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Paving the Way for Smart Factories

Intel, EXOR International, JMA Wireless and Telecom Italia collaborate to demonstrate benefits of on-premise 5G private network alongside artificial intelligence.

VERONA, Italy--(BUSINESS WIRE)-- **What's New:** Intel, EXOR International, TIM and JMA Wireless teamed together to build an end-to-end smart factory in Verona, Italy, as an example of the benefits of Industry 4.0 digitalization to manufacturers of all sizes. Based on a breadth of Intel products, including Intel Atom® processors, Intel® Xeon® Scalable processors, Intel® FPGAs, Intel® Edge Controls for Industrial software and Intel® Edge Insights for Industrial software, the factory shows what is possible with the latest networking, cloud and edge computing technologies in an agile and modular application environment.

> *"We built this smart factory from the ground up to take advantage of the latest 5G and AI technologies from TIM and Intel. Our smart factory in Verona will demonstrate that digitalization can happen at any scale. This is increasingly important for small and mid-size manufacturers who are looking to stay innovative and competitive in the market. We can't wait to share what is now possible for manufacturers of all sizes with Industry 4.0 solutions."*
> –Claudio Ambra, chief technical officer of EXOR International

Why It Matters: The global smart manufacturing market is expected to reach roughly $506 billion by 2027 – a compound annual growth rate of 12.2%. Manufacturers are evaluating ways to take advantage of industrial Internet of Things (IIoT) technologies such as artificial intelligence (AI) and 5G to reduce maintenance and energy costs and improve workforce productivity. Yet, questions remain. EXOR's smart factory aims to demonstrate the operational benefits of digitalization, including:

- Autonomous human resources scheduling, reacting to changes in orders and employee availability in real time.
- A clear indicator of whether everything planned for the week, including supplies, components and documentation, is in order and ready for production.
- Real-time updates on order status and work-in-progress advancements, regardless of order size.

"We're seeing Industry 4.0 adoption accelerating and hearing from customers that they are interested in understanding how 5G and AI can speed up their digital transformation," said Christine Boles, vice president in the Internet of Things Group and general manager, Industrial Solutions Division at Intel. "EXOR's new smart factory is a great example of how deploying solutions based upon standards with open architectures can help lower maintenance costs, increase productivity and take advantage of new business opportunities."

About Experimenting with 5G: The smart factory will also include an on-premise 5G lab to demonstrate how manufacturers can build private networks and integrate with existing

solutions to deliver business value. The lab will explore 5G's ability to:

- Improve communication in an extreme factory design setup.
- Enable peer-to-peer communication through the use of industrial robots.
- Impact edge computing cluster connectivity versus wired connections.

About the Project: EXOR, an industrial PC and human machine interfaces manufacturer, is partnering with local service provider TIM to provide the 5G spectrum (sub 6GHz and 26GHz). This allows EXOR to capitalize on the benefits of Industry 4.0, providing engineers the ability to collaborate, explore, test, deploy and enable digitized technology. EXOR will open a portion of its smart factory floor and 5G laboratory for other companies to prove how they can move to Industry 4.0 with wireless communication.

EXOR will also pilot a visual quality inspection machine, leveraging Intel® Movidius™ VPU and Intel® Distribution of OpenVINO™ toolkit to automatically flag defects, dust and scratches in near real time. The solution will also classify those defects before sending the information to factory workers for assessment.

More Context: Intel Industrial IoT | EXOR on Intel Solutions Marketplace | Best Practices for Accelerating Industry 4.0 Transformation (TelecomTV) | Intel at MWC 2021

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