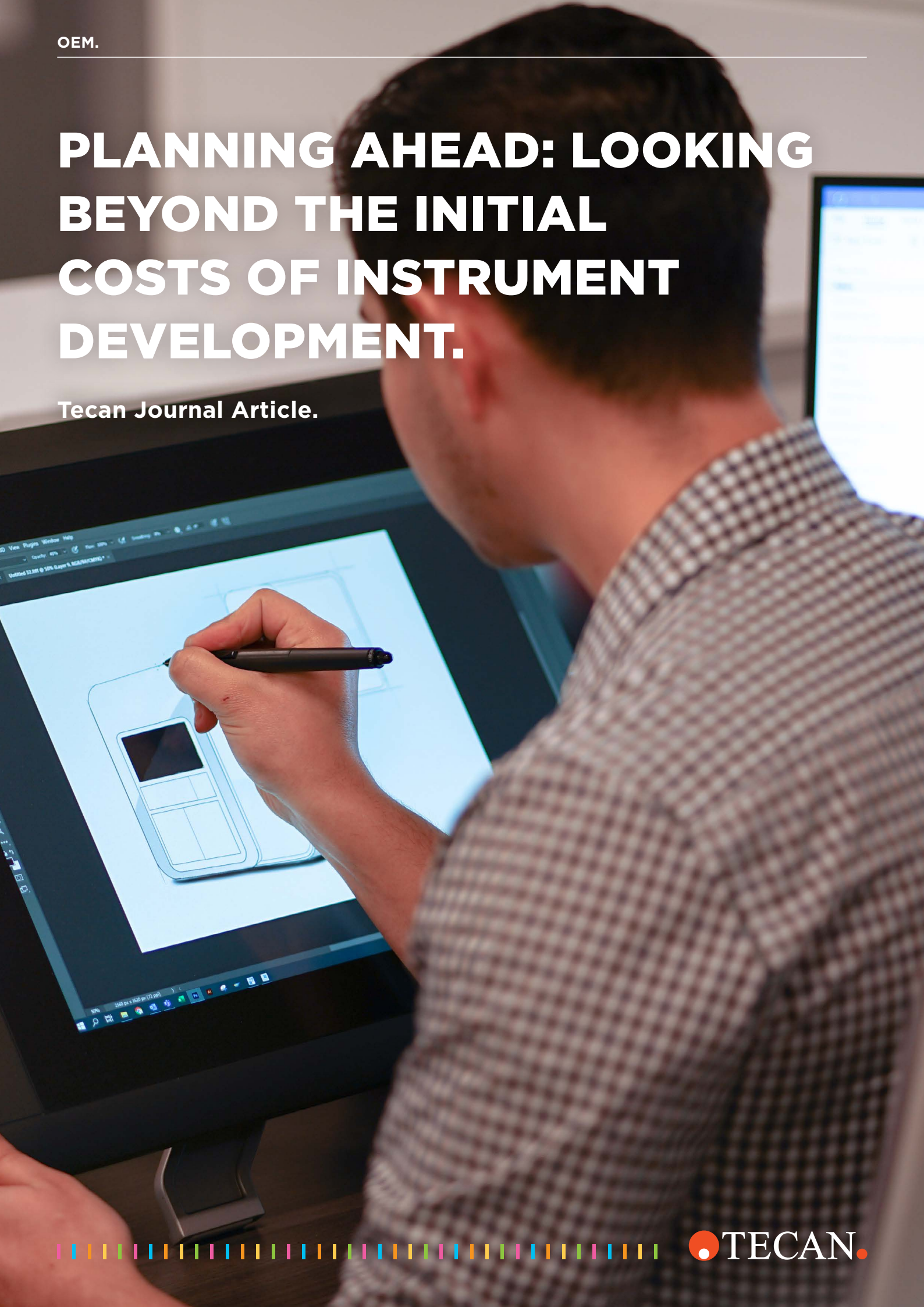
PLANNING AHEAD: LOOKING BEYOND THE INITIAL COSTS OF INSTRUMENT DEVELOPMENT.

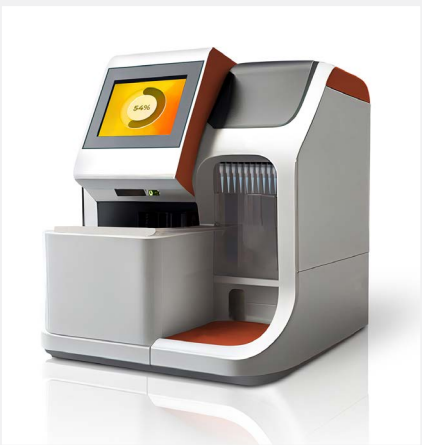
Tecan Journal Article.



TECAN.

Bringing a novel life sciences or diagnostics instrument to market is a lengthy and costly undertaking, requiring years of planning and execution. Companies understandably focus much of their energy on initial concept development and reducing the associated costs, with less thought into capturing the cost of an instrument over its lifetime. With most devices expected to be operational for 10 years or more, it's vital to think beyond the initial investment, factoring in the operational costs that impact the financials of both instrument developers and end-users for years to come.

Total cost of ownership (TCO) is a method to evaluate all the costs associated with a laboratory instrument for its entire lifetime. For the end user, TCO covers both the purchase and installation costs – capital expenses – and ongoing operating expenses, such as energy costs, maintenance activities, floor space, and reagents and consumables. By evaluating these elements, laboratories can make informed financial decisions that ultimately lead to sustainable and cost-effective investments in laboratory equipment. Alexander Matthews, Global Vice President of Business Development at Tecan, commented: "Laboratories take a risk if they only focus on the sticker price of an instrument, and not the entire cost over its lifetime. It is essential for laboratories to consider the other factors that affect TCO in the long term, as these can dramatically affect the return on their investment. As both an instrument provider and OEM development and manufacturing partner, Tecan is uniquely positioned to understand these potential hidden costs that customers may encounter, and address them in the design of the initial instrument. This leads to increased end user satisfaction and, ultimately, helps to extend an instrument's time on the market."



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The TCO model can also be applied to instrument developers, and includes developing, manufacturing and maintaining the equipment for its entire lifetime, from concept through to phase-out. When considering the development of a new laboratory instrument, it is essential for manufacturers to take into account TCO from the outset, engaging experienced personnel and implementing appropriate initiatives to maximize return on investment in the long term. TCO provides a holistic approach to product development by factoring in all costs related to new instruments, including initial development, manufacturing and regulatory approval, as well as installation and calibration at the customer site. However, there are less obvious after-sale costs to the manufacturer as well, such as the resources required for the provision of ongoing maintenance support, the need to maintain and ship a stock of spares (both for routine replacement and repair) and, eventually, the complexity and cost of decommissioning the instruments.

The main challenge of reducing TCO for manufacturers is considering, and understanding, all of the elements involved in developing and maintaining a complex instrument in an ever-changing environment. Madhu Vasudevamurthy, Vice President of Tecan's Partnering Business, explained: "Getting the instrument to market is often the 'easy' part, while less thought is usually put into what happens post-launch. This is where many challenges arise, and it is actually the most important aspect of reducing TCO. Of course, it's vital to build a robust instrument, but it must be done with the future in mind, anticipating everything from regulatory changes to obsolescence management. Each supplier should also be carefully evaluated, ensuring every part is available when needed to minimize potential instrument downtime for customers, and the associated risk of damage to reputation for manufacturers."

Designing a modular instrument can help to address many of these concerns, but this is often a daunting task. This is why many companies choose to develop their instrument using an OEM partner that has the resources – including regulatory knowledge and industry experience – to perform the necessary due diligence in product development and future planning. Madhu continued: "Partnering with an experienced company such as Tecan gives instrument developers access to a broad range of resources that they would otherwise need to look for or create internally, allowing them to better plan for the long term. Our extensive experience in the OEM sector allows us to build devices with the future in mind, reducing the headaches – and costs – for

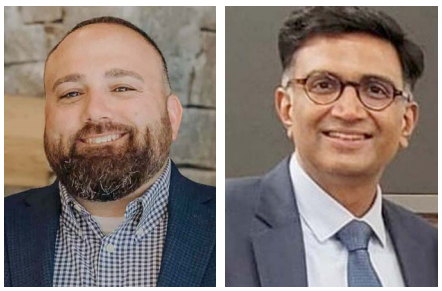
our partners and their customers. As a global company with multiple manufacturing facilities, we also have the ability to scale up manufacturing rapidly in response to increasing demand, or if our partner wants to expand into new markets. Our clients can be assured that, if they need to grow, we have the capacity, capability and worldwide presence to do so."

It is also important to consider that instrument development does not usually stop with the launch of the first generation instrument. The healthcare sector is fast paced, with new applications and technologies constantly being released onto the market. This can lead to rapid shifts in how laboratories are using equipment, requiring a flexible approach and ongoing updates to ensure continued relevance and market position. This could simply be the launch of new tests, applications and features, but may require a new generation instrument with new hardware.

Alexander said: "It's not just about getting the design right initially, as what the end user needs might have changed completely in five or 10 years. We therefore focus on building robust instruments that are both scalable and modular from the outset, and asking the difficult questions our partners might not have considered. Having our development and main manufacturing departments at the same site is also key to this, ensuring that the manufacturability and scalability of an instrument are always thought of during each stage of development."

Tecan has a strong track record of OEM partnerships spanning multiple generations of instruments, and recently helped one long-term partner create a new iteration of an existing device to offer end-users more flexibility in how it is integrated into their workflows. Madhu explained: "We helped design and build the original system, and sales were going well, but our partner wanted to improve obsolescence management and enhance performance and efficiency. We didn't change the functionality of the instrument, but rather made it more modular, as there were units on the original that were redundant for some customers. This allows customers to pick and choose what units they need, saving them money while making the instrument more appealing to a wider range of clientele."

"TCO also extends beyond hardware," Madhu added. "Instrument developers must factor in software updates, and how digital tools can help to reduce costs over time. For example, our Introspect™ software provides insights into the efficiency of their customer's instrument – including runtime, consumables usage and error rates – while our Service Cockpit solution is designed to provide comprehensive service and support management. These solutions help with remote monitoring and diagnostics, as well as predictive maintenance, which can increase uptime and end-user satisfaction, and reduce TCO, which ultimately improves sales and enhances the reputation of the manufacturer."



Alexander Matthews (left) Vice President Business Development, Contract Design and Manufacturing and Dr Madhu Vasudevamurthy (right) Vice President Partnering Systems

Alexander concluded: "What really sets us apart at Tecan, especially in the life sciences and diagnostics sectors, is that we understand the markets, we understand an instrument's life cycle – because we develop our own platforms as well – and we understand the science underpinning the end user applications. We can therefore really relate to both our manufacturing partners and their customers, helping to reduce TCO throughout the entire instrument journey."

TO FIND OUT MORE about Tecan's OEM instrument development and manufacturing services, visit tecan.com/synergence

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