

Flexibility as the key to the future

How transparency fosters flexibility and makes industrial companies more competitive



Flexibility has become a crucial competitive advantage to ensure sustainable and profitable production in a volatile world. Nowadays, speed is increasingly the key to success – yet many industrial companies are trapped in fragmented operating models, processes and IT landscapes, and operate too slowly and without a consistent data basis.

To increase their adaptability and agility, industrial companies must focus on a **combination of processes, technologies and culture**. This requires a step-by-step approach. By continuously improving data availability and quality, companies gain valuable insights and unlock new courses of action – and these options, in turn, offer flexibility. Critical to success is eliminating data loss, system fragmentation, and isolated solutions to build progressive end-to-end transparency, treating production as a dynamic, integrated ecosystem enabled by flexible software platforms like iDIP.

Why flexibility is the new ‘turbo’

Many industrial companies struggle with fragmented processes and IT landscapes, causing knowledge and information to remain hidden. The result is that decisions take weeks rather than days. There is a great deal of untapped potential for improvement and business growth.

WHY FLEXIBILITY IS VITAL IN TODAY'S ENVIRONMENT:

Resilience to supply chain disruptions and fluctuations in demand: Early identification of and adaptation to changes in supply chain dynamics and demand

Customisation and batch sizes of 1: Flexible production technologies and processes that enable the provision of customised products at the cost of mass production

Strategic flexibility: Identification of new business areas and scenario planning

Retention of skilled workers: Employee training, empowerment and retention are key factors for standing out from the competition – alongside digitalisation and increased flexibility

A roadmap to greater flexibility: three steps for industrial companies

Industrial companies must implement a combination of processes, technologies and culture to embed flexibility within the company in the long term.



STEP 1

Analysing the process and data landscape

Specifically, the first step involves reviewing the current situation and implementing initial initiatives to serve as a basis:



Performing a value stream analysis:

Identify non-value-adding activities



Analysing processes in terms of data density:

Identify processes and process steps that generate large amounts of data, assess the quality and relevance of this data, and determine the value-adding activities in which the relevant data is utilised



Carrying out a data inventory and improving quality:

Identify the most significant data gaps and prioritise them according to their impact on the business; then define initial measures to improve data quality



Streamlining processes:

Minimise non-value-adding activities and reduce losses

Typical pitfalls in this first step include unrealistic expectations regarding process and data quality, and the lack of a cross-functional team. The data used as the basis for further analysis can be expanded step by step as initial results emerge and momentum builds. Putting together a cross-functional team ensures that hidden correlations are brought to light, which may reveal further opportunities for optimisation.



STEP 2

Establishing a solid data basis and enabling change

Scenarios can then be developed and tested, taking into account value creation and the existing data basis and quality. When correlations and latent knowledge are brought to light by interlinking information, this creates the opportunity to harness this knowledge for the internal optimisation of processes or external marketing.

Practical example: Using traditional Lean methods to introduce technology effectively

At IGP Powder Coatings, for example, the initial focus was not on the technology, but on understanding the company's own processes. In accordance with the Lean principle of identifying waste using traditional Lean methods, the initial situation was first systematically analysed while collecting data at the same time. This provided a reliable picture of the actual process flows and waste categories. Based on these findings, the iDIP software solution was then introduced as a tool to specifically reduce the inefficiencies identified, increase transparency and support a culture of learning from mistakes through digital means. Markus Wagner, COO of IGP Powder Coatings, summarises the approach as follows: "Provide context and build momentum!" Small teams – with the full support of senior management and the Board of Directors – can make a significant impact by adopting a Lean approach and thereby measuring the baseline and defining target states.

This makes it clear that digitalisation delivers its greatest benefits when it is based on sound analysis and a clear understanding of reality. The following measures can support this process:



Data consolidation:

Set up a simple, functional data lake to consolidate the relevant data and enable cross-analysis



Data expansion:

Complete and/or expand the relevant data – manually, if necessary, during a pilot phase



Smart connectivity:

Gradually integrate production and IT systems to enable more detailed performance analysis – with the use of IoT sensors for real-time data where appropriate



Use of artificial intelligence:

Take advantage of the experience gained from experiments to develop scalable deployment models and implement robust governance

Typical pitfalls in this second step include becoming excessively absorbed in analyses and taking too little action. Setting priorities based on value contribution helps maintain a focus on costs and profitability. During this phase, it is important to build credibility and to involve the entire workforce – from senior management right down to employees on the ground – and engage them through 'show and tell'.



STEP 3

Putting flexibility into practice and establishing a culture of agility

The aim of the third step is to establish data-driven and rapid decision-making as standard practice. This step must be embedded in the organisational culture so that employees actively embrace the newfound flexibility – because technology alone is not enough to guarantee success.



Process optimisation:

Integrate the expanded data and information basis into streamlined processes; start by automating individual process steps and, subsequently, entire processes



Shorter decision-making processes:

Strengthen individual responsibility by providing a better information basis and, where appropriate, making recommendations generated by the algorithm



Further training and multi-skilling:

Revise and extend existing roles at every stage of data-driven automation; encourage employees to develop multiple skills to enable flexible deployment and greater responsibility

During this step, it is essential to focus on change management in order to engage employees at all levels of the company and foster their willingness to embrace change. The speed at which initiatives can be implemented is significantly influenced by the prevailing corporate culture.

Practical example: Achieving acceptance of new tools and processes through targeted change management

At the electrical recycling company Immark AG, a subsidiary of the Thommen Group, digitalisation was not just about replacing paper-based and error-prone processes but, above all, about successfully driving a process of change with employees. The aim was to improve data quality, make data collection more efficient and significantly simplify data entry as part of day-to-day operations and processes. To increase acceptance among employees, the existing paper-based process and the new digital process were tested in parallel over a period of several weeks. Within just a few days, the benefits for users were obvious: simpler data entry, fewer errors, greater transparency and more efficient processes – as confirmed by Matthias Ebner, COO of Immark AG.

Strategic outlook: From greater flexibility to greater innovation

In addition to the above-mentioned improvements stemming from greater flexibility, a broader information and knowledge basis can also make a significant contribution to innovation. Flexibility acts as a catalyst, since it provides opportunities for adopting a new perspective across different functions and creates scope for rapid changes and creative problem-solving.

Opening up new business areas: For example, this can strengthen product development and lead to the development of new products and services, such as predictive maintenance as a service offering.

Eliminating losses: Losses across different areas can be addressed, creating benefits both internally and externally, and potentially giving rise to marketing opportunities. Examples include improving the product mix, optimising the supply chain and increasing energy efficiency in production.

Conclusion

Flexibility is not a short-term response to crises, but an ongoing management task. Companies that invest in the gradual digital transformation of their value chain while simultaneously fostering an agile culture can turn untapped potential and existing knowledge into a sustainable competitive advantage.

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