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GUIDEBOOK DIGITALIZATION FOR SMEs.

Optimize processes first – then
digitalize | With SME examples
from Switzerland and Liechtenstein

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Universität St.Gallen

Schweizerisches Institut für KMU
und Unternehmertum

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Foreword

Digitalization is not a question of company size – it is a question of attitude and approach.

Dear entrepreneur

Digital transformation poses particular challenges for small and medium-sized enterprises (SMEs). While large corporations with their own IT departments and extensive budgets are making progress, many SMEs lack the time, resources, and sometimes even the orientation.

This is exactly where this guide comes in. As a joint initiative of the KMU-HSG at the University of St. Gallen and MMIND.ai, we deliberately chose a practical and broad approach: "From SMEs for SMEs." We focus on concrete solutions that have proven successful in everyday SME practice and offer an overview of the opportunities that can be implemented with the help of digitalization. The content has been developed from numerous interviews and concrete projects with SMEs.

Digitalization offers many opportunities. But the crucial question is: Where should you start? Which processes should you prioritize? How do you bring your employees along on the journey?

This guide offers pragmatic guidance. It guides you from initial analysis to concrete implementation and shows how other SMEs in the region are already successfully exploiting the opportunities offered by digitalization.

We wish you all success!



Dr. Alexander Fust, Eduard Muqaj,

Swiss Institute for SMEs and Entrepreneurship at the University of St. Gallen



Dr. Hartmut Hübner,

Co-Founder MMIND.ai

1. Introduction

1.1 Challenges of digitalising SMEs

SMEs often face specific challenges in digitalization that differ from those faced by larger companies. These include the following (although these may vary depending on the company size and industry with regard to IT issues) (Leyh et al., 2018, p. 38):

- Limited budgets for investments in hardware and software
- Dependence on external service providers and their availability
- Often lacking internal expertise for strategic IT decisions
- Limited company size to attract IT specialists for small teams

- Especially in smaller SMEs, there is a lack of time for strategic issues in addition to day-to-day business, as operational activities shape the everyday life of many entrepreneurs.

Strategic future topics, such as digitalization, risk being postponed.

There is also often a lack of time for systematic analysis of processes and weak points, which can lead to "firefighting" rather than proactively designing (digitalized) efficient processes (Fasel, 2021). It is also difficult for SMEs to gain an understanding of what is possible with the help of digitalization. Such an understanding is often only possible with a significant time investment.

We would like to start with this approach. We are convinced that SMEs, despite limited budgets, have many opportunities to improve and digitize their processes. The trend toward faster decision-making processes, flat hierarchies, and greater flexibility can be exploited as opportunities.

1.2 Opportunities related to digitalization

Digital technologies offer significant opportunities for SMEs in Liechtenstein and Switzerland that go far beyond the mere modernization of IT systems. These include improved tracking of customer inquiries, better customer reach, faster response to inquiries, and the automation of tasks, thus increasing efficiency.

reducing the error rate or automating tasks that are not readily performed. Furthermore, new business models can be developed or the challenge of the skilled labor shortage can be addressed by making processes more efficient (Demary et al., 2016, p. 30ff.).

1.3 Objectives of this guide: From “why” to “how”

With this guide, we aim to highlight the opportunities offered by digitalization and provide guidance. The guide is intended to showcase examples of how other SMEs have implemented digitalization and how they have designed this process. It provides an overview of various processes that have already been digitized by other companies.

From this, we develop a guideline on how to proceed in order to make processes more efficient and effective with the help of digitalization.

2. The foundation: understanding and optimizing processes

Digitalization is not an end in itself, and there are various reasons why SMEs want and should engage in digitalizing their businesses. However, before investing in digitalization, it's worthwhile to first take a structured look at your own business processes.

A common mistake in digitalization is the hasty adoption of technology. Inefficient processes then simply become "digital chaos." The golden rule is therefore: optimize first, then digitize (Davenport & Ronanki, 2018, p. 113; Affolter, 2023, p. 8).

It is worth taking a look at your company's processes before investing in software or hardware.

2.1 The three process types: The A and O of corporate structure

The first step is to gain a clear understanding of your company's processes. Every company, regardless of size, can be divided into three basic process types: core, management, and support processes (Rüegg-Stürm & Grand, 2019, p. 65).

This simple structure will help you keep track of your processes and set the right priorities. In some places, we've also included examples from SMEs showing how they have digitized these processes.

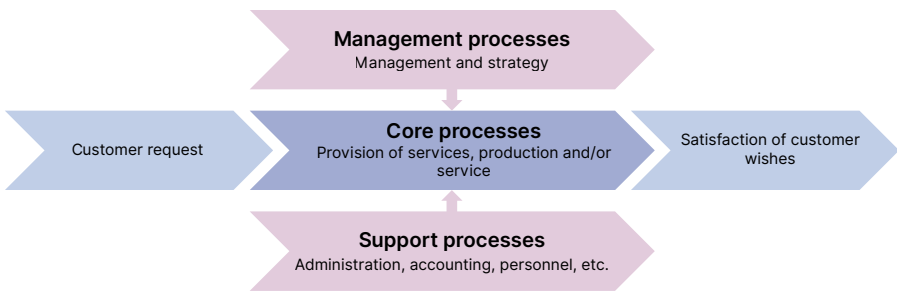


Figure 1: Process model overview (own illustration based on Rüegg-Stürm & Grand, 2019)

The core processes include the processes that are necessary for the creation of the company's own products and services, and thus for the core services.

This embraces processes such as writing offerings, order acceptance through production or service provision to invoicing. This is where direct value is created for the customer (Rüegg-Stürm & Grand, 2019, S. 67) .

Support processes: They enable the core processes.

Although they do not create direct customer value, they are essential for customer value to be created through core processes (e.g., accounting, IT, marketing; Rüegg-Stürm & Grand, 2019, p. 69).

Practical examples of support processes that can be digitized:

A painting company is implementing digital time recording and automated material management. Administrative time savings are in the range of 30-40 percent, as other processes, such as the quotation system, have also been improved.

A restaurant automates invoice processing. An AI solution captures invoices from emails or scans, extracts all relevant data, and compares them with existing bookings. Manual effort and error rates are drastically reduced.

Management processes: They strategically manage the entire company (e.g. strategy development, controlling, reporting; Rüegg-Stürm & Grand, 2019, p. 66).

A medium-sized company is replacing its Excel-based annual financial statements with intelligent software and AI assistants that help companies manage and improve performance and profitability at strategic, tactical, and operational levels. This provides management with a daily, integrated view of finances and soft factors such as corporate culture, enabling them to make quick, informed decisions.

2.2 Digitalization fields of the three process types

The core, support, and management processes help to obtain a better overview and structure of the various digitalization fields.

Below, we distinguish different digitalization fields and applications based on the three process dimensions and present various examples from SME practice. In each example, we first address the problem and then present the solution and the result.

We are aware that this list is not comprehensive, but we would like to provide a structure to show SMEs the possibilities at a glance.

We draw inspiration from the breadth of possible solutions and do not explain all specific solutions in detail, as this would be too comprehensive. In preparation, we conducted various interviews with SMEs, reviewed offers from IT service providers and ERP vendors, compiled examples from discussions with entrepreneurs, analyzed continuing education programs in the field of digitalization, evaluated various bachelor's and master's theses, and reviewed the literature (e.g., Peter, 2017) to arrive at this structure.

2.3 Core processes: The heart of the company

The core processes, also called core performance processes, deal with the processes that are necessary for the provision of services (e.g., products and/or services). For companies in the project business, this therefore goes from the offer to the

Acceptance of the work.

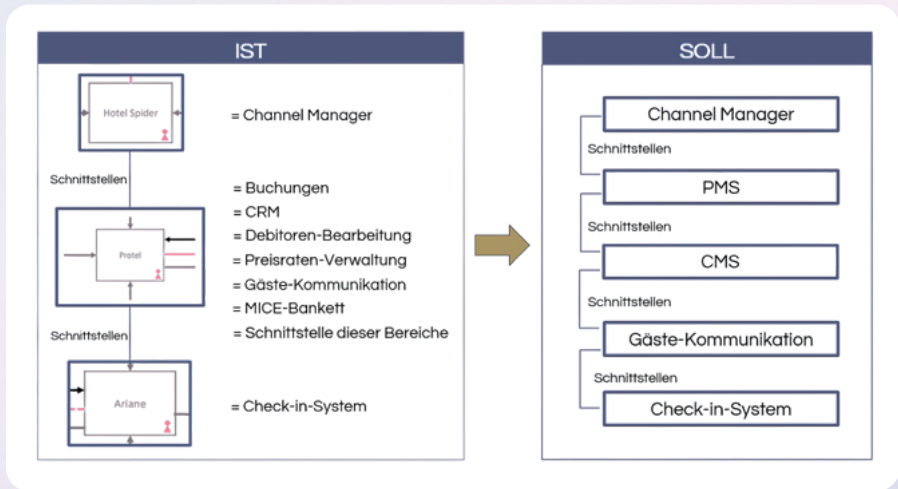
The digitalization of the order processing process is one example of this. CAD programs support the drawing of objects. Machines in craft businesses that are fed with digital data automate part of the order processing and production. Most companies work with an ERP system that covers various processes. There are (comprehensive or simple) industry solutions for this, as well as the integration of different systems (best-of-breed approach; Leyh, 2015).

¹ We thank Axelle Scheuner, Maximilian von dem Bussche and Jan Mainka, whose work has provided a basis for this guideline.

01

Use case:

Technological foundation for growth



Company: Hospitality service provider (b_smart Group with approximately 250 employees)

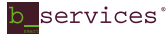
Process type: core process.

Digitalization field: Modular digital solution for accommodation establishments with Self Check-in – replaces the traditional reception and digitizes all front and back office tasks.

Problem: A technology landscape that had evolved over a decade was slowing the company's growth, was prone to disruption, and caused high costs in operating the core business through manual processes, such as the creation of company invoices.

Solution: The company opted for a complete core infrastructure replacement ("open-heart surgery"). The old, monolithic system block was replaced with a flexible, modular system architecture based on proven industry-standard solutions. Over 60 hotel properties were migrated during ongoing operations over a period of just a few months.

Result: The new system runs reliably, is scalable, and has eliminated manual processes. It forms the technological foundation for future growth and the gradual integration of additional AI solutions.



"This was the technological entry into the next decade. We have created a modern, resilient and high-performance "base plate" on which we can build, grow and can scale."

– Marco Weishaupt, b_smart

2.4 Management processes: Management and control

There are various ways to digitize management processes. Which key performance indicators are best suited to measuring a company's success? How can these figures be collected as automatically as possible to manage the company? Consolidating these figures into a management cockpit enables data-based management – often even in real time. This is also referred to as business intelligence. But: modern corporate management goes beyond mere key figures.

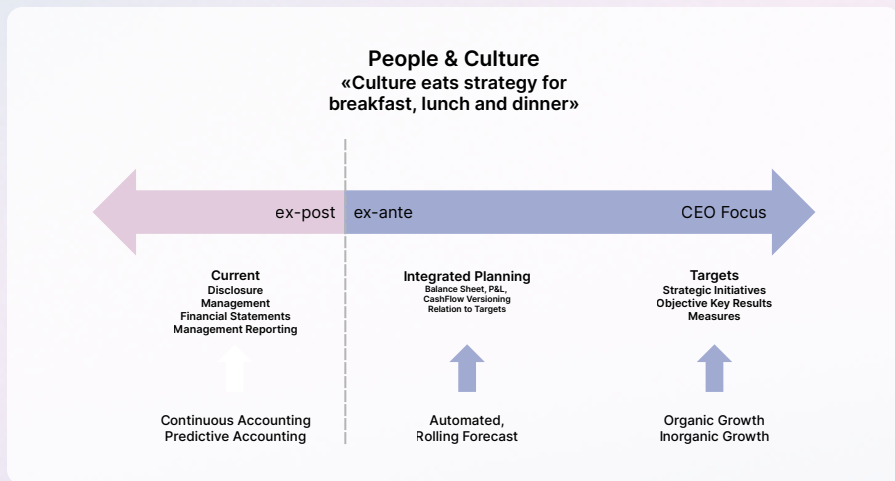
It encompasses the integration of planning, consolidation, and reporting into a single, end-to-end process. This ensures that both daily actual figures and automated forecasts, as well as strategic goals, are available in the same system. CFOs and managers thus receive a transparent picture of the status of project implementation, the achievement of financial and sustainability goals, and compliance with regulatory requirements.

Such a CFO office cockpit consolidates data from controlling, accounting, and business departments, automates recurring tasks, and provides decision-makers with a consistent set of information. This leaves time for analyses, scenarios, and strategic management.

In addition, secure exchange platforms for dialogue with the Board of Directors, Supervisory Board or external stakeholders be used.

In addition to traditional financial metrics, non-financial information is also gaining importance – for example, in the area of sustainability reporting (ESG). Companies must be able to efficiently meet these requirements while simultaneously structuring their organization so that metrics can be used as genuine management tools.

02 Use case: Keeping regulatory requirements under control



Company: Medium-sized manufacturing company (600 employees)

Process type: Management process

Digitalization field: Strategy, finance and reporting

Problem: As a supplier to large corporations, the company was hit hard by the new EU reporting requirements (e.g. on sustainability, CSRD). The required data was scattered across various departments and Excel spreadsheets. A manual report would have taken weeks and been error-prone.

Solution: The company implemented a cloud-based CPM (Corporate Performance Management) solution, which consolidates all relevant data from controlling and accounting on a central platform. and automates the creation of the necessary reports.

Result: The company not only saves considerable time and money in report creation, but now also has a reliable, consistent database. Management can simulate scenarios at the touch of a button and make informed decisions while confidently fulfilling regulatory obligations.



"When a medium-sized company is faced with new regulations such as the CSRD, it often doesn't know where to start. We translate complex requirements into a standardized, automated process. This allows the CFO to create a compliant report with one click, freeing up his team for strategic analysis."

– Wolfgang Schmid, CFP Business Consulting AG

2.5 Support processes: The foundation for efficiency

When it comes to support processes, we distinguish between the following areas: finance, online marketing, human resources (HR), and IT in the broader sense, especially cybersecurity.

Finance includes financial and asset accounting, particularly accounts payable and accounts receivable management. At the beginning of the digitalization of this process, the signature regulation is often considered as to who is allowed to authorize payments in accounts payable management (Fust et al., 2020).

When it comes to sales processes and marketing, we would like to start with online marketing first. For example, the website can be optimized for search are achieved with the help of search engine optimization (SEO) or search engine advertising (SEA), whereby SEA charges per search term and click on the link to the own website (Ahrholdt et al., 2023).

When it comes to being found by AI language models (Large Language Models), this is also referred to as AI SEO. The behavior of potential customers on websites can be better understood by collecting and analyzing data (data analytics), for example, which advertising measures had what effect. Social media, on the other hand, makes it possible to reach many people and companies through the creation of posts or videos.

A CRM (Customer Relationship Management) system allows communication and information about customers (including correspondence and mailings) to be recorded centrally in the program. This allows marketing campaigns to be created and individuals or companies to be qualified as (potential) customers, for example. Depending on the response of the (potential) customers, further actions and mailings can be triggered with the help of marketing automation. This means that depending on the behavior of the (potential) customers, they receive additional information tailored to them, which was defined during marketing automation.

Dies kann mittlerweile durch KI noch besser verfeinert und individualisiert werden. Auch können Chatbots auf der Webseite helfen, den Kunden durch die Webseite zu führen, damit er möglichst schnell auf die relevanten Informationen stösst. Es gibt Firmen, die mit Webshops arbeiten, v.a. auch im B2B (Business to Business, also dem Geschäft mit anderen Firmen), um die Offterterstellung und Auftragsabwicklung möglichst effizient umzusetzen und den Prozess transparenter zu gestalten (Ahrholdt et al., 2023; Terstiege et al., 2022).

Auch beim **Personalwesen (HR)** können verschiedene Aufgaben mit Hilfe der Digitalisierung automatisiert werden. Der Rekrutierungsprozess kann durch hilfreiche Tools abgebildet werden. Auch Performance Management Systeme oder ein zu entwickelndes HR-Managementsystem (inkl. Gespräche mit Mitarbeitenden zur Entwicklung). Weitere Digitalisierungslösungen beinhalten die Lohnbuchhaltung, die Arbeitszeiterfassung, die Erstellung von Arbeitszeugnissen und die Aufbewahrung von Personaldokumenten z. B. über ein **Dokumentenmanagementsystem (DMS)**.

Ein wichtiger Aspekt betrifft die **IT-Infrastruktur** und insbesondere die IT-Sicherheit (Cyber Security). Dazu zählen die Bildung und das Durchspielen von Notfallszenarien, die Schulung und Sensibilisierung von Mitarbeitenden, eine technische Umsetzung (z. B. mind. zweifaktorielle Anmeldung). Ein gut durchdachtes Risiko- und Rechtemanagement lohnt sich in vielen Fällen. Die Umsetzung des Datenschutzgesetzes wird oft auch unter diesem Aspekt behandelt. Wenn IT breiter verstanden wird, kann auch die IT-Infrastruktur dazugezählt werden, z. B. der Ort, an dem die Software betrieben wird, resp. die Daten gespeichert sind. Dies kann intern (On-Premise) oder über ein externes Rechenzentrum/Cloud erfolgen.

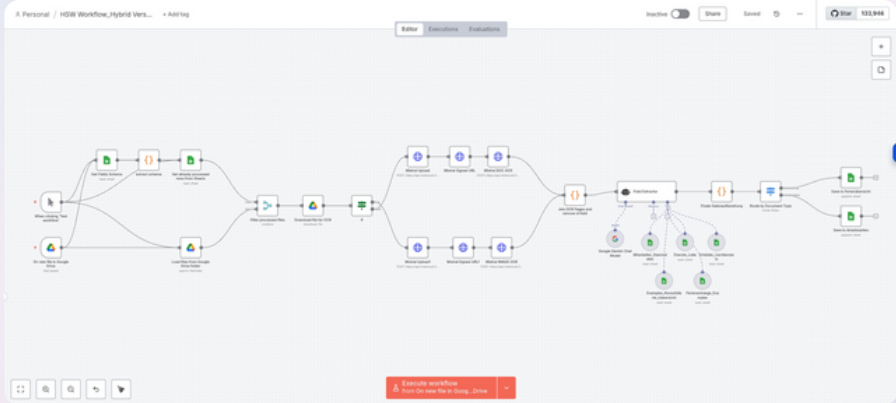
This can now be further refined and personalized using AI. Chatbots on the website can also help guide customers through the website so they can access the relevant information as quickly as possible. Some companies work with online shops, especially in B2B (business-to-business, i.e., business with other companies), to implement quotation creation and order processing as efficiently as possible and make the process more transparent (Ahrholdt et al., 2023; Terstiege et al., 2022).

Various tasks in human resources (HR) can also be automated with the help of digitalization. The recruitment process can be mapped out using helpful tools, as can performance management systems or an HR management system being developed (including employee development discussions). Other digitalization solutions include payroll accounting, time tracking, the creation of employment references, and the storage of personnel documents, for example, via a document management system (DMS).

An important aspect concerns the **IT infrastructure** and in particular IT security (cyber security). This includes training and practicing emergency scenarios, employee training and awareness-raising, and technical implementation (e.g., at least two-factor authentication). A well-thought-out risk and rights management system is worthwhile in many cases. The implementation of data protection law is often also addressed from this perspective. If IT is understood more broadly, IT infrastructure can also be included, e.g., the location where the software is operated or the data is stored. This can be done internally (on-premises) or via an external data center/cloud.

03

Use case: Efficiency leap in a service SME



Company: Cleaning and facility service provider with around 20 Employees (HSW AG)

Process type: Core & support processes

Digitalization field: Administration with a focus on marketing, human resources and management issues

Problem: Time-consuming, manual processes in marketing (dependence on external partners) and time recording (digital and handwritten recording; multiple Excel lists for data comparison) tied up resources and caused high costs.

Solution: A holistic approach was pursued:

- **Marketing:** Use of Canva (AI-assisted design platform) for rapid in-house creation of materials.
- **Time tracking:** Replacing the expensive legacy system with an AI automation that compares working hours from various sources, creates a complete time overview, and calculates vacation balances for all employees.

Outlook: Further AI automation and integration of all administration tasks in an open source ERP system

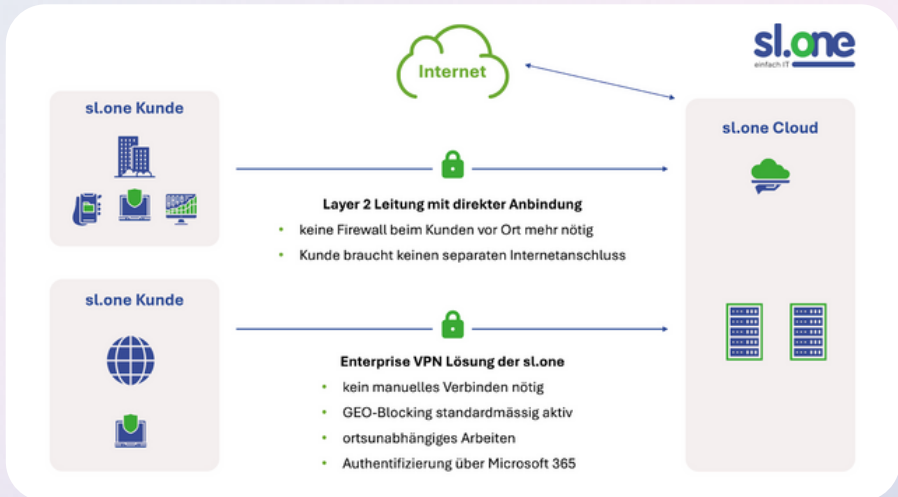
Result (potential analysis): The change in time recording alone resulted in net savings in the five-figure CHF range per year. In addition, there were time savings, error reduction, and greater strategic independence throughout the company.



"The holistic approach to digitalization with AI has shown us new possibilities for how we can position ourselves for the future and be sustainable in the long term."

– Michael Baumgartner, Executive Master of
Facility Management, NDS, HSW AG

04 Use case: Focus on core business thanks to outsourced IT



Company: Production plant (15 employees)

Process type: Support process

Digitalization field: IT infrastructure & cloud systems

Problem: The IT infrastructure posed major challenges for a production facility. The costs for the server in the basement were unclear, Maintenance took up valuable time, and security updates and backups were a source of unease. Management wanted to focus on the core business and products, not on server administration.

Solution: The company outsourced its entire IT infrastructure to a local cloud solution. Now, a fixed monthly fee is paid, and the service provider takes care of everything – From hardware to licenses to high and reliable data security, always up to date.

Result: IT costs are transparent and predictable. The operational risk no longer lies with the company, and data is stored securely in Liechtenstein. The time gained is now fully invested in customers and products.



"For many SMEs, it's a relief to no longer have to worry about IT security and unforeseen costs. By taking this off their hands, they can focus 100% on their core business, knowing that their data is safe in Liechtenstein."

– Manuel Pfiffner, CEO, sl.one AG

05 Use case: Efficient accounting in the trust industry

eWebu eWebu - FiBu Export aus der One Wealth Plattform Zurück zu Start Sprache auswählen Markus Voth Version: 1.2.0

Beschreibung anzeigen Prozessinformationen anzeigen Zurück Wieder

Portfolio (2) Buchungstypen FilBu-Buchungen

Neu anzeigefilterte Daten anzeigen?

Abkürzungen Filter löschen Postenbezeichnungen anzeigen FilBu-Rechnen exportieren

	Dat-ID	Buchungsdatum	Buchungstext gekürzt	Buchungstyp	FilBu-Betrag	Wertschriftentyp	Identifikation Wertschrift	FilBu-Konto	Saldo (€) / Haben (€)	Betrag Leihbuchung	Betrag Buchungsbuchung
	422813	01.01.2024	Interest Income USD ...	Zinsen	Brutto	Geldkonto	L105 0880 5504 0247 3000 1	72.500 (Gross-Kontokorrent)	H	1.284,26 USD	1.284,26 USD
	422813	01.01.2024	Interest Income USD ...	Zinsen	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	S	1.284,26 USD	1.284,26 USD
	426641	07.01.2024	Outflow Cash USD - 17 ...	Geldbewegung	Brutto	Geldkonto	L105 0880 5504 0247 3000 1	2011 (Bankkonto Cash)	S	1.758,70 USD	1.758,70 USD
	426641	07.01.2024	Outflow Cash USD - 17 ...	Geldbewegung	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	H	1.758,70 USD	1.758,70 USD
	426138	10.01.2024	Outflow Cash USD - 39 ...	Verwaltungshonorar	Brutto	Geldkonto	L105 0880 5504 0247 3000 1	51010 (Gemeinsamverwaltungsvermögen)	S	1.940,56 USD	1.940,56 USD
	426138	10.01.2024	Outflow Cash USD - 39 ...	Verwaltungshonorar	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	H	1.940,56 USD	1.940,56 USD
	426970	12.01.2024	Interest Income USD ...	Festgeld Reduktion	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	S	20.000,00 USD	20.000,00 USD
	426970	12.01.2024	Interest Income USD ...	Festgeld Reduktion	Wertschriftenbewegung	Festgeld	24739027	180000 (Festgeld)	H	20.000,00 USD	20.000,00 USD
	426226	15.01.2024	Cash Dividend Secur ...	Dividende	Brutto	Anlagefonds (Eigentum)	V52766202038	72210 (Einlage auf derg. Wertpapier)	H	1.345,37 USD	1.345,37 USD
	426226	15.01.2024	Cash Dividend Secur ...	Dividende	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	S	1.345,37 USD	1.345,37 USD
	426253	15.01.2024	Cash Dividend Secur ...	Dividende	Brutto	Anlagefonds (gemischt)	V52766202023	72210 (Einlage auf derg. Wertpapier)	H	639,77 USD	639,77 USD
	426253	15.01.2024	Cash Dividend Secur ...	Dividende	Geldbewegung	Geldkonto	L105 0880 5504 0247 3000 1	180000 (Bankkonto)	S	639,77 USD	639,77 USD

Anfang Zurück 1 2 3 4 5 Weiter Ende

Zeilen 1 - 25 von 653

Company: Trust company (10 employees)

Process type: Support process Digitalization field: Finance, Accounting & Reporting

Problem: The biggest challenge for a trust company was the manual posting of securities transactions for its clients. This was not only time-consuming and error-prone, but it was also becoming increasingly difficult to find qualified employees with this specialized knowledge.

Solution: The company introduced cloud-based software, The bank transactions are processed automatically. The system recognizes the transaction type, generates the posting records, and imports them directly into financial accounting.

Result: The time spent on posting has been significantly reduced. The company now has daily transparency and significantly fewer manual errors. The highly qualified employees can now rely on consulting of the client instead of typing documents.



"Many trust companies are drowning in manual accounting tasks. The goal was to give them a tool that automates the tedious work so their professionals can focus on providing value-added client advice."

– Tino Kesseli, Head IT, CSL

2.6 Cross-process collaboration

The type of collaboration within a company can be understood as cross-process, as it affects all three process dimensions.

In relation to digitalization, this includes mobile working / working on the move, setting up home offices or generally a paperless

Office understood.

This also includes central access to relevant information, which is made available via an intranet or similar tools.

For a clear presentation, we have created a mind map in which the possible digitalization fields are assigned to the company processes are assigned.

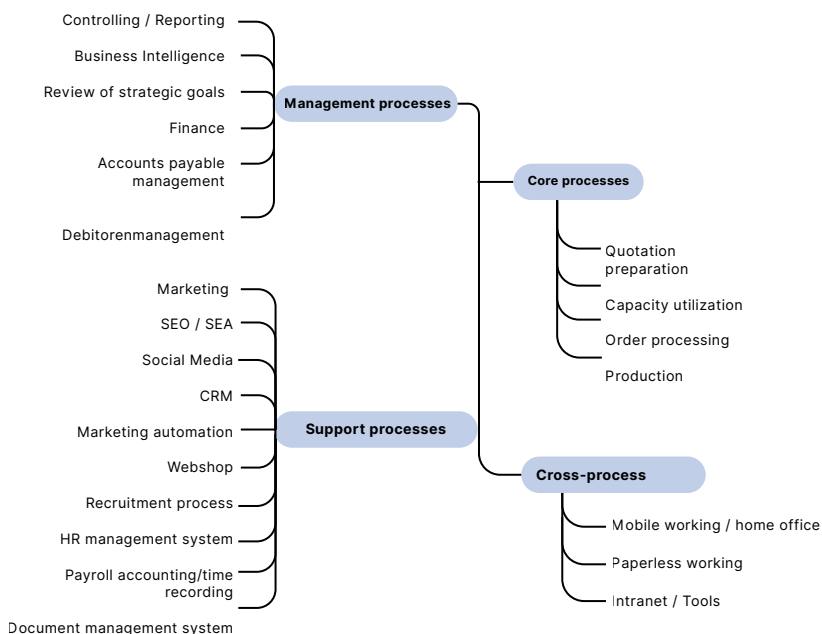


Figure 2: Digitalization fields in the overall context

Not all of these lists can be clearly assigned to the areas/processes and often have connections to other processes and subject areas. With this list, we wanted to attempt to structure these processes and digitalization fields, aware that it is neither conclusive nor clearly presented. Nevertheless, we hope it will provide a good To provide an overview of digitalization opportunities in SMEs. This overview offers ideas on which digitalization fields exist and what could be implemented.

Of course, there are other areas of digitalization that may be relevant. These include technological developments (e.g., AI, blockchain, building information modeling, digital twins, augmented and virtual reality, metaverses, and low-no-code platforms that allow automation with little programming knowledge). It is important to consider what impact these developments have on your own business model and to what extent they can support your own competitiveness.

3. Setting priorities with the cost-benefit matrix

The next step is to ask yourself: "Where should we start?" The cost-benefit matrix is a simple and extremely effective tool that helps you set targeted priorities.

Evaluate each idea according to the following two criteria:

Benefit: How significant is the positive impact on your company? (e.g., time savings, cost reduction, quality improvement)

Cost: How many resources (time, money, personnel) do you have to invest?

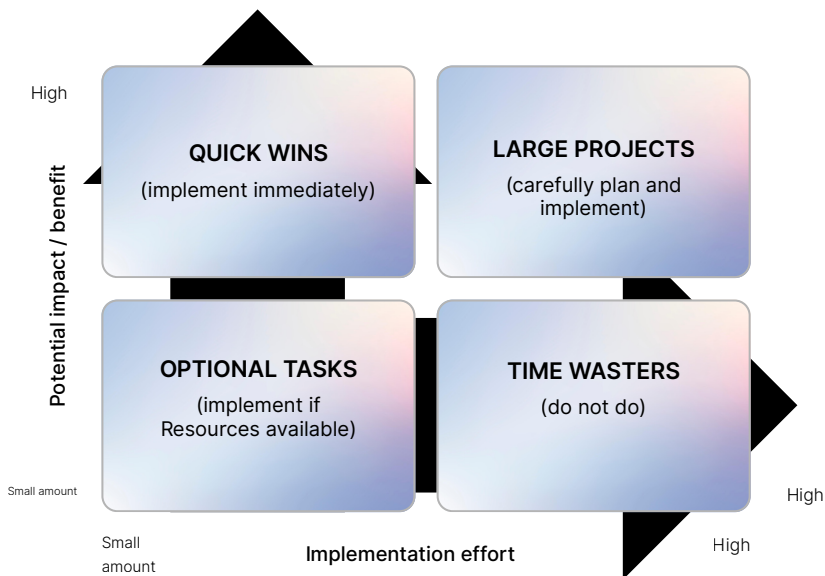


Figure 3: Prioritization matrix

The four quadrants in detail:

Quick Wins (High Benefit, Low effort): These are the digitalization projects that can be implemented quickly and offer significant added value. They bring quick success, motivate the team, and create the energy needed for larger projects. It's worth starting with such projects.

Large projects (high benefit, High effort): These are your strategic initiatives. It's worth planning these projects carefully with clear milestones. Depending on the size and complexity, the question also arises as to whether project management should be **carried out by an external partner**.

Optional Improvements (Low Benefit, Low Effort): "Nice-to-have" tasks. Complete them when you have time and resources to spare.

Time wasters (low utility, high expenditure): These projects tie up resources without delivering any real added value. They are therefore not worthwhile and should not be addressed.

3.1 The most important step: Optimize processes before digitizing

The previously formulated approach helps, for example, to quickly identify quick wins. In general, digitalization is not a panacea for poor processes. Before you select software for a process,

The process itself should be understood and improved. Digitalization projects offer the opportunity to improve existing processes to question and optimize.

3.2 Practical tool: The target/performance analysis

01. Record the current status:

Describe the process exactly as it is running today. Who does what, when, and with what tools? What data is recorded where (e.g., on paper, In Excel, in an old software? Visualize the process, for example, with post-its on a wall or on a digital whiteboard. This immediately highlights bottlenecks, sources of error, waiting times, and media disruptions (e.g., switching from digital to paper).

02. Define the target state: Now design the ideal process. Forget technical limitations for a moment and ask yourself: What would the perfect, leanest and fastest process look like?

- **Eliminate:** Is this step really necessary? What would happen if you omitted it?
- **Simplify:** Can we combine steps? Are there unnecessary loops or duplicate work?
- **Standardize:** Can we define a clear, consistent process for this recurring task?

To do this, a table can be created in which the steps that are to be eliminated, simplified or standardized are inserted. Another option is to mark the steps with different colors.

- A skilled trades business wanted to digitize its quoting system because it was too error-prone and slow. Instead of immediately purchasing software, the team analyzed the process (as-is analysis). The problem wasn't a lack of tools, but rather unnecessary approval loops and a lack of standard templates. Once these organizational issues were resolved in the target concept, the subsequent selection and implementation of a software solution was significantly easier and more successful.

Digitalization shouldn't be an end in itself. Just because a process is digital doesn't mean it's perfect. Only when a process is lean and logical does digitalization unfold its full potential. Take the time to optimize processes accordingly before investing in new technologies.

GENERAL TERMS	DESCRIPTION	CONCRETE STEPS	REMARKS
Eliminate	Which steps aren't necessary? What would happen if you skipped that step?		
Simplify	Which steps can be summarized?		
Standardize	What is the process for recurring tasks?		

Figure 4: Definition of the target state (see also Arndt, 2015; Hofmann, 2020)

4. Digital skills and success factors

1. Successful digitalization in SMEs depends significantly on the digital skills of employees and the strategic approach. Current research shows that digital skills are not just a "soft factor," but a fundamental prerequisite for the success of digital transformation projects (Kallmünzer et al., 2024). Digital skills encompass both basic IT knowledge and specialized digital tools.

1. Data analytics skills and a willingness to continuously learn are also particularly important. Communication skills in the digital space are also particularly important, as SMEs often need to build trust with their customers through digital channels. One SME manager describes it this way: "We hire a lot of young people who are familiar with technology. This is like basic knowledge required for working in our company" (Kallmünzer et al., 2024).

SUCCESS FACTORS	BARRIERS
✓ Clear objectives ✓ Employee participation ✓ External consulting ✓ Technical basis	× Knowledge deficits × Financial limits × Cultural resistance × Outdated systems

Figure 5: Success factors vs. barriers to SME digitalization

Despite the obvious benefits, SMEs face specific challenges in digitalization. The main barriers are knowledge and skills gaps (over half of SMEs lack a clear understanding of digital opportunities), financial constraints, cultural resistance to change, and technical challenges such as outdated IT infrastructure (Kallmünzer et al., 2024; Proietti & Magnani, 2025). Successful digitalization projects, on the other hand, are characterized by a strategic approach with clear, achievable goals (SMART approach), a people-centered approach with employee participation and training, and external support from specialized consulting.

Especially when integrating artificial intelligence, which has the potential to increase labor productivity measurably and sustainably, a well-thought-out framework with clear objectives, consideration of human aspects and technical requirements is crucial (Proietti & Magnani, 2025).

4.1 Managing change

Accordingly, it is a key task to take employees along on the journey to ensure sustainable change.

If employees don't embrace the new processes and use the tools in the future, the full potential of digitalization cannot be realized. We recommend considering the following aspects (Peter, 2022, p. 19; Fust et al., 2020, p. 30):

Demonstrate necessity and benefits:

The need for change and digitalization should be clearly communicated to employees from the outset. the advantages of digitalization as the (long-term) consequences for the company in the event of non-implementation are also communicated (e.g. in the form of what-if scenarios).

Make early successes visible:

Communicate positive results and milestones (e.g. quick wins) to to strengthen the motivation and acceptance of employees. If the employees see,

The fact that the changes are positive and have an impact often increases motivation for future changes and projects. Therefore, it's best not to start with the most complex ERP project, but rather with these quick wins.

Accompany and empower employees:

School and accompany all those involved in the new processes and technologies. In SMEs, it's often observed that employees are expected to participate in such digitalization projects in addition to their already busy daily work. Provide employees with the necessary time and support to help them get used to the new features.

Also create mechanisms for regular feedback to ensure continuous improvement of the change process and to address the sensitivities / Employees' concerns can be addressed.

Your employees are a key factor in the success of your digitalization strategy. In addition to leadership commitment and a clear implementation plan, the participation of all stakeholders is crucial for the sustainable implementation of the desired change.

4.2 7-step plan for digitalization

Inspired by practice and literature (e.g., Peter, 2022; Fust et al., 2020), the implementation can be divided into seven pragmatic steps.

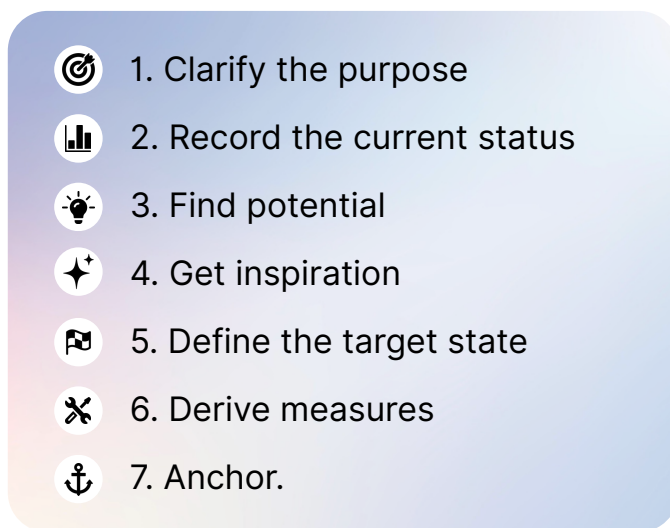


Figure 6: Infographic showing 7 steps as a path.

1. Clarify your purpose: Why do you want to digitize? It helps to first to address why digitalization is necessary. The following reasons can be identified (not exhaustive):

1. Skilled worker shortage (relief for skilled workers, replacement of unavailable skilled workers)
2. Attractiveness as an employer (perception as a modern employer)
3. Cost savings
4. Error reduction
5. standardization
6. Traceability in the service provision process / transparency of processes
7. Customer / supplier requirements
8. Regulatory requirements
9. Developing new business models
10. Creating potential (e.g. future scaling)
11. Increasing flexibility
12. Acceleration of workflows
13. Strategic objectives
14. Knowledge retention
15.

2. Assess the current status: Visualize your current processes. Talk to everyone involved and visualize the relevant processes. Which processes are running well? Where are the problems? Which recurring tasks are performed manually (see Chapter 2.5)?

3. Identify potential: Where are bottlenecks, waiting times, duplicate work, or sources of error? Which tasks are purely annoying (see Chapter 2.5)?

4. Get inspiration: Think outside the box. Talk to other entrepreneurs. Use the overview and examples in this guide (see chapters 2.2 and 2.3).

5. Define the target state: Design the ideal, lean process – without any technological blinders (see chapter 2.5). What should the desired state look like?

6. Derive measures: Only now do you look for the right solutions and the right technology. Which digital tools support an optimized process best (see chapter 2.5)?

7. Anchoring: Involve your employees! Explain the "why," offer training, and demonstrate initial successes (see chapters 2.4 and 2.6). Only when the change is lived will it unfold. they have the potential.

This structured approach helps to successfully tackle digitalization projects.

5. Conclusion

We are aware that there is a wealth of literature on the topic of digitalization. Some of it is geared towards large companies, some is relatively technical, and some is very comprehensive. Our aim with this guide is to provide a fresh perspective and an overview of the ways SMEs can leverage digitalization for their own benefit. In addition to the overview, we have provided various examples for further study and hope that they will inspire SMEs.

We also presented a process with seven steps on how to approach digitalization projects. We deliberately chose a broad approach, ensuring that this guide is not too comprehensive, yet still easy to read. We wish you much success in implementing your digitalization projects and look forward to your feedback on how we can incorporate further examples into this guide and further develop it.

Editors

This guide was jointly developed by the KMU-HSG of the University of St. Gallen and MMIND.ai. The content is based on extensive interviews with SME practitioners and current academic research on digitalization in small and medium-sized enterprises.

Swiss Institute for SMEs and Entrepreneurship at the University of St. Gallen

KMU-HSG

The importance of SMEs was recognized early on at the HSG. This led to the establishment of the Swiss Institute for SMEs and Entrepreneurship over seven decades ago (1946). "SMEs, Family Business, and Entrepreneurship" are the pillars of the institute. Through daily dialogue and exchange with entrepreneurs and managers from SMEs, it generates knowledge about and within SMEs and disseminates this knowledge through:

Further training for entrepreneurs and managers from SMEs
Transfer services for SMEs such as Erfa groups
relevant and in-depth research on SMEs
Teaching at the University of St.Gallen

Contact

Alexander Fust
alexander.fust@unisg.ch

Hartmut Hübner
projekte@mmind.ai

KMU-HSG
Swiss Institute for SMEs and
Entrepreneurship at the University
of St.Gallen Dufourstrasse 40a
9000 St.Gallen Phone +41 71 224 71
00
www.kmu.unisg.ch

MMIND GmbH
Duxgass 55
9494 Schaan Phone: +41 77 261 07 24
www.mmind.ai

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