

Bearings on Blockchain

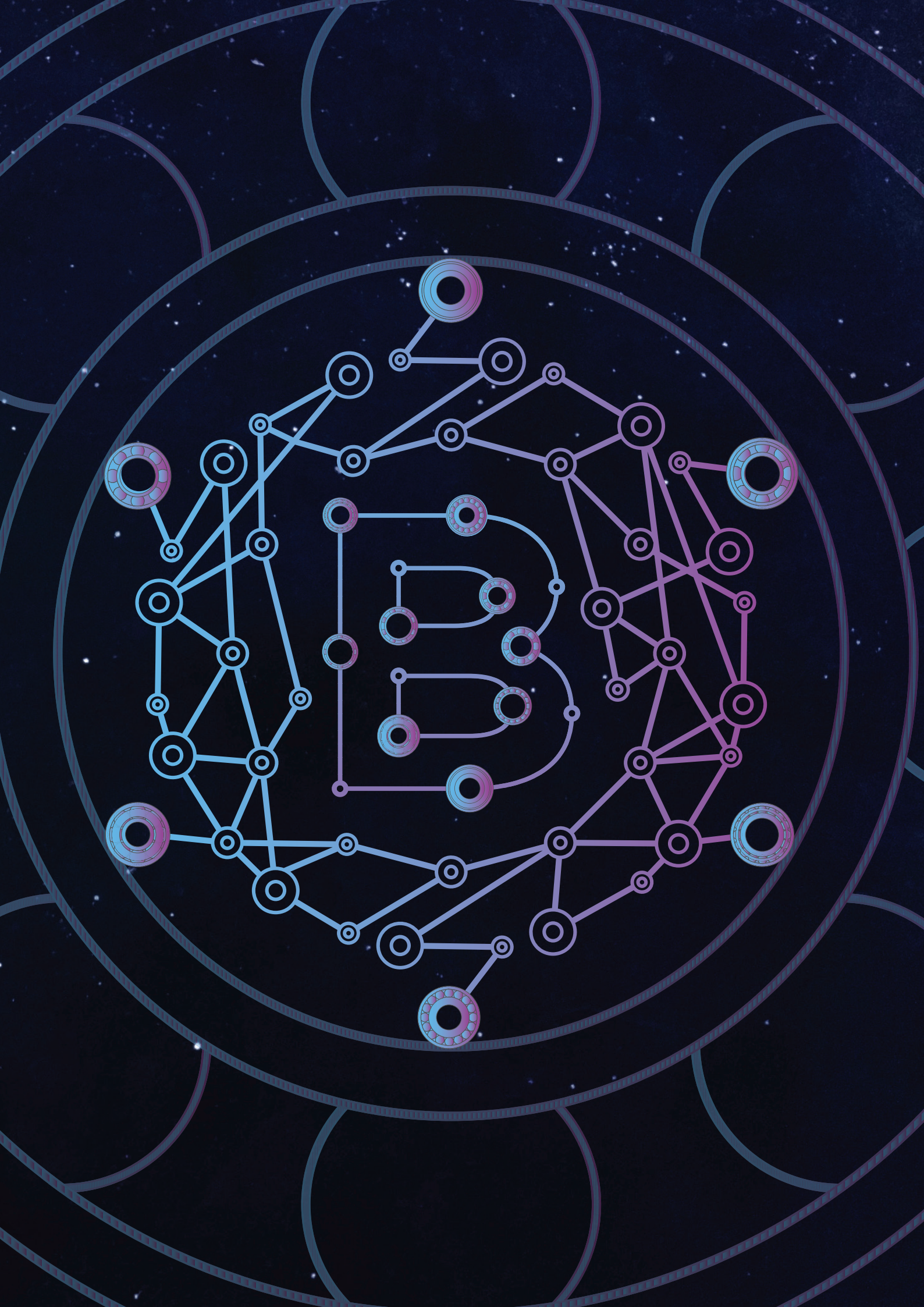
to beat
counterfeit
bearings & to
guarantee
traceability

Counterfeit bearings are unfortunately a quite popular phenomena worldwide that creates each year **damages for hundreds of millions Euro** to the premium bearing brands and, according to the World Bearing Association, jeopardizes more than 5 million regular jobs in the world, besides it represents serious risk for users safety in many critical applications.

Blockchain is a **Distributed Ledger Technology (DLT)** that may represent a valid tool to fight and to beat the counterfeit bearings phenomena. It consists in a **digital public ledger** for data validation, **without centralized control**, containing all the transactions made by the users of a certain network. Such database is **safe**

and transparent, is shared among all the network nodes, without any intermediation, in such a way that any participant can check the validity of transactions chain and get aware if anything wrong is entered into the chain. Each ledger is **immutable**, i.e. the info cannot be changed by anyone without the consensus of the network nodes.

Known to the public mostly for the cryptocurrencies (Bitcoin, Ethereum, etc.), indeed DLT may be very useful in several contexts: to guarantee the proper traceability in the supply chains, to assure transparency to the final users, to reinforce the brand identity and to protect the branded products from counterfeiting.





BLOCKCHAIN

ICT srl is an Italian technical, organizational and commercial consulting company specialized in bearings and bearing components industry and has recently developed **Blockchain solution to record all the main steps in the supply chain of bearings industry** (from raw material to the finished product sales to final user) and to associate a **digital token** to the physical good that makes impossible to clone it. The buyer who is proposed to acquire a product without the digital token knows automatically that a fake bearing has been offered to him.

The increase of transparency of supply chain – especially in those cases in which it is very fragmented – can be a very important tool to provide value to the bearing quality and **to guarantee that all the steps of the processes have been done according to the specifications**, complying with materials origins and with certain standards. Also aspects of **sustainability** and **ethics** can be made transparent to the market: e.g. the usage of renewable energy sources and recycled raw materials, the respect of human rights in the management of workforce and in the relationships with local communities.

Potential synergies of such approach with **Environmental Product certifications** (EPD, Ecolabel and others) and with **ISO 26000** for management of social responsibility of companies are quite evident.

Thanks to **smart contracts** (i.e. codes that translates contracts between two or more parts in such a way that they can work autonomously, without intervention of third parties) each bearing part moves from one operation to the following one only if certain criteria are effectively verified: e.g. the production place, certain



process and/or product parameters, a time interval between the process steps. Of course the integration of DLT with **Internet of Things, Artificial Intelligence** and proper sensors capable to identify quantitative KPI to support the products traceability may be important. Similarly it is fundamental to build a wide nodes network, “scalable”, assuring participation of all players as guarantee of its transparency and reliability.

The final user shall award who makes available as more details as possible on origin and manufacturing of bearings: more the

product is transparent and guarantees on its origin, more he will be available to pay. ICT has a **team of professionals** able to support the bearings manufacturers and distributors in enhancing the perceived quality of products, reinforcing the traceability system and providing a tool to avoid bearings counterfeiting and to assure the final clients on products quality. In addition to DLT based solutions, ICT team can also:

- Create or improve the products traceability management within the company Quality system according to ISO 9001, IATF 16949, ISO/TS 22163 or ISO 9100;

- Assess the value chain of the customer, optimizing the flows also through the new digital tools;
- Consult on Environmental Products Certifications for finished bearings and components, completing **Carbon Footprint** and **Lyfe Cycle Assessment (LCA)** on current and/or projected status and supporting in reaching Carbon Neutrality.

For more information, please get in touch with ICT team calling the number +39 (0)121 376811 or writing to info@consulting-trading.com.