA Welcomes Two New World Congress Bronze Sponsors

Sponsorship of the World Congress continues to grow. IDA is pleased to report the addition of Fluence Corporation and Veolia Water Technologies as new Bronze Sponsors.



Formed in 2017 following the consolidation of independent water treatment solution providers

Emefcy and RWL Water, **Fluence Corporation** was established with the vision of becoming the leading global provider of fast-to-deploy decentralized and packaged water and wastewater treatment solutions. With a team of 300 highly-trained water professionals with experience operating in 70 countries, Fluence provides local and sustainable treatment and reuse solutions while empowering businesses and communities worldwide to make the most of their water resources.



With more than 100 years of experience in desalination, **Veolia Water Technologies** is

a world leader in assisting municipalities and industries implement desalination strategies. Veolia's all-encompassing range of solutions and technologies is

Countdown To São Paulo: IDA World Congress

dedicated toward increasing the value of water resources. Veolia specializes in seawater or brackish water desalination plants and units of all sizes, utilizing four types of solutions: Multi-Stage Flash Distillation, Multiple Effect Distillation, Reverse Osmosis and Hybrid desalination, coupling MED and RO. Veolia produces more than 12.9 million cubic meters of desalinated water daily. ■

DEWA to Sponsor World Congress Closing Gala Luncheon and Awards Ceremony



IDA also announces that the Dubai Electricity and Water Authority (DEWA) will sponsor

the Closing Gala Luncheon and Awards Ceremony on Thursday, October 19.

DEWA was formed by a decree issued by the late Sheikh Maktoum bin Rashid Al Maktoum to merge the Dubai Electricity Company and Dubai Water Department, which had been operating independently before then. Both organizations were established by the late Sheikh Rashid bin Saeed Al Maktoum in 1959.

The Dubai Government fully supported the Electricity Company and the Water Department to provide Dubai's citizens and residents with a continuous and reliable supply of electricity and water. Since then, DEWA has made considerable achievements, and has been ranked as one of the best utilities in the world.

Today, DEWA provides services to more than 780,000 customers with a satisfaction rate that reached 95% in 2016. The UAE, represented by DEWA, has been ranked first in the Middle East and North Africa and fourth globally for the fourth consecutive year for ease of getting electricity as per the World Bank's Doing Business 2017 Report.

At the conclusion of the Closing Ceremony, IDA will present a World Congress flag to DEWA, "passing the torch" from the 2017 World Congress in São Paulo to the 2019 World Congress in Dubai. ■

Tours Give World Congress Delegates a Behind-the-Scenes Look at Plants in São Paulo

Delegates at the World Congress will have a unique opportunity to tour plants in São Paulo. Attendees are invited to register for one of the following tours:

Sabesp's Rio Grande Water Treatment Plant (ETA)

operates in São Bernardo do Campo located in the Southeast area of Greater São Paulo. It produces 5000 liters of water per second and supplies 1.5 million people in Diadema, São Bernardo do Campo and part of Santo André. It is an arm of the Billings Dam.

Aquapolo Ambiental is the largest enterprise for the production of industrial reuse water in South America, and fifth largest on the planet. The result of a partnership between Brookfield and Sabesp (Basic Sanitation Company of the State of São Paulo), it provides for a contracted 650 liters per second of reuse water for the Petrochemical Complex of the ABC Paulista Region. This is equivalent to supplying a city of 500,000 inhabitants, such as Santos.

Sabesp is a mixed-capital company responsible for providing water and sewage service in 366 municipalities of the State of São Paulo, and is considered one of the largest water and sewage service provider companies in the world based on the number of customers. Populations of 28.8 million people are directly and indirectly supplied with water, and 23.2 million people have sewage collection. In addition to the basic sanitation services, Sabesp is able to operate in other markets, such as drainage, urban cleaning and solid waste management services and energy. ■

IDA Forms Strategic Partnership with Cagece



IDA recently formed a strategic partnership with Cagece, a company that engages

in the treatment and supply of water in Brazil. Its mission is to contribute to the improvement of health and quality of life, promoting solutions in basic sanitation, with economic, social and environmental sustainability.

continues on page 10

Countdown To São Paulo: IDA World Congress

The strategic partnership is a meaningful alliance as industry leaders converge in São Paulo. As the leading global resource for information and professional development for the world's desalination and water reuse industry, IDA looks to create strategic partnerships with companies around the world whose values and goals align with IDA's commitment to develop and promote the appropriate use of desalination and desalination technology globally in water supply, water reuse, water pollution control, water purification, water treatment and other water sciences and technology.

Cagece joins a network of 14 businesses and organizations as strategic partners of the World Congress. ■

IDA Thanks World Congress Media Partners

A special thank you to our World Congress media partners including Water. desalination + reuse, Global Water Intelligence, FuturENVIRO, Hydro Magazine, The Water Network and Water and Wastewater International and WEF Publishing. The team of media partners helps disseminate news of the World Congress through a variety of traditional and new media. ■

Choose to Connect: Networking Events at World Congress

World Congress week features a number of evening networking opportunities for delegates to mingle in an atmosphere of camaraderie. Attendees are invited to connect with former and current colleagues and engage in dialogue with new business contacts throughout Congress week at a number of social events.

As the first social event kicking off Congress week, the **Welcome Reception** on Sunday, October 15 affords an excellent opportunity to connect with potential business contacts and book appointments or schedule meetings in the days to come.

The **Exhibition** will remain open Monday, October 16 and Wednesday, October 18 after the technical sessions end for delegates to enjoy some food, drink and social time with exhibitors and one another. Attendees are invited to stop by and celebrate being part of the IDA World Congress community.

A Samba School will bring all the excitement of Carnival to the IDA World Congress 2017 at a **Cultural Night** on Tuesday, October 17 and light up the night with a performance that embodies the festive spirit and theme of the world-renowned Samba Parade.

Hosted by IDA, the **IDA Young Leaders Reception** on Wednesday, October 18 brings together current and prospective members of the Young Leaders Program to talk about YLP goals and objectives and create opportunities for future networking and collaboration. This special event is open to members of IDA's YLP, along with anyone age 35 or younger who may be interested in joining IDA and the YLP.

Free admission to the exhibit hall area will be available on the last day of the Congress (Thursday, October 19). The Exhibit Hall will close at 1pm.

IDA will hold its **Membership Meeting** on Tuesday, October 17 at 5:30 pm. This is a great time for individual members to comment on the activities and operations of the Association - now and for the future.

Guests will gather after the conclusion of the Technical Program to celebrate the success of the 2017 World Congress at the **Closing Gala Luncheon and Awards Ceremony** on Thursday, October 19. The closing events will give attendees an opportunity to reflect on activities and events of the Congress while celebrating the winners of the Presidential and Technical Paper awards. Delegates will also have a chance to meet the next IDA President and Board of Directors and share in the excitement of the upcoming 2019 World Congress in Dubai. ■

Seven Must-see Sites in São Paulo

São Paulo offers numerous activities for delegates of IDA World Congress 2017. If you are attending World Congress, please take lots of photos and be sure to tag us at [@idadesal](#) [#ida2017worldcongress](#).

The São Paulo Museum of Art, known locally as MASP, has the most representative and comprehensive collection of western art in Latin America. You'll see works by Impressionists and modern masters – Renoir, Van Gogh, Matisse, Manet, Debret, Picasso, Miró, along with 73 works of bronze sculpture by Degas alone.

Countdown To São Paulo: IDA World Congress



Opened in 1911 and fully restored in time for its centennial, **São Paulo's Municipal Theater (Teatro Municipal)** is one of the city's top architectural treasures and cultural attractions. A major center for the performing arts in South America, the theater has hosted performances by internationally renowned singers, dancers, musicians, and performing artists that have included Carla Fracci, Rudolf Nureyev, Titta Ruffo, Enrico Caruso, Maria Callas, Arturo Toscanini, Hector Villa-Lobos, and Mikhail Baryshnikov.

Parque Ibirapuera is the one of the largest city parks in Latin America. The immense green space with its monuments, museums, playgrounds, gardens, trails, lakes, and performance spaces is a leisure paradise for the people of São Paulo, as well as a showcase of modern architecture and culture.

Auditório Ibirapuera, designed by Oscar Niemeyer, is considered one of São Paulo's best concert venues. Museu da Aeronáutica e do Folclore, the Aeronautics and Folk Art Museum, displays aircraft models and flight equipment on the ground floor, with nearly 20,000 exhibits devoted to folk art and traditions from all over Brazil filling the remaining floors.

The Museu Paulista of the University of São Paulo, commonly known in São Paulo and all Brazil as Museu do Ipiranga, is a Brazilian history museum located in the Southeast region of the city of São Paulo. Inside it contains large collections of costumes, decorative arts, paintings, and furniture of the Imperial Period.

Sé (Cathedral), is the neo-Gothic cathedral built on the site of an earlier cathedral and took from 1913 to 1967 to complete. The interior has several interesting features, including the 10,000-pipe organ and stained glass windows picturing the history of Catholicism in Brazil. Visitors can tour the crypt below the main church to see marble sculptures and tombs. The cathedral sits at the historic center of São Paulo, and is a good place to begin a walking tour of the old town.

São Paulo Street Art such as graffiti culture in Brazil is breathtaking, adding color and context to the city. Artists use the city walls to present all forms of art including abstract, portraiture and artwork with strong political statements. Avenida 23 de Maio and the Museu Aberto de Arte Urbana de São Paulo on Avenida Cruzeiro do Sul, display an array of artists with story-telling images that extend for miles. ■

And the Award Goes to...

IDA will present numerous awards at the World Congress including Presidential Awards, a Lifetime Achievement Award, Emerging Leaders Achievement Award in Desalination and Water Reuse, and Presentation Awards for Technical Papers. The awards for Best Written and Best Oral Presentation will be presented in five categories: Environment and Sustainability, Research and Development, Innovation, State-of-the-Art and Young Leaders.

In addition, delegates will have the opportunity to vote on-site for three other awards using the World Congress app. The categories are Best Presenter, Best Poster and Best Moderator.

A special thank you to the Awards Committee led by Borja Blanco (Spain) including Dr. Mike Dixon (USA), Dr. In Kim (Korea), Dr. Ronan McGovern (USA), Shawn Meyer-Steele (USA), Fayyaz Mubeen (Pakistan), Neil Palmer (Australia), Ziad Salibi (Lebanon), and Greg Wetterau (USA). ■

continues on page 15

IDA Connections continues coverage of Amane Advisors' study on digital transformation of the water sector with the second in a series of articles for Trendwatch.

Digital Transformation in the Water Sector, Part Two: Developing and Executing a Digital Strategy – Why Water Sector Utilities, Technology Providers and Service Providers Have the Most to Gain



By Gigi Karmous-Edwards

True digital transformation starts with a five to ten-year vision and a solid plan. Transformation of the water sector means that each utility around the world will be required to undergo its own internal transformation. GE's Jeff Immelt's assertion that "every

industrial company in the coming age will also have to become a software and analytic company" rings true for the water sector as well.

Amane Advisors recently conducted original research into why the water sector lags other sectors with respect to digital transformation. We found that the primary success factor for rapid adoption by utilities is whether they developed a comprehensive multi-year digital strategy and executed to that plan or not, instead of implementing various end-to-end point solutions without any overarching strategy. Although the focus of the

of the creation and successful execution of a digital strategy applies to every technology and service provider participating in the water sector.

Digital Strategy Explained

Our findings from this research show that utilities that establish a digital strategy focused on clear goals and outcomes, and execute to that plan, are well-equipped to implement multiple digital technologies at a much faster rate and with greater overall success. Such plans typically include revisiting and transforming their current processes, developing a roadmap for utility-wide digital infrastructure, and most importantly, migrating to an innovation culture and change management. Once staff is trained to be prepared for innovative implementation and open to change, true transformation can take place.

The development of a utility-wide digital infrastructure (see Figure 1 for typical components), rather than relying on technology provider infrastructure, makes it easier for data integration across solutions and legacy systems. Most utilities, however, have not taken that route and have implemented specific end-to-end digital point-solutions for some of the costlier problems without having a digital strategy. Such solutions include pressure monitoring to help identify network leaks, pump optimization to reduce energy costs, and automatic metering infrastructure, just to name a few. In most cases, when utilities implement solutions without common infrastructure, it usually results in more data silos and inability to take full advantage the multiple data sets.

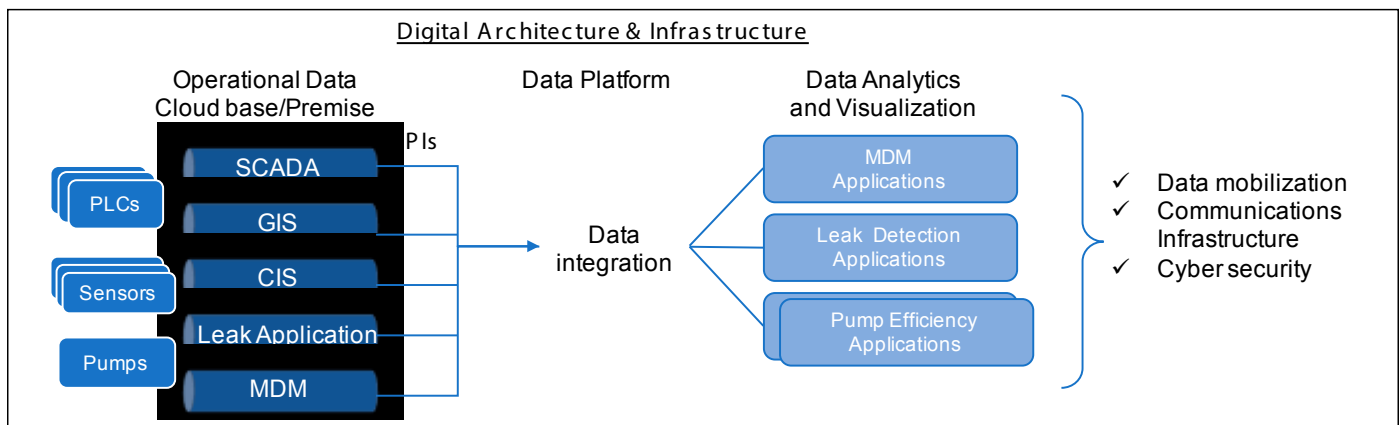


Figure 1

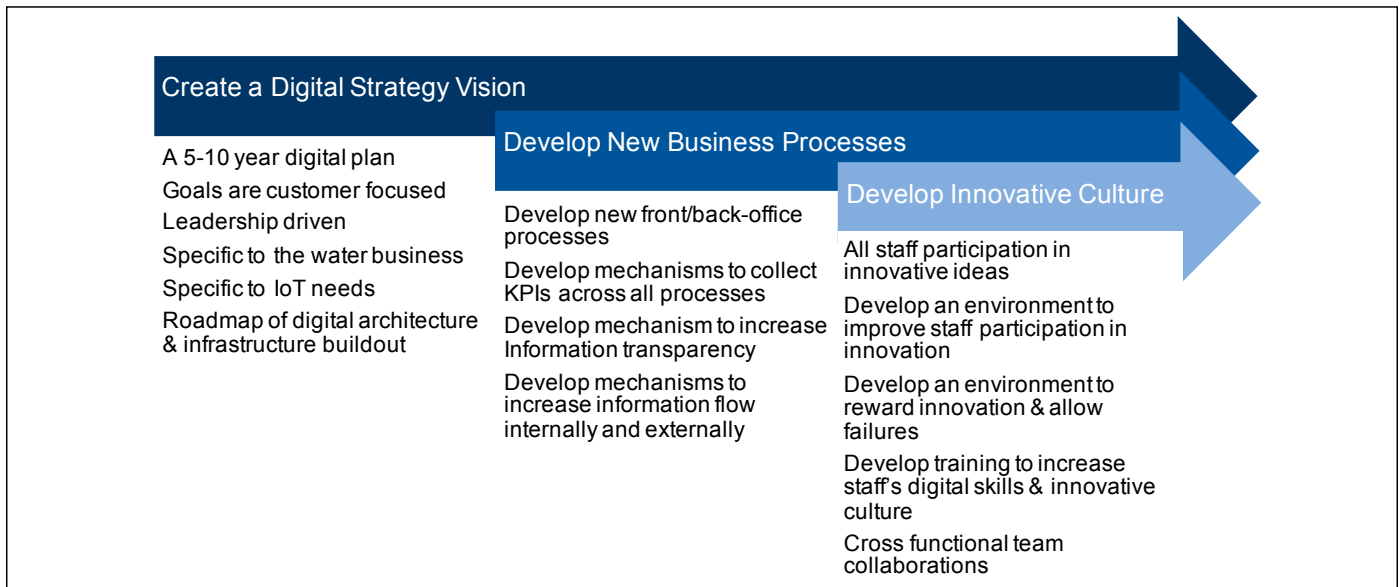


Figure 2

While pre-transformation point solutions do provide a reasonable return on investment, more value can be gained if data from the different solutions are accessible for better integration.

Finally, it is well accepted that digital transformation is more about the people and process, and less about technology. That was strongly reflected in the survey answers, which expressed that the top change needed at utilities to accelerate digital technology adoption is developing a stronger digital culture (see Figure 2).

Digital Utility Group

Amane Advisors is bringing together 50 of the most progressive utility leaders to form a global Digital Utility Group aimed at moving the water sector towards digital transformation. One area the group will focus on is the development of digital strategies through peer-to-peer sharing. Figure 3 expresses the three key concepts in building and executing a digital strategy.

Water Sector Service and Technology Providers

Water sector service and technology providers will find that they will also need to develop a digital strategy to compete in the water sector. Salesforce's CEO Marc Benioff says "speed is the new currency of business". As more and more utilities and technology providers in the water sector embrace digital transformation,

speed of product and service innovation will become the key competitive advantage. A solid digital strategy is a critical component of that success as we progress through the digital transformation.

Gigi Karmous-Edwards is a Director of Digital Business for Amane Advisors, an advisory firm specialized in the water sector. She can be reached at gigi@amaneadvisors.com. ■



Figure 3

Voting Period for IDA Board of Directors Is Now Open

Voting is now open for the 2017-2019 (Term 18) Board of Directors. The two-year term of IDA's current Board of Directors will expire on October 19, 2017, and the new Board will be installed on October 20, 2017 following the conclusion of the IDA World Congress.

Elections

Directors are elected by a direct vote of IDA's Class I and Class II members. Ballots are posted on the IDA website; IDA members must log in and vote electronically. Voting will close on September 27, 2017. The results will be posted on the IDA website by October 1, 2017, and members will be notified of the results by email. To cast your vote through the online voting ballot system, click [here](#).

Candidates for Election

The following individuals are standing for election.

Europe

Gerard Canton
Carlos Cosin
Christopher Gasson
Shannon McCarthy
Alistair Munro
Miguel Angel Sanz
Domingo Zarzo Martinez

Latin America/Carribbean

Alejandro Sturniolo

Middle East/Africa

Zamzam Al Rakaf
Rachid Ghamraoui
Mounib Hatab
Mohamad Jaroudi
Fady Juez
Nizar Kammourie
Imad Makhzoumi
Johnny Obeid

North America

Leon Awerbuch
Juan Miguel Pinto
Devesh Sharma
Rick Stover
Michael Tramer

Pacific Asia

Nobuya Fujiwara
Maurice Neo
Hideaki Kurokawa
Youqing LI

For complete information about each candidate, please view their biographical information on the online voting page.

For any questions regarding voting, please contact Nancy Pagels at npagels@idadesal.org. ■

IDA World Congress, Voting and More

continued from page 1

Another highlight of this issue is the continuation of our Trendwatch series on the digital transformation of the water industry, authored by Amane Advisors, which is researching this topic.

And finally, voting is now open for the next IDA Board of Directors. If you are a Class I or Class II member, you are eligible to cast your ballot. IDA is your organization and you can help shape its future. We hope you will take a few moments to take advantage of the opportunity to vote. ■

The World Congress also presents a fantastic opportunity for delegates from other parts of the world to share information about their technology advancements and best practices with their Latin American colleagues.

We are honored by the rich list of VIPs who have committed to join us, from Dr. Benedito Braga, State Secretary of Water Supply and Sanitation of the State of São Paulo and President of the World Water Council; Mr. Niu Bo, Head of Water Saving Section, National Development and Reform Commission of the People's Republic of China (NDRC); H.E. Saeed Mohammad Al Tayer, CEO of the Dubai Electricity & Water Authority; and many more distinguished speakers who will be announced in our upcoming bulletins.

The 2017 World Congress will also feature the first participation by such esteemed agencies as the World Bank and the Interamerican Development Bank, which

are now being asked to help to finance desalination and reuse plants, and UNESCO, whose 2017 UN Water Development Report is titled Wastewater, the Untapped Resource.

The World Congress is proof of IDA's commitment to be the leading point of connection for members of the global desalination and water reuse community. This is the foundation that supports the Congress and will continue to make it a premier event for years to come.

We sincerely hope that you will join us in Brazil, where in addition to expanding your business horizons, you can also enjoy the country's exuberant spirit. The IDA World Congress in São Paulo is the place to be in October! ■

Countdown To São Paulo: IDA World Congress

continued from page 11

Innovation Theater Showcases New Ideas, Promotes Collaboration at World Congress

The IDA Innovation Theater provides entrepreneurs, delegates and exhibitors an opportunity to showcase ideas and products, meet industry pioneers, and expand and share knowledge. If you are presenting at the Innovation Theater, be sure to promote your presentation on your website and social media networks. Stay tuned for updates on the IDA website and social media. Delegates can keep track of their schedule on the World Congress mobile app. ■



IDA Welcomes New Members

Corporations

Magharebia Technologie et Travaux, Tunisia
CMS Innovations, Australia

Individuals

Abdallah Mkarem, United Arab Emirates
Abdullah Mustafa Al-Johani, Saudi Arabia
Adnen Dachraoui, Tunisia
Ahmed Abdel-Hadi, United Arab Emirates
Alaa Rawas, United Arab Emirates
Amelia Price, United Arab Emirates
Amr Osman, United Arab Emirates
Ana Lopez, Denmark
Anas El Arras, Germany
Andres Galan, United Arab Emirates
Andrew Ian Sinclair, Australia
Anna Cortes, United Arab Emirates
Aurelio Ignacio Lopez Mier, Spain
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Pang Chee Meng, Singapore
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Paul Buck, United Kingdom
Peiyong Hong, Saudi Arabia
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Philip Narezzi, Australia
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Rashmi Menon, United Arab Emirates
Renzo Meinardi, Italy
Richard Woodling, Singapore
Rick Lea, United Arab Emirates
Romney A. Penn, British Virgin Islands
Sergio Hilsdorf, France
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Sleheddine Ben Halima, Tunisia
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Sahil Shah, United States
Saket Satish Ambardekar, Germany
Sebastian Leaper, United Kingdom
Sergio Verdugo, United States
Vinnie Venturella, United States
Yvana Ahdab, United States

IDA 2017 World Congress on Water Reuse and Desalination

October 15 - 20, 2017

São Paulo, Brazil
wc.idadesal.org

5th Water Arabia Conference & Exhibition

October 17 - 19, 2017

Al-Khobar, Saudi Arabia
sawea.org/waterarabia2017

Aquatech Amsterdam 2017

October 31 - November 3, 2017

Amsterdam, The Netherlands
aquatechtrade.com/amsterdam

IDW 2017

November 22 - 25, 2017

Busan, Korea
desalist.gdrc.or.kr/main

KDPA-APDA Joint Forum

November 24, 2017

Busan, Korea
desalist.gdrc.or.kr/main

AWWA/AMTA 2018 Membrane Technology Conference & Exposition

March 12 - 16, 2018

West Palm Beach, FL
amtaorg.com/event/2018

Desalination for the Environment Clean Water & Energy

May 6-10, 2018

Nantes, France
edsoc.com

OZWATER'18 - AUSTRALIA'S INTERNATIONAL WATER CONFERENCE & EXHIBITION

May 8-10, 2018

Brisbane Convention & Exhibition Centre (BCEC)
ozwater.org

CaribDA 2018 – Biennial Conference & Exposition

May 29 - June 1, 2018

Curaçao
caribda.com/event/caribda

Singapore International Water Week 2018

July 8-12, 2018

siww.com.sg

AWWA/AMTA 2019 Membrane Technology Conference & Exposition

February 25 - March 12, 2019

New Orleans, LA
More details to follow

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