

# Digitalizing Industrial Construction



# »All I can say is: Go digital. The sooner, the better. This saves time and resources...«

HEINZ PICHLER
Vice President Global Site Operations, ANDRITZ Hydro

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# Initial Situation

Cost and time pressure, delivery bottlenecks, customer requirements, regulations, global crises: The challenges in industrial construction are increasing. Digitalization is therefore becoming more and more important - after all, it helps to make informed decisions, minimize unnecessary effort, and free up time for construction activities. In short, digitizing plant construction projects makes working life easier for everyone involved and promotes project success.

# Digitalization Options

How companies digitize their construction projects varies: Some use Microsoft Excel instead of loose notes and call this digitalization. Others extend their ERP (e.g. SAP) to the construction site. Others use a single application for different fields of application (e.g. one app for construction diaries, one for defect management, etc.). Finally, there are those who make their project life easier in the long term by relying on an end-to-end platform for the entire construction site and the corresponding supply chains.

Options at a Glance

- 1. platform Insite LMS
- 2. countless isolated solutions
- 3. adapted ERPs
- 4. Excel & Co.
- 5. working in analog ways/with paper

Each of these options has advantages and disadvantages. Yes, you can use one separate tool for each use case in your projects. For example, one app for defects, one for time tracking, etc. But you don't have to! Not doing so, you don't lose time, money and nerves, e.g. for the implementation, training and maintenance of numerous isolated solutions. Customized ERP systems, on the other hand, often only cover the needs on the construction site to a limited extent. In contrast, platforms like Insite LMS have been tailor-made to meet construction site needs, developed by plant engineering practitioners in close cooperation with users on construction sites. No ERP or other solution can match the

quality and practical benefits of this system.

Excel, for its part, is powerful, no question. For construction projects, however, it soon becomes unwieldy and impractical: the number of lists increases the longer a project takes. Even Excel has its limits at some point and the joy of searching, formatting, entering data, and troubleshooting is naturally not great. And working in analog ways - well, if you like to rummage through folders, sort notes and generally appreciate the good old days ...

# Think Big - Start Small

From our experience, we can say that organizations that use an integrated platform developed specifically for industrial construction will be more successful in the long term. The platform allows them to ideally cover the relevant processes on the construction site and along the supply chain - in a single application and with one intuitive app. However, this by no means means that you have to digitalize all areas right from the start. Start with some of the most promising one - and optimize continuously! Your digitalization solution should support this. In other words, it must be flexible enough that additional project areas can be digitized or integrated on an ongoing basis.

# Theory is Silver - But Real Life Experience is Golden!

Rely on a system that has been developed by practitioners, by people who have worked in plant construction themselves, who know the construction sites and their day-to-day problems. The advantage: With such a system, the users on the construction sites and all those who work on the project will enjoy working with it. Because it fits and problems are easily solved.



In the beginning, the reluctance is often great.

But so is the amount of suffering. Those who dare to say goodbye to the data chaos will benefit from a new quality of construction management.



# Goodbye, Data Chaos!

## Three Simple Steps

INSITE IT has successfully managed 6,000+ digitalization projects. The following three steps have proven to be as practicable as straightforward.

## 1. Initial Meeting & App Presentation

In a free initial session, INSITE IT experts will clarify your questions and outline how Insite LMS can positively support your projects. They will be also happy to give you a comprehensive overview of our solution during a presentation.

### 2. Test Phase

Your team and you will have the opportunity to try out Insite LMS in a non-binding test phase. Typically, about three months are dedicated to this. At the

beginning of the test phase, we define with you with which project and to what extent you will test Insite LMS. We support you in all necessary preparations and are at your side if needed.

# 3. Taking Off

Have the results of the test phase convinced you and your team? We will continue to support you, including long-term activities. We look forward to a successful partnership.

# Will Digitalization Create a lot of Extra Work?

No, because with Insite LMS you do the same as before, only more efficiently: Defects always have to be documented and daily logs always have to be created, for example.

What used to be paper chaos on site is now Excel list and data chaos. Saying goodbye to this can be easy.



With the app, this is done much more quickly. This frees up time for other tasks and has a positive impact on project quality.



The convenient all-in-one Insite LMS app can be used for processes on site/along the supply chain.

# Digitalization is Much More than a Software Topic!

Anyone tackling a digitalization project by no means just has to select a suitable system.

The three pillars of digitalization projects are

- 1. Users (needs, roles, mindsets)
- 2. Software/tools
- 3. Organization (culture, processes, data)

You will find out more about these three key elements on the following pages.

On construction sites, there is one right tool for every task.

The same is true for IT applications and processes. Insite LMS is the right tool for industrial construction.





# Foster Commitment

# **Tip 1: Users First**

### At a Glance

- Ensure that users benefit from digitalization right from the start.
- Rely on a field-tested app with the top usability.
- Involve users right from the start.

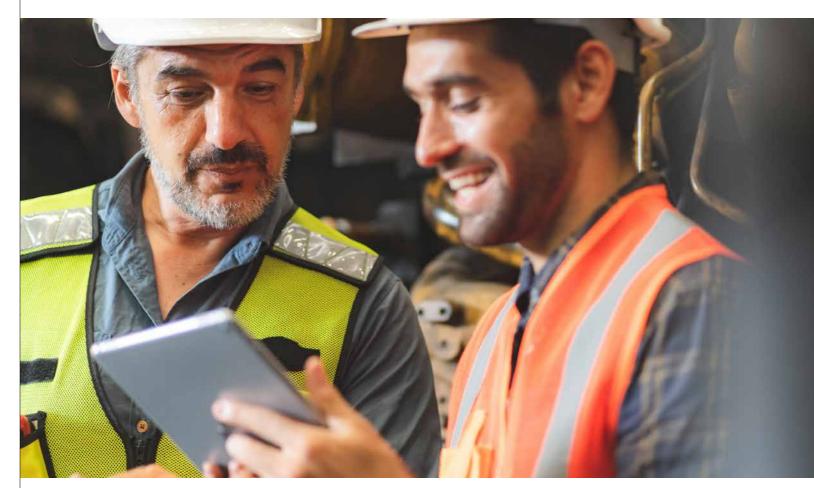
# Digitalization Must Never Be an End in Itself

Digitalization projects only succeed if users consistently use the solution in their everyday work. They will do so if the solution offers real added value on the job right from the start. In short: User acceptance is important for the success of digitalization projects. Experience shows that field-tested tools are particularly well accepted.

### Involve Your Users

Solutions that have been developed together with the users who work with them daily are ahead of the game when it comes to practical benefits and long-term acceptance. If you involve users early in the project and take their feedback into account, this will help increase the acceptance of the new solution. A win-win situation!

Insite LMS is a solution that consistently follows a users-first approach: To develop this platform for industrial construction, INSITE IT worked with plant engineers and their users on site. The result is a practical, cloud-based solution that enjoys a high level of acceptance. Because it is intuitive to use and offers benefits for the construction site and the back offices - from manufacturing to installation.



Digitalization projects: Involving all users at an early stage and at eye level promotes acceptance and thus project success.

# **Choose a User-Friendly Solution**

FOR DIGITALIZATION IN INDUSTRIAL CONSTRUCTION, A SOLUTION THAT COVERS USE CASES FROM MANUFACTURING TO INSTALLATION - ON THE CONSTRUCTION SITE AND IN THE BACK OFFICES - IS BEST. THE IDEAL APP IS ...



module-based



configurable & offline capable



intuitive to use on numerous devices



suitable for the entire site

# **Tip 2: Transparency** is **Key**

### At a Glance

- Those who communicate openly promote constructive collaboration.
- Digitalization in construction results in greater transparency don't be afraid of it!

# Move Away from Secrecy

Take a transparent approach and communicate at eye level. Why? There will always be errors and uncertainties in large projects. Experience shows

that dealing with them openly and clearly promotes constructive cooperation and reaching goals.

This also applies to the construction projects themselves, which are becoming more transparent because of digitalization. Why? Because of comprehensive, digital documentation, open communication, comprehensive traceability and information in real time, etc. Some people initially shy away from such transparency. However, experience shows that even skeptics quickly appreciate digitalization in plant engineering: Everyone benefits. The people, because they get more time back for the essentials, the project itself, among other things, from optimized value creation.

# Opponents? No fear!

# Tip 3: Active Change Management

### At a Glance

- Consider the three pillars of digitalization.
- Expect resistance.
- Actively pursue change management: Communication is the key

# Three Pillars of Digitalization

As mentioned earlier, digitalization in plant engineering is not just a matter of selecting a suitable system. Several factors play a role in digitalization projects. Specifically, the following three pillars of digitalization should be considered:

1. Users (needs, role, attitudes)

- 2. Software/tools
- 3. Organization (culture, processes, data)

In addition to software, the respective corporate culture as well as established processes play a role - and last, but not least "the human factor". It is important to consider the specifics of the corporate culture, internal resistance, established processes, and the attitudes of the people who will be affected by the changeover. Appropriate measures must be selected to match these factors.

Regardless of this, it is beneficial to choose software that is tailored to the needs of the employees and can be introduced quickly.

### Managing Change: Communication!

Depending on the company (culture, demographics), people may be more or less critical of the digitalization project. In this case, you have to

persevere - and manage the change professionally. This includes early involvement of those affected and clear communication at eye level. Especially at the beginning, it helps to have an

organizational advocate on site who actively and positively supports digitalization and "rocks" any resistance. Later on, a system ideally becomes a self-runner.

# Communicate Professionally

Communication is a key factor for the success of change projects. It helps to clearly define who communicates which messages to whom. The goal: All participants should experience the change as meaningful and become supporters (in the sense of "commitment", i.e. voluntary action in favor of the change project). Involving employees enables them

to move from being uninvolved observers to acting as supporters.

### What Supports Digitalization?

- Advocates within the organization.
- active change management/ constructive handling of resistance,
- unbureaucratic support in all project phases ongoing training, even after roll-out,
- offering concrete added value from the very first minute and
- adaptability of the software to the requirements of the company without programming work.

Successful change management transforms opposition into commitment.



Learn More

# Expert Interview: Digitalizing Construction Sites





# There Can Be Only One

# Tip 4: Establish a Single Source of Truth

### At a Glance

- One system instead of information chaos
- Central data storage, e.g. in the cloud
- Meaningful real-time information at the push of a button
- · Secure, global collaboration

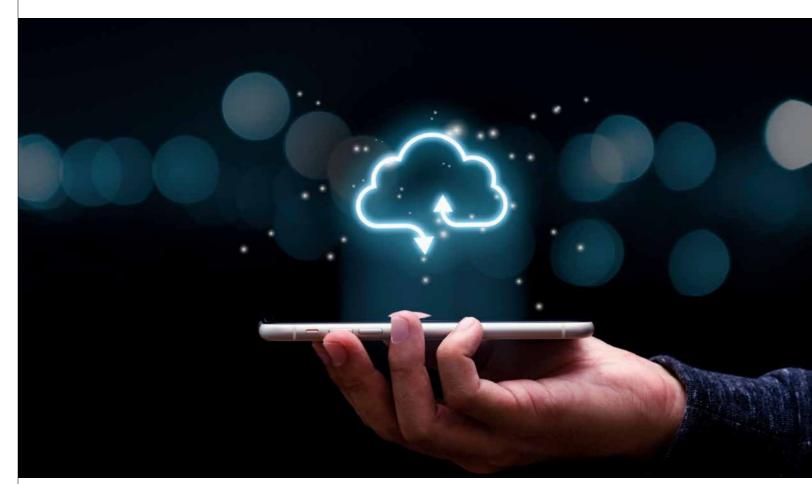
### Convenience

Real-time information is becoming increasingly important in industrial plant engineering. Relevant information at the push of a button, anytime and from anywhere - that's exactly what you want! With analog project management or "bumpy" digitalization, the opposite is true: You have to laboriously sift through Excel lists, mails, loose notes, different

tools and umpteen data sources - not to mention time-consuming telephone queries, multiple data entries and manual formatting efforts.

The solution to getting rid of that is a "single source of truth" like Insite LMS. As a central, globally available system, it stores all data, prepares all information for further use and distributes it. This "single source of truth" is critical to success. It helps to

- avoid data chaos,
- · reduce multiple efforts,
- · minimize ambiguities,
- collaborate constructively, transparently and securely,
- provide project teams on site and back-office users with valid information and the same view of the project.



Ideal: All data is captured once, stored centrally (cloud solution) and is then available globally and in real time.

# **Platform Instead of Isolated Solutions**

AN END-TO-END PLATFORM FROM MANUFACTURING TO ASSEMBLY OFFERS SIGNIFICANT ADVANTAGES. INSITE LMS IS SUCH A SOLUTION. WITH THIS SINGLE SOURCE OF TRUTH, YOU IDEALLY COVER THE PROCESSES ON THE CONSTRUCTION SITE AND ALONG THE SUPPLY CHAINS - VIA ONE INTUITIVELY USABLE APP.





# **Tip 5: Question Isolated Solutions**

At a Glance

- Isolated solutions cause unnecessary IT, training and maintenance costs
- An integrated platform from manufacturing to installation digitalizes core processes sustainably and standardizes them.
- A "one tool at site" approach significantly simplifies day-to-day project work.

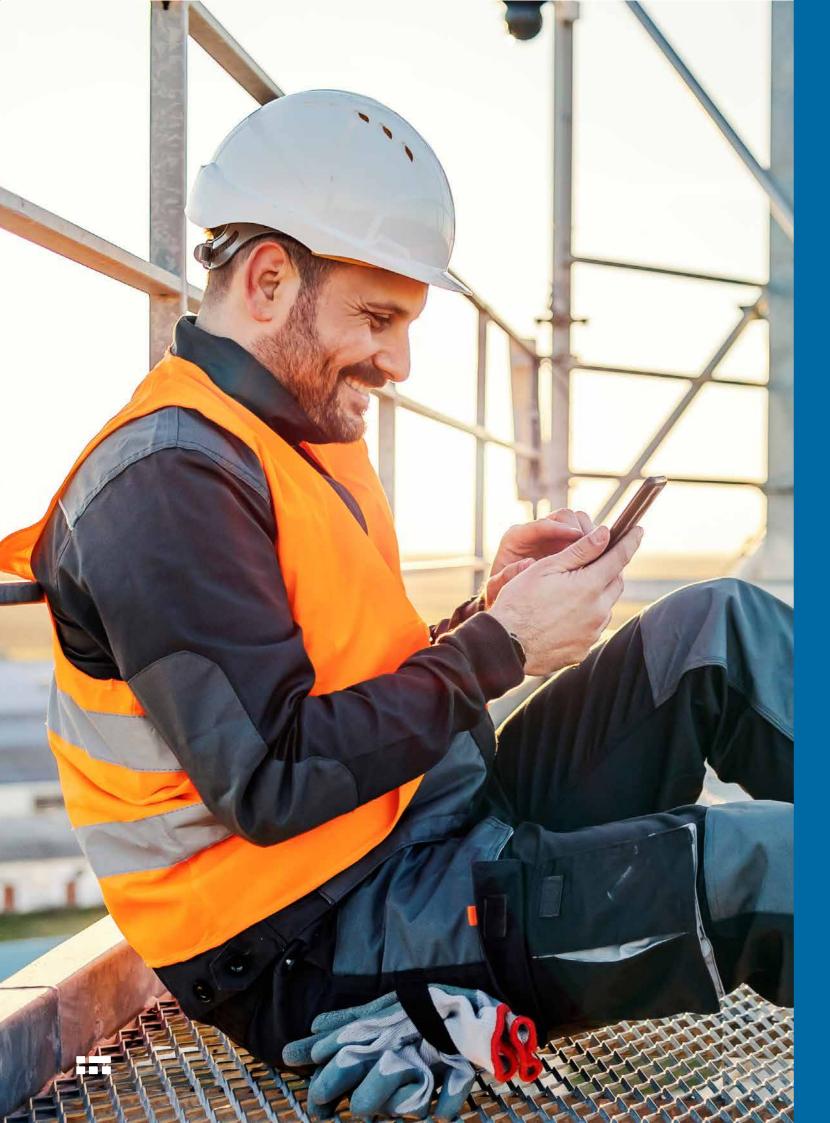
# Minimize Unnecesary Effort

Our experience is that using countless individual solutions for different areas unnecessarily increa-

ses integration, training and maintenance costs and reduces the satisfaction of the people involved in the project.

# Just Like vacation! Integrated Platform for Industrial Construction

Ready for the island? If you don't want end up being ready for vacation all the time, go for a mature platform instead of umpteen isolated solutions. An end-to-end solution developed specifically for industrial construction ideally covers the relevant processes on the construction site and along the supply chain - in one application. This approach makes everyday project work easier: information on materials, construction progress, defects, claims, daily construction reports, time recording, etc. are available at the touch of a button. Online, mobile and offline.



»My conclusion after ten years:
For us, only a "one tool at site"
approach is an option, i.e.
using a single solution on the
entire construction site.
Interfaces can then be
implemented as needed.«

HEINZ PICHLER Vice President Global Site Operations, ANDRITZ Hydro

### Use a platform that

- covers use cases from manufacturing to installation,
- easily integrates internal and external project team members,
- eliminates the tedious maintenance of x subsystems.

# **Tip 6: No Barriers!**

### At a Glance

- · Avoid hardware and software barriers.
- Opt for solutions that do not require special equipment.
- Ensure smartphone capability

### Break Down Barriers

Both companies and end users benefit from digitalization solutions that are easy to implement and use. This applies to both the hardware and software levels. So, before you decide on a digitalization solution, be sure to find out what hardware it will require and whether users will be able to use the software seamlessly.

Examples of unwelcome software-side barriers include internal software that only works in the VPN or complicated login procedures. Example of a hardware barrier that should be avoided is special equipment.

Example: Do you need your own scanners when taking over deliveries at the construction site? Or can you do it without any special hardware? Insite LMS



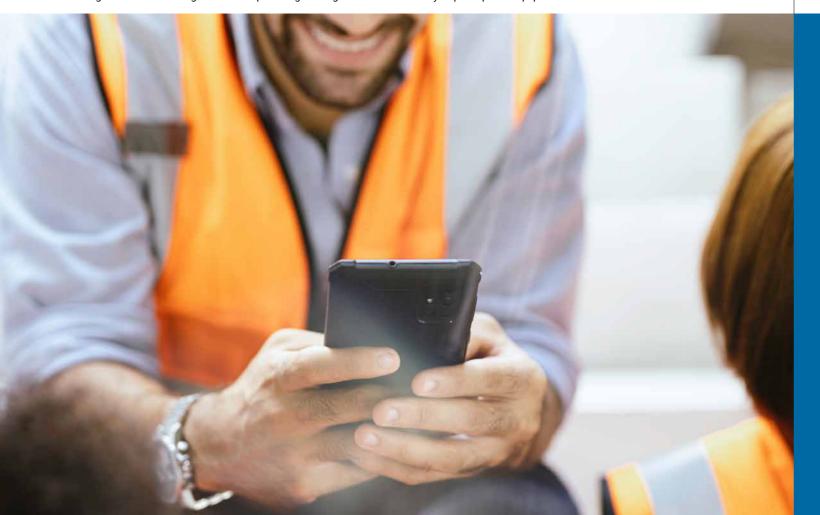
All-in-one app Insite LMS: Accept, check and document deliveries directly on the smartphone.

can be used for this purpose via app on smartphones (cloud-based) - no dedicated hardware is required for the to-dos that will occur on the construction site.

### Good solutions are

- robust, secure & offline capable,
- usable without special equipment,
- flexible (modular design, configurators, etc.) for changing project requirements, and
- seamless to use: no complicated sign-up process.

The good news is that digitalization in plant engineering does not necessarily require special equipment.



Learn more

# **Insite LMS**

Platform for Industrial Construction

insite-it.net/en/insite-lms



# Shit in, Shit out: Sadly True

# **Tip 7: "Air out" Your Processes**

### At a Glance

- It is possible to always do better: question processes and optimize them.
- · Encourage critical thinking.
- Process optimization is an ongoing process choose a tool that supports this!

### Critical Thinking Is Desirable

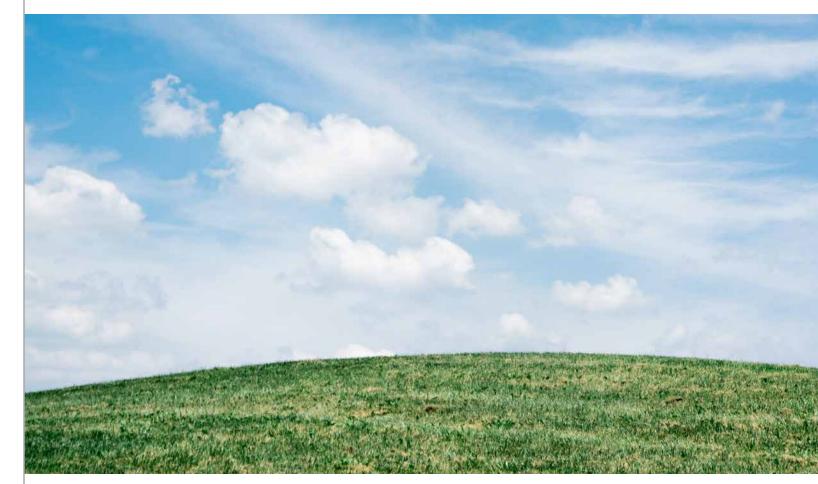
Those who digitize their projects have the opportunity to question existing routines. It is a good time to "air out" established processes. In doing so, it is important to leave behind the attitude of "It's always been this way!" and to encourage critical questioning. Specific questions that can be asked now are:

 Does the status quo still fit or can something be improved? Are there similar work areas/ac-

- tivities that are handled differently by x departments/teams in the projects? Should these be harmonized?
- Which analog processes regularly produce a particularly large amount of work? Which Excel lists are currently being sent around the world?

»Think about how you can optimize your processes and make them smarter, even if they already seem to be working well.«

NOGUEIRA ITAMAR Senior Site Manager, Group Site Installation ANDRITZ AG



A breeze of fresh air! Those who digitize should also air out - and optimize - their processes.

# Data!

EXACTLY - YOU GUESSED IT: NO DIGITALIZATION WITHOUT DATA. BUT DON'T WORRY. IF YOU TACKLE THE ISSUE STEP BY STEP, YOU'RE GOING TO REACH YOUR GOAL.



Data = Foundation



Data quality - right from the start!



Central data storage (e.g. cloud)



First ACTUAL, then TARGET data

# **Tip 8: Data Quality Right From the Start**

### At a Glance

- Data quality = foundation for digitalization
- Ensure data quality right from the start
- Ensure data consistency avoid multiple entries.

## Prerequisite for Digitalization

One goal of every digitalization project is to make projects more successful and to make it easier for users to perform routine tasks. The indispensable basis for this is - precisely - data. And data of the right quality. Therefore, ensure data quality FROM

THE BEGINNING. Why? Because "You can't teach an old dog new tricks" - data quality that is not "put into the system" at the beginning will not evolve magically afterwards!

Every system is only as good as project teams work with it. Invest sufficient energy to ensure data quality throughout the process. This concerns among other things

- project standards for data handling,
- supplier integration (easy-to-use material registration, communication, legal framework),
- data consistency: every typed packing list is one too much!
- meaningful data interconnections (e.g. parts lists, material, deliveries, storage locations).

# Quick Wins First

# **Tip 9: Think big - Start Small**

### At a Glance

- Keep the big picture in mind.
- Take a step-by-step approach.

# Big Picture: Entire Supply Chain

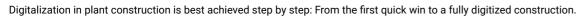
One question to ask when digitizing is: "Does it make sense to digitally map more of the process?" One example for this is material pre-registration (prior to delivery to site). INSITE IT recommends to digitally map projects from manufacturing to installation in one system. This definitely is the way to benefit most from digitalization.

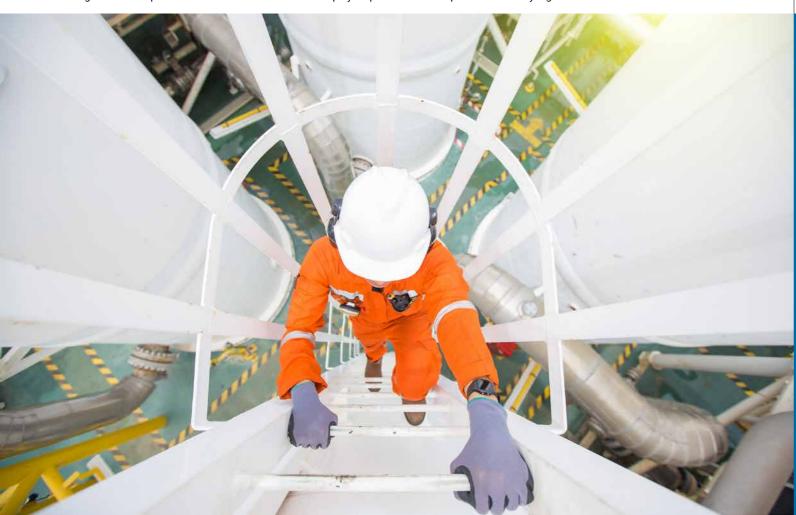
## First Steps - Quick Wins

This does not mean that you have to digitally map all areas right from the start. Ideally, you should start quickly and optimize continuously. The digitalization solution should support this. It must be flexible enough to allow continuous improvement and expansion. How quickly additional areas can be digitized depends on the general conditions: How do the employees tick? Which company-specific aspects (e.g., decision-making paths) play a role?

# Step by Step

It is recommended to proceed step by step. Example: You want to compare target and actual data. Record actual data (e.g. packing lists), link target data (e.g. bills of materials, purchase orders) only in the next step.







Renowned international companies use Insite LMS. There are more than 5,000 projects worldwide.

Global Track Record

# Insite LMS 6,000+ Projects Worldwide

insite-it.net/en/custome



»Now all information on shipping dates, arrival times, defects, deviations, and construction progress is based on better underlying data and is correspondingly more significant.«

HITACHI ZOSEN INOVA Construction of energy-from-waste plant



# Stop saying "Yes, but ..."

# Tip 10: Start, Don't Wait!

### At a Glance

- If you hesitate, you will waste time.
- Get started and optimize successively.
- Choose established partners.

### Real World Objections

There are always reasons for not tackling a specific initiative, or not tackling it until later. When considering digitalization, we frequently face objections such as

No time!

- Too much internal resistance!
- Too much effort ...
- We are still waiting for national or international standards!
- · We must do a comprehensive analysis first.

All these reasons are understandable. However, postponing digitalization usually benefits the competitors rather than your own company ...

### Easy Ways to Better Project Control

From our many years of practice, we know that digitizing construction sites and supply chains from the start offers benefits that more than make up for the initial effort. If done right. One question that often comes up: How much effort should you put into preliminary analyses? This certainly varies from case to case - but one thing is clear: If you spend too long

analyzing, you waste valuable time. Heinz Pichler has found a good way in his projects: "For us, it has proven to make sense to evaluate for a limited time and harmonize the most necessary things in advance - but then to quickly start digitalization and continuously develop areas further. Otherwise, you never get done."

### Conclusion

Right now is the best time to digitize your industrial construction projects. Get started, even if you don't solve all the problems right at the beginning. Digitize additional areas after the project has started and expand or optimize on an ongoing basis.



Projects under better control: Digitalization in plant engineering offers comprehensive added value

Insite LMS is available for smartphones, tablets, laptops and standalone computers and in ten languages.



See Insite LMS
in Action

insite-it net/en/demo

# Always On Your Site

### About INSITE IT

INSITE IT GmbH has many years of experience in the digitalization of industrial construction projects: The company's platform Insite LMS is used in over 6,000 projects in more than 80 countries worldwide. Insite LMS digitizes logistics, materials and site management in a practical, secure and fast way. Paper, list and data chaos on construction sites are now a thing of the past.

### Services

- consulting & process optimization
- implementation & roll-out
- training and support



INSITE IT founder Florian Altmann.

# **About US**

INSITE IT IS AN AUSTRIAN SOFTWARE COMPANY FOUNDED IN 2012. THE COMPANY IS HEADQUARTERED IN LINZ (AT). THE PLATFORM INSITE LMS IS USED IN OVER 6,000 INDUSTRIAL CONSTRUCTION PROJECTS IN MORE THAN 80 COUNTRIES WORLDWIDE.

1

Vision

12

People

6,000+

Projects

1

Platform

### Insite LMS

Insite LMS, the platform for industrial construction, was developed by INSITE IT to specifically meet the requirements of industrial construction and has been continuously enhanced over the course of more than ten years:

- · logistics, materials & site management system
- intuitive, offline-capable all-in-one app
- cloud-based, field-proven solution
- fast set-up

The platform works on all major operating systems (Android, Apple iOS, Microsoft Windows, web browsers) and devices (cell phones, tablets, laptops, desktop computers) and covers all relevant areas of the supply chain from manufacturing to installation. The system supports barcode/RFID tags scanning.



Insite LMS digitalizes industrial construction.

Insite LMS is in use in industries such as hydropower, steel, infrastructure, metals, chemicals and intralogistics.



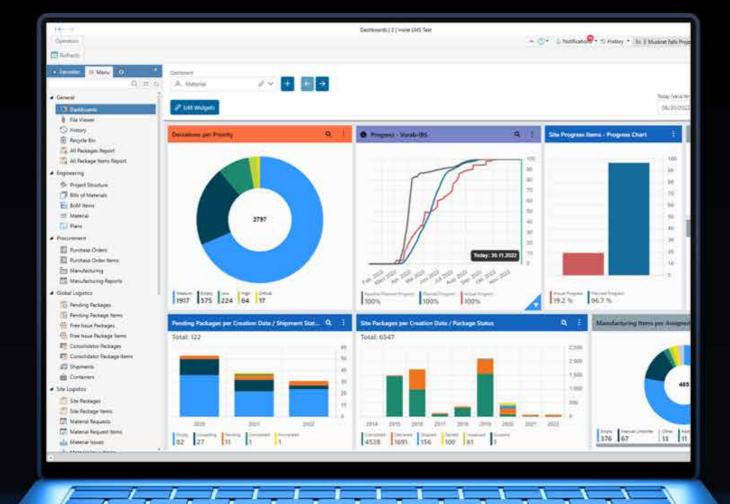


Better 80% digital than 100% paper chaos.

# Fight the Data Chaos on Site

The Platform for Industrial Construction

**INSITE LMS** 





# Always on Your Site

