tset

Why You Should Get an Automated Cost & CO_2 Calculation Tool

Excel’s Breaking Point: Why Spreadsheets Fail Modern Cost Engineering Needs

Excel‘s Breaking Point

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Once the cornerstone of cost engineering, Excel is struggling to keep pace with the complexities of a modern manufacturing environment.

Your company needs robust, specialized software to streamline cost calculations and integrate sustainability considerations. This shift is not just about staying current; it’s about maintaining a competitive advantage in today’s dynamic manufacturing environment.

The challenges of using Excel for complex cost engineering tasks – from data management issues to collaboration hurdles between purchasing, sales, and product development – can significantly

impact a company’s efficiency and accuracy. As the gap broadens between traditional methods and innovative solutions, it’s crucial for businesses to reassess their tools and processes.

This whitepaper examines seven critical limitations of Excel for modern cost engineering tasks and demonstrates how specialized cost calculation software provides a more effective solution for managing costs.

01 Poor Data Management and Scalability

As projects grow in complexity and scale, Excel struggles with handling large datasets, complex calculations, and multi-sheet dependencies.

With an increased volume of data, Excel's performance deteriorates, leading to slow processing times and potential system crashes.

Moreover, Excel's row and column limitations can be restrictive for extensive cost breakdowns. When projects involve thousands of line items or multiple levels of cost hierarchies, Excel's structure becomes hard to navigate. This lack of scalability often forces Cost Engineers to split data across multiple workbooks, further complicating data management and increasing the risk of errors.

The absence of a centralized database in Excel also poses significant challenges. Unlike specialized cost engineering software, Excel does not provide a single source of truth for cost data. This can lead to inconsistencies across different spreadsheets and make it difficult to maintain an accurate, up-to-date overview of project costs.

02 High Risk of Human Errors

Excel’s reliance on manual data entry and complex formulas significantly increases the risk of errors in cost calculations.

Common issues such as formula errors, broken links, and data overwriting can have serious consequences, potentially leading to substantial financial miscalculations.

This transparency issue is particularly problematic in cost engineering, where understanding the logic behind calculations is crucial. In Excel, it’s often challenging to find the right data, determine its source, and understand what calculations have been performed.

Users frequently struggle to trace calculations back to their origins, making it difficult to verify the accuracy of complex models or make necessary changes.

Furthermore, the lack of clear data lineage in Excel hinders effective auditing and quality control processes.

Without a straightforward way to track how specific values were derived, Cost

Engineers may spend valuable time trying to understand or modify existing models, increasing the risk of introducing new errors in the process.

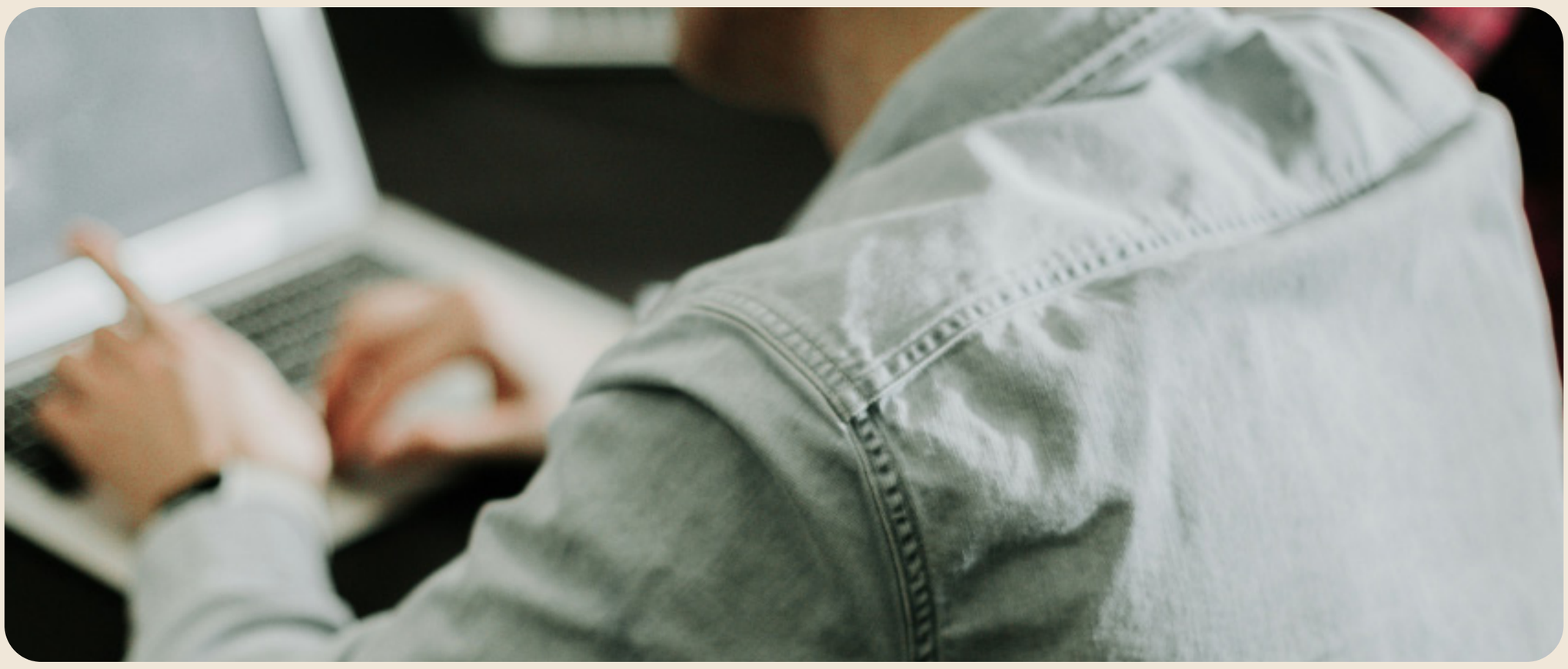
03 Challenging Collaboration and Version Control

Excel's limitations in supporting multi-user access and real-time collaboration pose significant challenges, often resulting in departmental silos and multiple versions of the same calculations.

When multiple team members need to work on the same cost model simultaneously, Excel often leads to version control issues. The lack of robust tracking mechanisms makes it difficult to identify who made specific changes and when potentially compromising data integrity and accountability. This issue becomes even more prominent when different departments maintain their own Excel files for identical calculations, resulting in inconsistencies and information silos.

The process of sharing and consolidating Excel files can be time-consuming and error-prone. Email exchanges of spreadsheets can lead to confusion about which version is the most current, and merging changes from multiple contribu-

tors can be a tedious and risky process. This inefficiency not only slows down the cost engineering process but also increases the likelihood of errors and inconsistencies in the final cost models.



Moreover, Excel’s limited ability to enforce user permissions and access controls poses security risks, especially when dealing with sensitive cost data. Without granular control over who can view, edit, or share specific parts of a cost model, organizations may find it challenging to protect proprietary information and maintain data confidentiality.

04 Over-Reliance on Individual Expertise

Excel calculations often depend heavily on the expertise of individual creators.

While their expertise is valuable, this over-reliance on individual knowledge creates significant risks. When a creator of an Excel model is unavailable, understanding and updating the spreadsheet becomes challenging. The personal structure and lack of standardization in Excel make it hard for others to grasp the expertise and knowledge embedded in the model. This can lead to errors when team members attempt to interpret or modify the spreadsheet.

This dependency on individual expertise also creates a steep learning curve for new team members. Additionally, the learning curve for new team members can be steep, especially when dealing with large, intricate spreadsheets. This not only

slows down the onboarding process but can also lead to reluctance to make necessary updates or improvements to existing models.

Furthermore, the highly customized nature of many Excel-based cost models can lead to a lack of standardization across an organization. Different departments or project teams may develop their own approaches to cost modeling in Excel, making it difficult to compare results or implement best practices consistently across the company.

05 Lack of Expert Support

Unlike specialized cost engineering software, Excel does not offer dedicated expert support or industry-specific knowledge.

When Cost Engineers encounter complex problems or need guidance on best practices, they are often left to their own devices. This lack of specialized support can be particularly challenging when dealing with industry-specific cost engineering problems or when trying to optimize Excel-based processes for specific manufacturing scenarios. Without access to expert guidance, organizations may miss opportunities to improve their cost engineering processes or fail to leverage industry best practices effectively.

Moreover, the absence of regular, industry-focused updates means that Excel users must manually stay abreast of changes in cost engineering methodologies and adapt their spreadsheets accordingly. This can be a time-consuming process and may lead to outdated practices persisting within an organization.

06 Inefficient Data Updating Process

Maintaining current data in Excel can be a time-consuming and error-prone process.

Users must manually update information, which can be particularly challenging for large datasets or when dealing with frequently changing market conditions. This manual updating process not only consumes valuable time but also increases the risk of working with outdated or inaccurate information.

In the fast-paced world of manufacturing, where material prices, labor costs, and other variables can change rapidly, the inability to quickly and accurately update cost models can lead to significant discrepancies between estimated and actual costs. Excel can’t easily connect to external data sources or update automatically, making it difficult to keep cost projections accurate and up-to-date.

07 Limited Software Features and Integration Capabilities

Excel’s generic interface fails to meet the specialized needs of cost and carbon calculations, lacking crucial industry-specific features and integration options.

While Excel is versatile for general calculations, its interface and visualization capabilities are not optimized for complex cost calculations, making it challenging to create intuitive cost models. This often leads to difficulties in interpreting data and communicating results effectively across teams.

Unlike specialized automated cost calculation software, Excel also lacks frequent feature releases focused on optimizing cost calculation processes. As a result, users miss out on innovative features and best practices that could significantly enhance their cost engineering workflows.

Moreover, Excel’s limited integration capabilities with other software tools, such as ERP systems, often require manual workarounds. In today’s interconnected business environment, this results in data silos, inefficiencies, and potential errors in cost calculations.

In contrast, purpose-built cost and CO_2 calculation software like Tset addresses these limitations with a user-friendly interface, seamless integration capabilities, and regular updates tailored to cost engineering needs. Tset emerges as the ideal solution for automated calculations in modern cost engineering environments.

Why Tset Outperforms: Benefits of a Purpose-Built Cost Calculation Tool

Tset is a cost and carbon calculation software that addresses these critical needs and offers significant advantages over traditional Excel approaches.

Key benefits of Tset include:

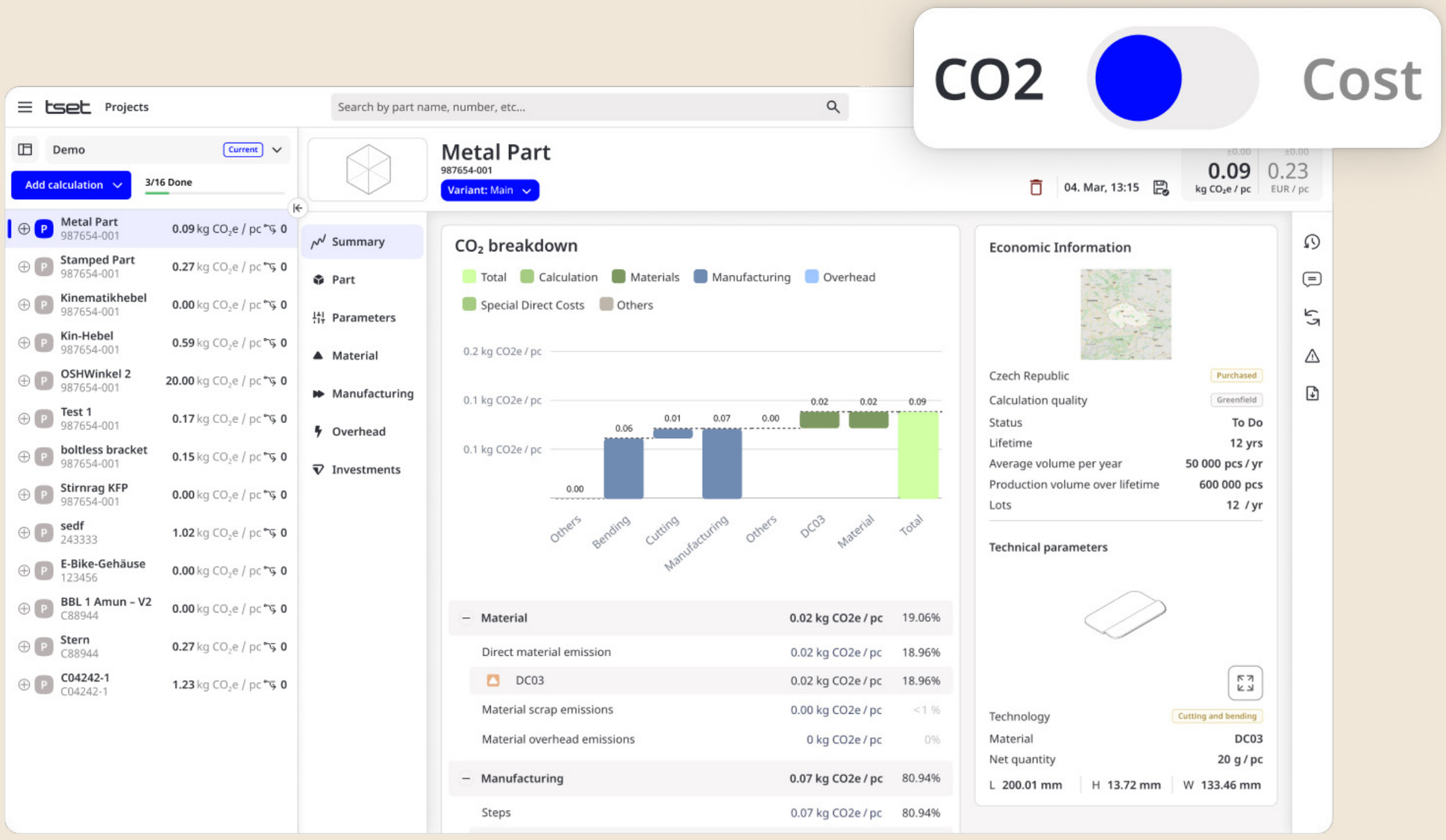
. **User-Friendly Interface:** The software caters to both seasoned experts and newcomers, offering a clear visual overview of complex calculations and serving as an effective learning tool, streamlining the cost engineering process for users of all skill levels.

. **Centralized knowledge base:** The market for cost engineers is not only growing but also experiencing a significant age and experience gap. As seasoned Cost Engineers leave organizations due to retirement or competitive offers, it is crucial to maintain an easily accessible and comprehensible centralized knowledge base for employees to keep the knowledge and stay informed.

. **Expert Support and Continuous Improvement:** Unlike Excel, Tset offers comprehensive expert support, ensuring you are never left to navigate complex challenges on your own. Our team provides regular software updates and comprehensive training programs. Importantly, Tset automates the process of keeping your crucial master data up-to-date, eliminating the need for manual updates and reducing the risk of errors.

. **Enhanced Collaboration:** Tset's centralized, web-based software breaks down organizational silos, facilitating easy access across departments with simple link-sharing for calculations and role-based access control for data security.

. **Integrated Cost and Carbon Footprint Analysis:** In addition to cost calculation, Tset enables simultaneous CO_2 footprint estimations. The software leverages a built-in emissions database for accurate sustainability assessments, allowing users to set and track CO_2 targets early in product development.



. **Seamless Integration:** Unlike Excel, Tset provides a professional API and support for Single Sign-On systems, enabling smooth integration with existing applications, ERP, and PLM systems.

Conclusion

The shift from Excel to specialized cost engineering software is a strategic move that can significantly impact your company’s performance and competitive advantage. As industries continue to evolve, those who embrace these innovative solutions will be better positioned to navigate the complexities of cost management and drive informed decision-making.

It’s time to move beyond the limitations of spreadsheets and leverage the power of specialized cost engineering software. Your company’s future success may depend on it.

Ready to break free from Excel’s limitations?

Discover how Tset software can revolutionize your cost calculations, enhance collaboration, and provide the transparency and accuracy your business demands.

Book a demo today and transform your cost engineering process.

Call us at +43 676 4487761 (We offer support in DE, EN, and NL).

About Tset

Tset Software GmbH - Tset for short - is a leading solution for product cost and CO_2 analysis and was founded in 2018 by Andreas Tsetinis and Sasan Hashemi. With its holistic cost and carbon management software, Tset enables the manufacturing industry to maximize cost- and CO_2-efficient product development, production, and procurement. As costs and CO_2 emissions are always calculated together, customers can showcase the benefits of their own products and CO_2 avoidance strategies with high precision. In contrast to standard market assessments, Tset's software provides very comprehensive and accurate analyses based on a large amount of secondary data already available, with

minimal additional primary data required. The security of data is ensured through TISAX certification, which validates information security in the automotive industry. In addition, the solution is cloud-based and offered as a SaaS product, making the system ready to use andeliminating internal IT costs for customers. Tset’s customers come mainly from the automotive, medical, electrical, and aerospace industries, including well-known companies such as Brose, ZF, BMW Group, and Stabilus. The team of over 80 internationally experienced mathematicians, software developers, and manufacturing experts is growing steadily, doubling every year since its foundation.