



29th-31st October 2019 https://www.iotsworldcongress.com

The event brings together 350 companies providing solutions for the digitalisation of industries

# IOTSWC takes connectivity to the next level, including IoT, artificial intelligence and blockchain

Digitalisation is making a relentless headway and transforming all kinds of industries and economic sectors, as a result of which many companies are assessing the most suitable technologies to invest in. To help them in their decision-making and implementation, the time has come for another IOTSWC (IoT Solutions World Congress), the international flagship event that will bring together more than 350 exhibitors, including the world's leading suppliers of IoT, artificial intelligence and blockchain solutions. It will also host a congress with over 300 speakers who will discuss the benefits of digitalisation based on their experiences in different businesses, analysing the challenges and new implications opening up in this era of smart connectivity.

Organised by Fira de Barcelona in partnership with the IIC (Industrial Internet Consortium), the IOTSWC will be held from 29th to 31st October in Gran Via venue in the framework of Barcelona Industry Week. It's the largest international event devoted to the industrial internet and, throughout its history, has complemented its offering with other converging technologies that are accelerating the digital transformation of sectors such as transport, manufacturing, healthcare, energy, utilities, construction, infrastructure, retail, and agriculture, among others.

#### Maximum international reach

The companies set to attend include those from the information technology sector, software platform developers, cybersecurity companies, service and telecommunications providers, industrial automation firms, consultancy firms, hardware manufacturers, technological and R&D centres, incubators, associations and IoT-related entities.

The list of participating companies includes Microsoft, Sas, Vodafone, Nutanix, Deloitte, T-Systems, Libelium, Kaspersky, Orange, Siemens, Fiware, Hitachi, Relayr, Thingstream, Zyfra, Emnify, Linux Edge Foundation, Hewlett Packard Enterprise and ARM through their headquarters. Leading companies adopting IoT solutions from different sectors, for instance Roca or Eutelsat, will also attend via the industry partner programme. The countries with more exhibiting companies are Spain, the USA, China, France, Germany and the United Kingdom.

In addition, IOTSWC 2019 will have international and institutional pavilions. In this regard, the presence of stands from Greece, Austria, Germany, Spain, Romania, Sweden, France, Baviera, Catalonia and Barcelona has already been confirmed; these will contribute a large number of companies to the event, many of them SMEs and start-ups linked to the IoT ecosystem.

A new feature of this year's fair will be a specific area called IoT Solutions. Font, which will provide visibility for start-ups with original and innovative IoT, Artificial Intelligence, and Blockchain based products and services that have already been tested in the market and with potential for internationalisation. In partnership with Conector Startup Accelerator, about ten start-ups from all over the world have been selected, which, in addition to being exhibited at the trade fair, will take part in a competition to choose the best one. There will also be a networking activity involving investors, sponsors and visitors interested in finding out more about their solutions. The winning start-up will gain direct access to a Connector acceleration programme. The participating startups provide solutions ranging from cybersecurity to data analysis and enhanced fire extinguishing equipment monitoring.

#### **Testbeds and Congress**

Finally, one of the great attractions of the commercial section will be the testbed area, where there will be live demonstrations of ten industrial internet applications that stand out for their innovation and efficiency in process improvement.

This year the following will be on display: an application that measures the driver's behaviour to update the cost of insurance policies; drones, sensors and blockchain that monitor the water quality of the Volga River; an autonomous electric car equipped with a cybersecurity system that blocks attacks that jeopardize the reliability or privacy of the vehicle; a solution to check gas distribution networks, reducing energy losses and preventing fraud, a platform that combines IoT, artificial intelligence and 5G to provide predictive medical care and handle emergencies affecting the elderly and chronically ill; a system to inspect and repair wind farm turbines using drones; artificial intelligence and the cloud; an assembly assistance system which accurately guides the employees of a factory through the different steps to be performed; an application to enable farmers to view the status of their holdings in real time and facilitate their decision-making; and software based on artificial intelligence for submersible pumps used in oil wells.

In addition, the 200+ sessions of the congress will be divided into nine thematic areas: IoT enabling technologies, connected transport, manufacturing, energy and utilities, healthcare, buildings and infrastructure, open industry, blockchain and artificial intelligence. The latter two have their own monographic forums: Blockchain Solutions World (BSW) **and** Al & Cognitive Systems Forum (Al & CS) with the aim of deepening these two technologies that enhance and reinvent the internet of things capabilities.

The list of over 300 speakers includes American analyst Joe Barkai and directors of companies using IoT, IA and blockchain solutions, such as Hugo Boss, McLaren Technology Group, Airbus, Sanitas, Carrefour Group, Daimler Motors, Ibercaja, Roca, SNCF Réseau, Maersk GTD or Brussels Airport, among others. Executives of major technology firms such as ABB, Dell, Ericsson, Google Cloud, Huawei, IBM, Hitachi, Microsoft, SAS, Wipro, Fiware, Honeywell, Amazon Web Services and Thingstream will also participate.

IOTSWC will also host several sessions bringing together female leaders in the sector to address why it is crucial to attract and support women's leadership in the industrial IoT sector, as well as promotion to management roles and gender equality. Helena Lisachuk (Deloitte Consulting), Leila Dillon and Nicole Bulgarino (Ameresco), Mandy Chung (Women in IoT); Nicole Hagopian (The Walt Disney Company); Sheila Ronning (Women in the Boardroom); Jaishree Subramania (Microsoft); Teresa Tung (Accenture Labs); Jenn Mann (SAS) o Sally Saba (Sally Lion LLC) will be speakers at these sessions.

The programme of activities is completed by four technology workshops to provide deeper knowledge on the fundamentals of artificial intelligence, digital transformation, connected transport as well as about start-up companies in the IoT ecosystem. Participants will receive an official certificate from IOTSWC and the Industrial Internet Consortium. Similarly, we highlight the training programme, which includes more than 25 side events organised by companies and entities in the sector within the framework of the event.

Finally, remember that on 30th October the IoT Solutions Awards will be held, an event which is convened annually and which recognises the best innovative technology, business transformation experience, success story in industries and the best testbed of this edition.

IoT Solutions World Congress, together with the Blockchain Solutions World (BSW) and Al & Cognitive Systems Forums (Al & CS), form part of the Barcelona Industry Week, a trade fair platform that will hold seven events related to the digital transformation of the industry simultaneously, from 29th to 31st October in the Gran Via venue of Fira Barcelona. Industry From Needs to Solutions, MAX, the Barcelona Cybersecurity Congress and Ayri11, an automation and robotics conference, will also form part of the event.





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The Congress programme presents digitalisation experiences in various industrial sectors

# Mc Laren, Hugo Boss, Airbus, Carrefour and Merck among the speakers at IoTSWC 2019

The event organised by Fira de Barcelona in collaboration with the Industrial Internet Consortium (IIC) will present the experiences of companies using IoT, IA and blockchain solutions, such as McLaren Technology Group, Hugo Boss, Airbus, Carrefour, SNCF Réseau, Maersk GTD, Merck and Daimler Motors, among others. Executives of technology firms will also participate, as well as renowned analysts, who shall analyse the current state of the digitalisation of industries and the new challenges to be faced.

IOTSWC 2019, held from 29th to 31st October at Fira de Barcelona's Gran Via venue, will focus on nine core themes: technologies facilitating IoT, connected transport; manufacturing; energy and supplies; the health sector; construction and infrastructures; artificial intelligence and blockchain. These last two themes are centred on their own forums: Blockchain Solutions World (BSW) and AI & Cognitive Systems Forum (AI & CS) with the aim of examining these two technologies that enhance and reinvent the capabilities of the Internet of Things.

The event will organize more than 200 sessions and 400 speakers.

There will be 200 sessions, including talks, round table discussions and presentations, and more than 300 speakers are expected to participate. Also noteworthy will be the talk given by Joe Barkai, author of The Outcome Economy: How the Industrial Internet of Things is Transforming Every Business, who will reflect on the development of artificial intelligence.

There will be two specific forums on blockchain and artificial intelligence.

# Real experiences

The Congress will focus mainly on the best practices and success stories of companies that have implemented IoT, artificial intelligence and blockchain achieving significant competitive advantages to inspire attendees and help identify trends. For example the cases of Jonathan Neale, COO of the McLaren Group, and Jörn Göres, Director of Connected Cars at Daimler Motors, who will address the IoT revolution in the automotive industry and connected mobility.

Also taking part are Emmanuel Delerm, Director of the Carrefour Group, a pioneer in introducing blockchain technology to observe the traceability of the food sold in its establishments; and Anes Hodzic, Global VP Digital Transformation Officer of Airbus, with a project based on blockchain to track programmed routes of drones and to guarantee air space safety.

Benoit Besson from the French public railway company (SNCF) will present the results obtained after applying predictive maintenance via IoT on its 30,000 km of track, 15,000 trains and 3,000 stations. Erkut Ekinci, IT

Success stories in connected transport, health, energy, manufacturing, retail and other sectors will be presented.

manager of Fashion firm Hugo Boss, will explain how artificial intelligence and automatic learning are changing their production systems, market access and retail sales opportunities. Meanwhile, the Merck executives Jean-Luc Gerling and Lukasz Paciorkowski will share the biopharmaceutical firm's experience in redesigning their industrial automation plants.

Glenn Schnieders, product manager IoT of Brussels Airport will present its strategies for making passenger travel "smart" and "seamless" from their arrival at the airport, boarding the plane, crossing the border, collecting luggage to arriving home.

There will also be a 5.0 solution for public toilets in commercial areas, transport centres or service stations, promoted by Roca, which collects key data for improving operations, maintenance, cleaning, water management and client satisfaction. In addition, time will be devoted to analysing the healthcare revolution via IoT, with the examples of the UCSF Health hospital consortium in California and the Radboudumc hospital consortium in the Netherlands. In addition, the results of the Vall d'Hebron Hospital programme, which is monitoring the stress of caregivers of children with neurological disorders through the use of physiological sensors, and the Sanitas Hospital-at-Home service, which provides safe, high-quality and hospital-type care to patients in the comfort of their own homes, will be presented through a health platform connected to the IoT. Additionally, Naturgy IT will talk about IoT applications for monitoring gas networks, and the Danish firm Maersk will announce specific achievements in the use of blockchain in the maritime transport industry and the cost savings this represents.

The 2019 IOTSWC will analyse the implementation status of artificial intelligence and automatic learning technologies for process improvement. It will also address issues related to standardisation, as well as ethical aspects and social responsibilities that arise at the beginning of the era of smart machines. In this regard, it will also address the relationship and role of people and machines in Industry 4.0 to improve safety, productivity and processes. In addition, IoT enabling technologies will be discussed from the experiences contributed by companies from different industrial sectors. Special attention will be given to the potential provided by "Digital Twins", one of the main strategic trends in the industrial IoT.

#### **Leading Companies**

At the same time, executives from global companies providing solutions to digitalise all types of industries will also participate. These include ABB; Accenture Labs; Bosch Software Innovations; Dell Technologies; Deloitte; Ericsson; Fiware; GE Current; Google Cloud; Hitachi; Huawei; IBM, Indra; Intel Corporation; Microsoft; Nutanix; Oracle Corporation; Relayr; SAS; Siemens; Thales Group; Thingstream AG; Vodafone; Wipro and Zyfra.

### Women & Diverstity in IoT

There is still a gender gap in the technology sector, but things are starting to change. To see this trend, IoTSWC19 will devote several sessions to discussing with inspiring female leaders why it is crucial to attract and support women's leadership in the IoT industry, how to address promotion to managerial positions and what the gender equality goals for the future are.

Among the female participants are Helena Lisachuk (Deloitte Consulting), Leila Dillon and Nicole Bulgarino (Ameresco), Mandy Chung (Women in IoT); Nicole Hagopian (The Walt Disney Company); Sheila Ronning (Women in the Boardroom); Jaishree Subramania (Microsoft); Teresa Tung (Accenture Labs); Jenn Mann (SAS) and Sally Saba (Sally Lion LLC).





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Leading technology companies collaborating in the development of IoT, Al and blockchain solutions

# IoT Solutions World Congress includes ten Testbeds to be able to see the IoT in operation

How can wind turbines on wind farms be fixed remotely? Will there be variable insurance policies that adapt to our driving behaviour? How can cyberattacks affecting the safety of autonomous cars be tackled? How can the water pollution of a river be monitored? How can energy losses in gas distribution networks be detected? and How can one find out the condition of crops in real time? From 29th – 31st October, IoT Solutions World Congress (IoTSWC) will provide an answer to these and other challenges in their testbed area. They will demonstrate how the Industrial Internet, combined with Artificial Intelligence, blockchain, drones, 5G and other disruptive technologies, are transforming multiple sectors with new products and services that were beyond our imagination just a few years ago.

Testbeds are experimental platforms designed to apply new solutions and test them under real operational conditions. These trials explore developing technologies or combinations of these with those that already exist with the aim of creating products or techniques which are capable of generating new international standards. The ten practical applications to be exhibited at the IoTSWC 2019 have been selected by a committee of experts coordinated by the Industrial Internet Consortium (IIC) who are also supported by representatives from the IoT Council, Ametic, Cenesis, Machine Design and ABII.

The first of these installations, presented by GFT IT Consulting S.L., will exhibit a solution to personalise and adapt car insurance to driving habits. This system analyses drivers' behaviour in real time using cloud-based technology and machine learning. In this demonstration, visitors will be able to drive radio-controlled cars around a track and augmented reality will determine the risk profile of the driver and check that the connected car technologies can be applied to real life, thereby creating new mobility, predictive maintenance and safety services.

Also noteworthy is the innovative cybersecurity system from TÜV SÜD developed by LHP Engineering Services, Xilinx, National Instruments and Aicas GmbH which blocks any threat that endangers the normal functioning of an autonomous vehicle in the field of connected transport. A cyber hack on a connected electric car will be simulated; it will compromise functions related to braking, steering, speed and the battery in order to learn how to prevent these attacks from being successful.

### Drones, Al and blockchain in rivers and wind farms

Similarly, at the IoTSWC 2019, visitors will see how Siemens Gamesa Renewable Energy has revolutionised the inspection and repair works to the wind turbine blades, substituting techniques, that were formerly carried out through a risk-filled activity at a height of 120m, with autonomous drones and a digital solution based on artificial intelligence and cloud storage known as Hermes. The aerial devices take pictures of the turbines, while the solution analyses the photos to detect possible damage to the blades, achieving safer, quicker and more accurate inspections. Microsoft Azure, Covizmo DK APS, GamaSmart and Clobotics have all participated in the development of this project.

In another field, the Spanish firm Libelium, in collaboration with its distributor in Russia, Smart IoT Distributions, Airalab and Togliatti State University present their 'Drone on the Volga' to measure the water pollution in the Kuybyshev Reservoir of the Volga River. Water Pollution is a major problem in Russia as more than 10 million people lack access to quality drinking water, resulting in health problems for the

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citizens of many cities in the country. This project combines the use of drones, sensors and blockchain to promote the transparency of data in real time, easily detecting sources of pollution and opening up a market for drone-based services in smart cities.

## Monitoring of crop fields, patients and production plants

The event also offers visitors the chance to get to know the Smarteye Project, an initiative resulting in the collaboration between Ibercaja, EFOR, Microsoft and Libelium. Thanks to the direct application of the IoT, this project allows farmers to see the status of their operations in real time, helping them make affordable and effective decisions. It is a scalable product which can adapt to any type of crop field or farm helping it become sustainable.

Additionally, i2CAT together with ConnecThink and Monolitic will set up a testbed designed to improve the quality of life for the elderly and chronically ill. The platform which will be presented is based on IoT, Artificial Intelligence and 5G and will enable healthcare providers to improve emergency treatment and home visits and patient home care, thereby reducing hospital readmissions.

The Fiware Foundation, along with the IDSA, Prostep, Capvidia, SAS, IBM, Orbitor, and Fraunhofer have developed an experimental environment to evaluate the benefits of the new generation of Digital Twins in the manufacturing process, the monitoring of products through IoT and 3D printing services for spare parts. They are capable of exchanging data with real environments through blockchain to provide support and improve specific production processes in manufacturing plants.

Similarly, Bosch Rexroth S.L.U. will present a workstation that acts as an active assistant to an employee, providing them with all the information about the assembly tasks to be performed, indicating errors and intervening to correct them where necessary.

#### Smart gas and oil well networks

Nedgia, a gas distributor belonging to Naturgy, in partnership with MAHLE Thermoelektronic GmbH and ALLWIZE Communications will exhibit a gas network monitoring system to improve operations and carry out predictive maintenance tasks, aiming to prevent energy losses and fraud. The main new feature is the use of a new thermoelectric technology to feed an IoT device that operates independently and with very little energy consumption.

Finally, ZYFRA in partnership with Slavneft present a software solution based on Artificial Intelligence to control submersible electric pumps in oil wells. With this system, the production efficiency can be increased combining the well's pump operation mode and the oil flow in an automated way. According to Gartner, these Smart oil wells could help oil companies reduce their costs by 5% and increase production volumes a further 2%. The solution has been successfully tested over a period of 6 months in 500 oil wells in Western Siberia achieving increased production of 1.5%.

These ten testbeds automatically participate in the IoT Solutions Awards, which will also recognise the most innovative technology and the most outstanding success stories in transforming business models and the digitalisation of industries. The winner of the award for the best testbed from this 2019 edition will be announced on 30th October as part of a sectoral event that will take place in the Gran Via venue of Fira Barcelona.





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Innovative solutions including turtle tracking systems, health-related data protection and fire extinguishing systems

# IoTSWC selects 10 IoT ecosystem start-up companies for a new area and a competition

IoT Solutions World Congress (IoTSWC) opens a specific area under the name IoT Solutions. Startups. Font, where around ten emerging companies from several countries will exhibit their original and innovative products and services based on IoT, Artificial Intelligence (AI) and Blockchain. In addition to presenting their solutions, this selection of start-up companies will participate in meetings with investors and in a competition to access an acceleration programme. These include sea turtle tracking systems, smart automatic co-pilots to sail the high seas, fire extinguishing solutions and applications for monitoring patients and the protection of health-related data.

The start-up companies from this new area offer solutions which have already been tested in the market and which have real potential for internationalisation, ranging from cybersecurity to the intelligent monitoring and analysis of all types of data thanks to the combination of the IoT and artificial intelligence. For example, **Data Analysis Bureau** (United Kingdom), a company specialising in data analytics and machine learning, literally uses artificial intelligence in sailing with a solution designed to help professional sailors in solo sailing competitions. This autopilot system combines the data from the boat's IoT sensors (wind, speed, pressure, temperature, the boat's condition, etc.) to decide the movement of the rudder at all times, simulating human behaviour and performance when steering a boat.

**Titan FireSystem (Spain),** develops, manufactures and markets a range of innovative solutions for remote monitoring and control of fire extinguishing equipment through smart wireless manometers. This system is especially useful in automotive, chemical, agro-food, paper and distribution warehouse companies, sectors which are very sensitive to fire. **Sternum (Israel)** provides a highly scalable, holistic IoT infrastructure security solution that prevents real-time attacks and provides continuous visibility and monitoring.

The **Irnas Institute (Slovenia)** is an innovation laboratory specialising in the development, prototyping and manufacture of IoT devices, including a system of IoT cameras and tags used to track green sea turtles and capture video images of the moment when they nest and laying their eggs. The objective is to better understand the behaviour and feeding habits of these animals in order to promote the best protection and conservation strategies.

Meanwhile, **Bandora (Portugal)** presents Bandora.OM, the first automation solution with artificial intelligence in the market for commercial or industrial buildings that predicts and controls energy consumption, indoor temperature, the comfort level, occupation, malfunctioning, etc., in real time. Also in the start-up company area we will find **Agile Lab (Italy)**, a firm specialised in big data and analytical solutions, with the "aim2" solution that brings AI to the edge and adds computer vision to industrial processes, guaranteeing autonomous operations in real time.

Wiliot (United States) has developed a tag with processing power and sensors that doesn't require any batteries (it takes advantage of the energy of environmental radio frequencies such as Bluetooth, mobile telephone networks or WiFi), with an unlimited lifetime and much cheaper than traditional beacon devices. This tag converts everyday products such as clothing or packaging into smart products. Digital Republic

(Switzerland) on the other hand, offers prepaid data SIM cards to connect all types of devices to the Internet at a reduced price.

Blockchain will also play a key role in this space. **Jitsuin (USA)** has developed Archivist, a cybersecurity solution based on distributed ledger technology that permanently logs events, automates corrective actions and enables a collaborative framework across the entire supply chain. Finally, **IOTIED (France)** brings several applications and blockchain-based software for the connected health sector to IoTSWC 2019. These include CardioClues, which monitor high-risk patients and enables proactive and secure communication between them and healthcare providers; HealthChain, a secure application for sharing and managing personal health information that enables patients to collect and monitor their health data and share it selectively with others; and SuperNurse, a tool for coordinating medical care at home.

On 30th October, these ten start-up companies will participate in a competition in which they must present their products and business plans to a jury of industry experts and investors, who will choose the winning company which will be able to access a business acceleration programme from Conector, an accelerator based in Barcelona.

### Barcelona, the hub of new disruptive companies

During the last decade, Barcelona has positioned itself as one of the main European technological hubs. In 2019 the Catalan capital is the fifth city in Europe and the first in Spain with more technological start-up companies, according to Crunchbase, with around 1,100 new companies accounting for 34% of total start-up companies in the country. In addition, Spain is also the third European country with the greatest power in attracting technological talent from other European Union countries.

IoTSWC will visualise this potential from the start-up ecosystem in Barcelona, Catalonia and Spain and will welcome several disruptive companies within the stands of various institutions. Thus, for example, the Barcelona City Council stand, will exhibit AEInnova, with its own technology which takes advantage of the waste heat generated by industry and converts it into electrical energy that can be returned to the grid; Bitmetrics, specialising in the development of data solutions based on artificial intelligence, statistics and mathematical optimisation to offer highly efficient AI solutions; Tracktio, which works on the monitoring of assets, processes and personnel working in complex operating environments and Sparsity Technologies with Cigo! an interactive mobility management solution that integrates data from various sources.

Noteworthy on the Generalitat (Government) of Catalonia stand are Sigma Industrial Precision, a firm that has designed a predictive maintenance platform that allows companies to have useful information to increase the availability of their assets and improve the performance of machinery; Atlantis, with several mobility and tracking solutions based on IoT and geolocation for the control and safety of all types of vehicles for both private individuals and companies; and Maccion, a consultant specialised in the implementation of Lean Manufacturing in production plants to improve processes.

The shared stand of Red.Es and ICEX sees the participation of public entities dependent on the Ministries of Economy and Industry respectively, companies from several Spanish provinces: Help-Flash (Pontevedra), with an intelligent device that helps signal that there has been an incident on the road; Herta (Barcelona) with facial recognition software to identify people; Creatio (Burgos) with systems to monitor and control equipment and devices remotely; Geeksme Universall (Madrid) that has an IoT ecosystem that turns everyday objects into smart ones; Gladtolink-G2L (Palma de Mallorca) with document security and document management solutions; Guinnova Electronics (Navarra) with IP communication and security systems; Leanxcale (Madrid) with database tools for large scale and analytical operations (Madrid) and Mesbook (Valencia) with a technology platform that solves various operational needs.

EUROPA SUITES (1st floor)

# **BARCELONA**INDUSTRY Week



29th - 31st October 2019 www.firabarcelona.com

A total of seven events that showcase the boom of smart, connected and autonomous manufacturing

# Barcelona Industry Week unveils the most advanced and digitalised industry at the Gran Via venue

From 29th to 31st October Fira de Barcelona's Gran Via venue will host the main fair platform that promotes smart, connected and autonomous manufacturing. The third Barcelona Industry Week will encompass the holding of seven events: IoT Solutions World Congress, Blockchain Solutions World, the Al & Cognitive Systems Forum, Industry From Needs to Solutions, MAX, the Barcelona Cybersecurity Congress and Ayri11, the automation and robotics congress. They will all address how disruptive technologies not only improve manufacturing processes but also reduce their environmental footprint from different standpoints.

The latest BIW (Barcelona Industry Week) will bring together 550 exhibiting companies and 600 speakers, who will take part in the 400-plus congress sessions, talks, workshops and panel discussions that have been scheduled. A total of 25,000 professional visitors are expected to attend.

According to Salvador Tasqué, Director of Own Business at Fira de Barcelona, "Barcelona Industry Week is establishing itself as the main fair platform for supporting and driving the digital transformation of multiple sectors, with a total of seven events that complement each other and offer a cross-sectoral vision of all the existing innovations for the deployment of the most advanced industry, with the aim of making production processes more efficient and sustainable".

# IoTSWC, another step towards smart connectivity

IoTSWC (IoT Solutions World Congress), the largest international event devoted to the industrial internet, will fill Hall 2 of the Gran Via venue with 350 exhibitors, including the world's leading suppliers of IoT, artificial intelligence and blockchain solutions, such as Microsoft, Sas, Vodafone, Nutanix, Deloitte, T-Systems, Libelium, Kaspersky, Orange, Siemens, Fiware, Hitachi, Relayr, Thingstream, Zyfra, Emnify, Linux Edge Foundation, Hewlett Packard Enterprise and ARM. It will also incorporate a test bench area to showcase ten experimental platforms that overcome challenges in real environments and an area that will provide visibility for startup projects from different countries.

As for the congress, with more than 300 speakers, it will analyse the benefits of digitalisation based on real cases that illustrate the achievements and new implications that are opening up in the era of smart connectivity. Directors of companies that already use IoT solutions, such as Hugo Boss, McLaren Group, Airbus, Sanitas, Carrefour Group, Daimler Motors, Ibercaja, Roca, SNCF Réseau, Maersk GTD and Brussels Airport, will also take part, as well as representatives of the leading technology companies. Attention will also be paid to the state of female leadership in the IoT ecosystem.

Barcelona Industry Week will bring together 550 companies, 600 speakers and 25,000 visitors

The aims are to promote innovation and the digital transformation of different sectors

The discussions will focus on the IoT, artificial intelligence, blockchain, cybersecurity, 5G, 3D printing, advanced materials, robotics and automation

#### Blockchain and artificial intelligence

Together with IoTSWC, there will be two themed events on blockchain and artificial intelligence, two technologies that are taking off and reinforcing and reinventing the capabilities of the Internet of Things. These are BSW (Blockchain Solutions World) and Al&CS (Artificial Intelligence & Cognitive Systems) Forum, both organised by Fira de Barcelona in partnership with the IIC (Industrial Internet Consortium), as occurs with IoTSWC.

The former, BSW, will cover topics such as the use of blockchain to reduce digital threats and authenticate and verify people's identities and for data control, the signing of smart contracts and all kinds of electronic transactions. Discussions will also be held on the impact of this technology on the generation, distribution and consumption of energy, food security, the new relationship that may be established between farmers and consumers, global trade, healthcare, mobility as a service and the offsetting of CO<sub>2</sub> emissions.

The latter event (AI&CS) will analyse the state of the implementation of artificial intelligence and automatic learning technologies for improving processes. It will also address issues related to standardisation, as well as ethical aspects and the social responsibilities that arise in the relationship between smart machines and people. The list of speakers will include American analyst Joe Barkai, who will offer his forecasts on the future of artificial intelligence and machine learning technologies and explain the opportunities and threats posed by autonomous machines.

### Industry: advanced manufacturing

The fourth Industry From Needs to Solutions, which will occupy Hall 3, will enhance its industrial nature with the addition of a new machine tool exhibition area, which will join the spaces devoted to connectivity and data, 3D printing, automation and robotics, moulds and dies, new materials and design and services, with the aim of meeting the technological needs of companies in the industry 4.0 era. Industry From Needs to Solutions is organised by Fira de Barcelona with the support of the Free Zone Consortium. It is also partnered by the Ministry of Industry, Trade and Tourism, the Catalan Government and Barcelona City Council, as well as the Leitat, Tecnalia and IAM3DHUB technological centres.

The exhibition area, with more than 150 companies, will be complemented by the Innovation Arena, where some of the most innovative industrial solutions to boost smart manufacturing will be on display. In addition, the area devoted to 3D printing will continue to be important, with the holding of the In(3d) talks, during which more than 50 speakers representing industries that use this technology, such as Roland Berger, Mobility Goes Additive and RUAG Aerospace, will pool their experiences. Ayri11, the congress on automation and robotics, will once again bring together companies and young talents.

The Industry From Needs to Solutions programme will include MAX, a new congress focused on advanced manufacturing and its capacity to maximise optimisation in areas such as efficiency, products, business and talent. The congress will feature 40 speakers from companies such as DHL, Roche Diagnostics, Fluidra, Siemens, Damm, Seat and Cisco.

#### Industrial cybersecurity

Following the success of the first Barcelona Cybersecurity Congress, the forthcoming event will focus on cybersecurity in the industrial field, solutions, business and governance. The congress, to be held in Hall 1, will have 60 speakers, including representatives from Telefónica, Tata Communications and Microsoft, who will discuss the implementation of cybersecurity solutions in multi-cloud environments, the protection of medical devices and new tools to prevent identity theft in financial services, among other topics.

In addition, all the events that make up Barcelona Industry Week will be associated with other knowledge and networking activities involving more than 50 partner entities, including associations, professional bodies, technological centres and universities.

Barcelona, 17th October 2019

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