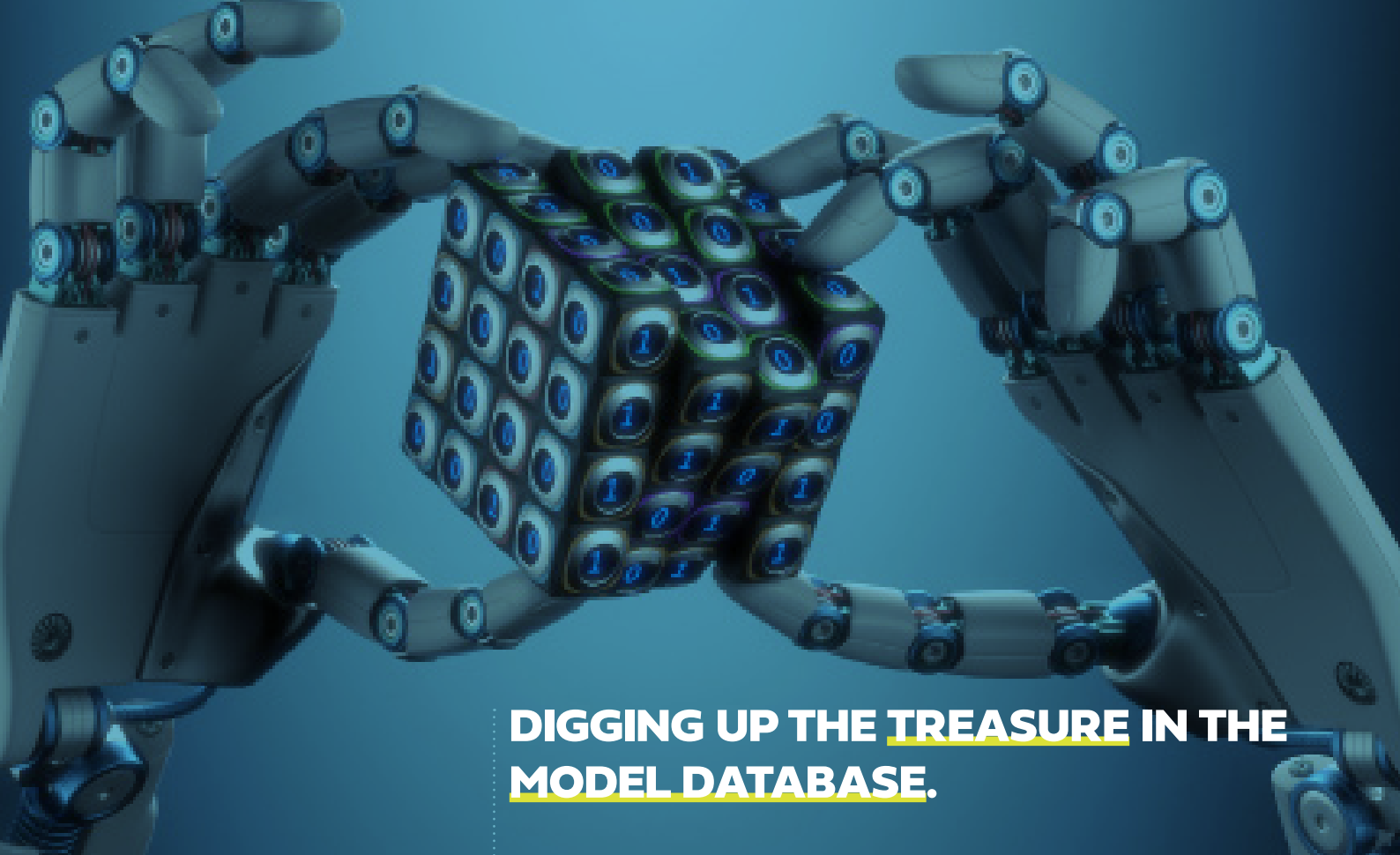# INTEGRATED PTC MODELSEARCH ADD-ON

Multotec PTY LTD │ Mineral Processing Equipment & Mining Services

# DIGGING UP THE TREASURE IN THE MODEL DATABASE.

Design and manufacturing companies in all industries know the problem: duplicates are hiding in their product database, and their number increases with each new design. Until now, there have been no efficient solutions for successfully searching for twins in the CAD cosmos. As a result, only supposedly new models are created at the design engineers' desks again and again, at high costs in real terms. Mining specialist Multotec from Australia has now found the perfect solution to this dilemma. The company received help from the other side of the world. From TECHSOFT, the software and technology partner for the manufacturing industry.

Australia has the world's largest reserves of iron ore, zinc and gold. Copper, cobalt and silver are also hidden deep beneath the continent's earth. To extract all these mineral resources from Australia's barren soil, state-of-the-art, robust and enduring equipment is essential. So it's no wonder that Multotec, as a global supplier of mining equipment, also discovered the Australian market early on. The company provides its customers with the necessary tools for all steps from soil testing, sampling, extraction and processing, to trans-

porting the ores, precious metals and stones.

At the main production site in Brisbane, in the far east of Australia, Multotec's design engineers are continuously designing new mining process equipment according to their customers' requirements. To do this, they rely on PTC's proven product development system, including PTC Creo CAD software and PTC Windchill for product management. The result of the excellent order situation is a well-stocked warehouse: At any given time, Multotec in Brisbane has 1,500 to 2,000 different parts in stock, most of them custom-made.

But do the designers at Multotec have to reinvent the wheel with each new order? Wouldn't it be more efficient and cost-saving to first search for suitable designs in the extensive CAD directory? Absolutely. But: even leading software solutions like PTC Windchill don't offer a viable solution for searching and matching new product specifications with existing ones. „It was usually easier to design new parts than to search for similar or even identical existing parts," knows Ben Lawson, engineering manager at Multotec. Easier, but also more
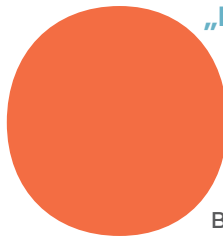
> **„ModelSearch enables us to significantly reduce our parts catalogue. We can reuse an unprecedented number of existing parts in a targeted manner instead of having to redesign them. In this way, in addition to design, we also reduce the workload of other departments such as planning, warehouse and production."**
>
> Ben Lawson, Managing Director at Multotec Australia

expensive. Because, of course, the cost of redesigning is always many times higher than using existing blueprints and parts.

A STAGGERING TRUTH AND COMPRE-HENSIVE KNOW-HOW TIP THE SCALES
In Multotec's case, there is also the fact that although PTC is an award-winning and internationally proven overall CAD solution, it is not widely used in Australia. Accordingly, it is difficult to find compatible supplements „Down Under". This challenge was also known to Nigel Kriel, Managing Director of Multotec in Australia. Together with Ben Lawson, he had been searching for a suitable solution for quite some time.

In November 2020, they found what they were looking for at their subsidiary LuCoTec. There, a „geometry-based similarity search" for PTC Creo from Austrian software provider TECHSOFT was just gaining popularity. Its name: ModelSearch. The data sheet for this solution reached Multotec internally. And it quickly turned out that ModelSearch was exactly what Kriel and Lawson wanted.

So Ben Lawson searched social media for ModelSearch's software experts on the other side of the world - and found Product Manager Philipp Hinterdorfer, whom he asked for a presentation of the hotly anticipated software solution. Hinterdorfer and his colleague Gerhard Schwab, Partner Sales Manager at TECHSOFT, responded immediately: First, the two presented a standard demo with in-house data. Then Multotec provided them with their own CAD data for an individual demo. The result

of this demonstration „shocked" the Australians: „TECHSOFT showed us in one case that we had a certain part in identical design 30 times in stock, with 30 different part numbers," says Ben Lawson. A shock with persuasive power. A few days later, the contract between Multotec and TECHSOFT was signed. „Gerhard and Philipp were the first to really have a convincing answer to all our questions," says Nigel Kriel, explaining the decision to go with TECHSOFT.

MODELSEARCH IMMEDIATELY BRINGS THE DESIRED EFFECTS IN DESIGN

Only a few weeks passed until go-live. The TECHSOFT team remotely installed the in-house ModelSearch solution - which, by the way, is not an interface. Rather, it is a fully integrated solution in PTC Windchill. This special feature is only possible because TECHSOFT has maintained a very close partnership with PTC for decades. The Austrians advanced early on to become a preferred product development partner of the software giant. This is how TECHSOFT in Linz, Austria, came up with the 3D CAD geometry search solution that today bears the name ModelSearch.

The combination of a proven partnership, tried-and-tested software and extensive know-how on the part of TECHSOFT meant for Multotec: TECH-SOFT took over the installation of the software and the input of the geometry data, the „footprints" of the products. For Lawson and his team, this meant very little project effort. One day, the engineering manager at Multotec simply had an e-mail from Philipp Hinterdorfer in his inbox. It's content, to wit: „It's done." And indeed, TECHSOFT had delivered the new solution „turnkey".

Since then, the Multotec designers have been receiving suggestions for existing, similar components completely automatically and in real time as soon as they start working in the CAD program and define initial specifications. If required, they can of course also search for possible „twins" at the touch of a button. What's more, because ModelSearch only uses PTC's existing data and is a fully integrated solution in Windchill, users do not need any training and do not have to navigate to other user interfaces in between.

MODELSEARCH REDUCES COSTS ACROSS THE COMPANY TODAY

After three quarters of a year, Nigel Kriel is convinced: „ModelSearch enables us to significantly reduce our parts catalogue. We can reuse an unprecedented number of existing parts in a targeted manner instead of having to redesign them. In this way, in addition

to design, we also reduce the workload of other departments such as planning, warehouse and production," says the Managing Director of Multotec.

Ben Lawson adds, „ModelSearch is the best remedy for the pain of duplicates and searching for parts." That „pain" can be quantified: a new standard part costs Multotec about 800 Australian dollars to build. At about ten new parts per month, that adds up to an annual cost of $96,000 - just for the design work. If you now add to this the costs of quoting, manufacturing, warehousing and the possible scrap of these items, the overwhelming savings potential of ModelSearch becomes very clear.

However, it is not only the design engineers who are convinced by the new software extension for Windchill, but also, for example, employees in the purchasing and service departments of the mining specialist. „The great benefits of ModelSearch are not only evident in the design department," says Ben Lawson. For example, the solution can be used for service inquiries, such as asking whether a customer would also be satisfied with a similar product if the desired one is not currently in stock. „Sometimes Sales also asks us for a specific part with very specific properties. Thanks to ModelSearch, we can

then provide information very quickly," says Lawson.

In short, after less than a year in use, ModelSearch is already achieving much more than what Kriel and Lawson had long sought without success: more efficient and cost-saving processes in all areas of the company, from purchasing to design and production to warehousing. And of course there is the TECHSOFT team, which Nigel Kriel appreciates: „TECHSOFT is a reliable partner that always finds a solution. But we are also convinced by the extremely pleasant way in which they treat us as customers," he says.