DIGITAL ASSISTANCE SYSTEMS

mupudia – Guides Your Workforce Through Your Workflows Step by Step

We leverage digital controls, artificial intelligence, digital image processing and knowledge databases to prepare your workforce for the future.

Empower your people.
Preserve your knowledge.
Digitalize your process.
Amplify your possibilities.

mu:pu:di:a
Multi Purpose Digital Assistant

The Digital Assistance System mupudia – The Logical Step Towards a Future-proof and Sustainable Workforce


mu:pu:di:a
Multi Purpose Digital Assistant

Transfer and Preserve Expert Knowledge

Preserving company knowledge is the key to sustainable process workflows. Knowledge transfer includes several stages:

1. Oral knowledge transfer. This type of transfer mostly relates to informal knowledge.

2. Putting knowledge into writing.

3. Recording knowledge in a corporate wiki. While the continuous maintenance of a corporate wiki is possible, it is not necessarily common practice due to time constraints.

4. Artificial intelligence can be used to find patterns in existing documentation that previously served as a basis for decision-making. These patterns are used to train a neural network that can subsequently provide suggestions for future decisions.

5. The trained neural network uses this information to identify new methods and patterns. It can even generate new information that can be evaluated on a case-by-case basis.
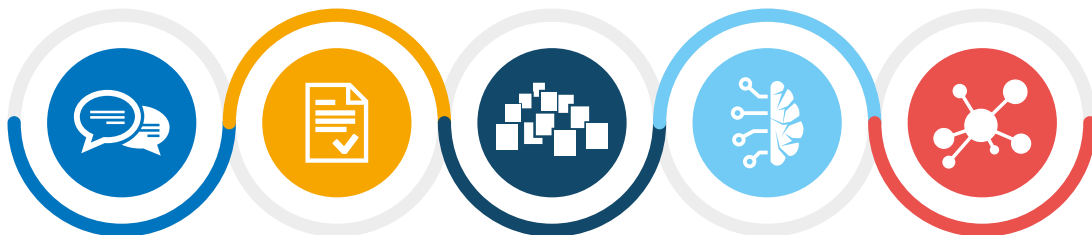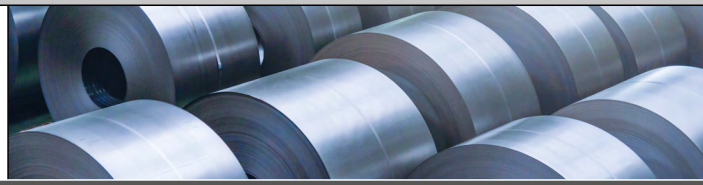
The Future of Working

Since PSI Technics was founded in 2005, we successfully supported many renowned clients like Volkswagen, Hong Kong Air Cargo Terminals (Super Terminal 1) or Deutsche Bahn with process automation and established ourselves as industry experts. We are proud to help our customers optimize their processes and make their workflows more efficient. Our experience and our comprehensive industry knowledge have made us a trustworthy partner for a large number of companies.

While our main focus lies on increasing efficiency, a new crisis is currently taking shape: Demographic change leads to a growing shortage of skilled labor that poses a significant challenge for all industries.

We clearly feel the impact that is caused by demographic change and consider it our social and corporate duty to support our clients with their digital transformation. That is why we developed **mupudia** – a new digital assistance system that puts people first and takes various aspects of demographic change into account.

But **mupudia** can do so much more and is not limited to industrial processes. In many industries, documentation requirements significantly increase while the number of skilled professionals continues to decrease. In the healthcare industry, for example, **mupudia** can assist caregivers and help reduce their workloads through automated documentation. It automatically translates content to eliminate language barriers and helps attract qualified talents. It offers digital onboarding and guides employees through processes and helps businesses turn new hires into skilled professionals.

With **mupudia** we offer businesses and administrations a Software-as-a-Service (SaaS) platform that uses the latest technology and state-of-the-art data security combined with first-class service and consulting – we actively listen to our customers' needs to help them master the challenges of demographic change.

We invite you to explore the causes and possibilities of demographic change to discover how **mupudia** can drive the automation and digitalization of industrial processes and help shape the future of working.

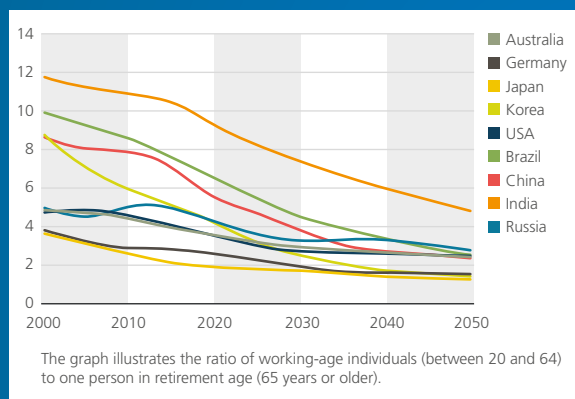Sincerely,
Karl-Heinz Förderer
CEO, PSI Technics GmbH

Our Approach – Why We Do What We Do

Current Trends

Demographic change affects all industries and leads to declining population levels over time.

The median age of the population increases which leads to a progressively heterogenous populace, while at the same time, immigration contributes to population growth.

Over the past decade, however, the working population decreased, which leads to a dwindling labor market. For example, calculations put the skills deficit in Europe over the next twenty years at 39 million people. Businesses are painfully aware that the so-called baby boomers, a strong generation of experienced professionals, are close to retirement age.

Demographic change in selected industrialized nations – Ratio of working-age population (20-64) to people in retirement (65+) (Source: OECD, 2014)

Legend:
- Australia
- Germany
- Japan
- Korea
- USA
- Brazil
- China
- India
- Russia

The graph illustrates the ratio of working-age individuals (between 20 and 64) to one person in retirement age (65 years or older).

Predicted annual changes of the labor market / the working-age population until 2060 (Source: IGZA, 2022)

EUROPE:

-39 Million   -76 Million

Million
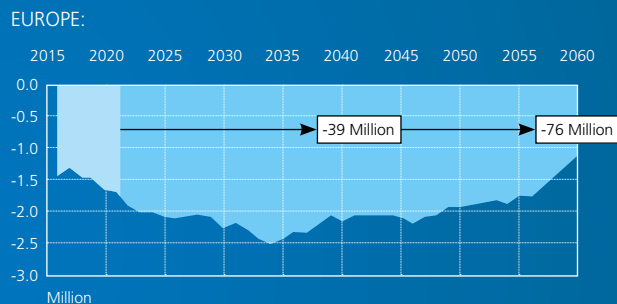
Low employee retention rates are another challenge that companies have to deal with. According to the Gallup Employee Engagement Index (a yearly employee survey), employee retention currently is at its lowest level in a decade. Only 13% of employees stated that they feel emotional ties to their employer. This means that company knowledge is irrevocably lost, and a skills deficit occurs when subject-matter experts leave or retire from the company. The training of new hires is not only time-consuming and costly, but also ties up important resources that are responsible for key business processes.

Hiring skilled migrants is complicated by language barriers. Integration attempts often fail or it may take years until they take effect. Language classes are overflowing and waiting times can range from several weeks to months.
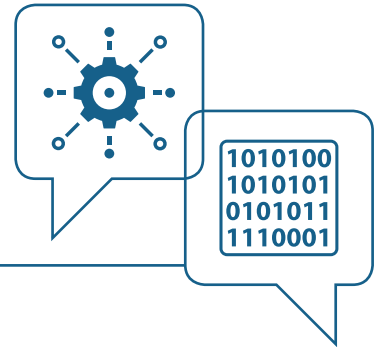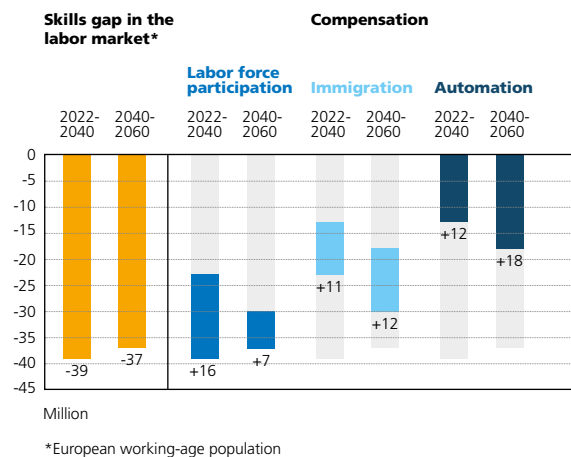
Are Automation and Digitalization the Solution?

Demographic change represents a huge challenge for companies.

The labor market will shrink considerably in the coming years. At the same time, relations between employers and employees are becoming less and less important. Businesses need to retain subject-matter experts while being able to integrate new hires quickly and efficiently. But how can they succeed?

The solution could comprise the following aspects: **Automation**, **immigration** and **increasing labor force participation**. We consistently put people at the center of our solutions. **mupudia**, our digital assistance system, supports employees with their daily tasks and promotes the integration of new hires.

Potential solutions to counter the effects of demographic change (Source: IGZA – Institute for the History and Future of Work, 2022)

Skills gap in the labor market*

Compensation

Labor force participation **Immigration** **Automation**

Million

*European working-age population

Automation:

Artificial intelligence and cloud services contribute to process improvements and to the conservation of resources. An agile and dynamic development that is tailored to business needs ensures that solutions are sustainable and future-proof.

Workplace integration:

A digital assistance system is designed to support employees with their daily tasks. Enabling employees to communicate in their own language as well as providing an intercultural user experience promotes the integration of new hires.

Increased labor force participation:

Digitalization solutions assist people in different stages of life. Subject-matter experts and new hires alike benefit from location-independent, role-based tasks and the ability to work remotely allows companies to tap into a bigger talent pool.

Our digital assistance system **mupudia** is the perfect solution for companies who are looking to prepare for demographic change. It offers fast and efficient workplace integration, strengthens ties between employers and employees and helps businesses to firmly establish themselves on the market. **mupudia** gives you a competitive edge!
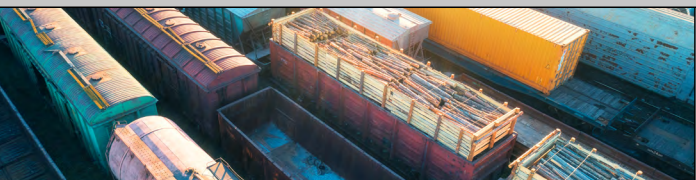
Our Approach

When it comes to implementing digital assistance systems, we rely on the following aspects that play a vital role during platform development.

**Generic process mapping:
Easy and flexible.**
A digital assistance system needs to be able to easily map generic processes. This means that users should be able to supply or access process data using a digital assistance system. Customers can decide which types of data sources they would like to integrate into their digital assistance system.

**We focus on individual requirements:
Process management for everyone.**
Digital assistance systems should flexibly adapt to user requirements and include automated translation or process mapping that is based on empirical values.

**Use of mobile devices:
Location-independent access.**
The use of mobile devices enables location-independent access to process information. It also simplifies the integration of new or innovative elements that are designed to improve existing processes.

**Dynamic development:
Use of cloud services.**
To ensure an agile and dynamic development and to provide custom solutions within a short period of time, we are using the biggest cloud service provider: Amazon Web Services (AWS). Their best practices for data security were crucial for the development of our digital assistance system.

Intelligently simplify and digitalize your processes. How it works:

1. Create
Create individual digital assistants using mupudia.

2. Use
Employees start using the mupudia mobile app that intuitively guides them through your process workflows.

3. Document
Create and share reports from data that was recorded with mupudia.

4. Analyze
Use the recorded process-related data to continuously optimize your processes.

mupudia *consists of 4 software modules.*
Users can use several or all of these modules, depending on their access rights.

After logging in with their credentials, users are presented with a **dashboard** that displays all of the currently available assistants. The dashboard is **mupudia**'s control center and provides access to all 4 software modules. When logging in for the first time, a sample assistant provides valuable tips and insights for using **mupudia** and allows users to test the system's features.

The dashboard in the picture below includes various digital assistants:

Digital assistants are flexible and can be created for all business processes.

Every time a new digital assistant is created, authors reflect on the process they intend to digitalize. Can any of the existing steps be improved or are any of the steps outdated and need to be removed? These considerations automatically enhance process quality and promote process optimization – **a positive side effect that offers added value!**

CREATING A DIGITAL ASSISTANT

The first step of creating a digital assistant is to define its basic structure. **mupudia** is easy and intuitive to use. No programming skills are required. Users can take advantage of the intuitive **mupudia** configurator to define individual process steps and use a wide range of digital elements to add process information as needed.

Structural elements are used to establish a logical process sequence that enables users *to focus on individual process steps*. **Static elements** are added to provide relevant information for each step. Placeholders for **user interactions** can be inserted when users need to provide a particular type of feedback during the process workflow.

Additional **add-ons** can be used to further *customize* each assistant. During a complimentary workshop we will determine your individual requirements and tailor the add-ons to your specific process workflow. For example, add-ons can include the *use of special sensors*, the *integration of machine data* or *ERP systems* as well as the analysis of specific data for determining Key Performance Indicators (*Business Analytics*). We leverage state-of-the-art technology such as *artificial intelligence* to ensure that all **mupudia** software modules can be deployed quickly and efficiently.

When configuring a digital assistant, you can choose from *up to 70 languages*. The content will be automatically translated when the digital assistant is saved to guarantee its availability in the selected language(s). An assistant's configuration can be expanded or modified at any time. Users can work with different modules, depending on their *individual access rights*. Every single process element can be assigned a particular user role or access right. This means that new talents can be guided through a process in greater detail than long-time employees with years of experience.

Structural elements
- Section
- Step

Static elements
- Aa Text frame
- Photo shoot
- Video
- Safety signs

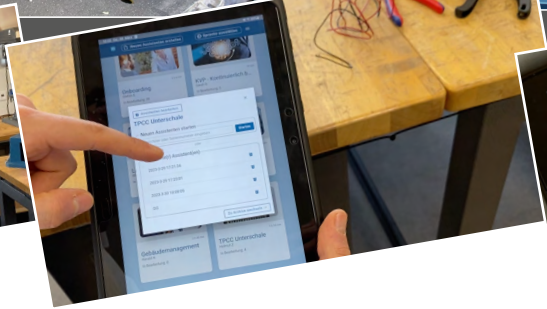**User interactions**
- Question and answer
- Photo capture
- Multiple Photo Capture
- Video recording
- Aa Text input
- Date/Time input
- Text recognition
- Checkbox
- Signature field
- QR code scanner

Add-ons
- Barcode scanner
- NFC Reader
- Document scanner
- Text-to-speech output
- Speech-to-text transcription
- MQTT connector
- Object detection

USING THE MUPUDIA APP

Once an assistant has been created, employees can use the **mupudia** app to work through the different process steps. While doing so, they adhere to the previously defined structure. If required, the app asks for feedback, for example, it can ask users to enter a description, take a picture or input process information that is specifically targeted to the user's role – and users can do it in their own language. *This eliminates language barriers and makes it much easier for employees to familiarize themselves with new processes.*

It also ensures that *subject-matter experts* spend less time training new colleagues and *can focus on their core competencies instead*.

The Benefits of mupudia at a Glance:

1. Reduced Employee Workload

The app guides your employees through your processes and allows them to focus on every single step, which makes processes more resilient and less prone to human error.

2. Faster Training of New Hires

The app enables you to train new employees faster and more efficiently in significantly less time. This frees up experienced staff members who can focus on creating added value in the process chain.

### 3. Faster Integration of New Employees

The app automatically translates content into more than 70 languages. This eliminates language barriers and promotes an efficient collaboration in multilingual teams.

4. Preserves Company Knowledge

Even if your subject-matter experts are close to retirement, there is still time to ensure that their knowledge is digitally preserved and will remain within the company.

A variety of digital elements help employees to work through different process steps.
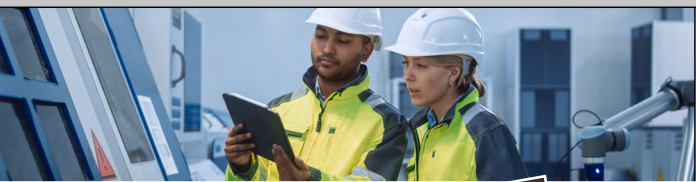
PROCESS DOCUMENTATION

mupudia automatically documents your processes. It saves the data that is gathered by your employees as they complete different process steps. The data cannot be retroactively changed. It can also be encrypted to *guarantee data integrity* in the long term.

No additional process documentation is required. As a result, **mupudia** also increases process efficiency and reduces the workload of your workforce.

mupudia *is not an isolated application.* It can be linked to a variety of super- or subordinate systems such as SAP or a PLC. State-of-the-art interfaces ensure that only the required process-relevant data will be transmitted.

PROCESS ANALYSES

And lastly, the recorded data can be analyzed using *big data analytics*. The analysis reports are displayed in the *management dashboard* and offer valuable process insights that can be used to identify and leverage hidden optimization potential.

An optional *anomaly detection* feature can be utilized to detect potential issues as they arise. The corresponding data can either be displayed as charts and graphs, or the analysis can be performed in the background. Alerts can be automatically generated to ensure that potential problems can be addressed in a timely manner.

Use Cases – Who Benefits from Using mupudia?

When developing **mupudia**, we focused on actively supporting people in their professional lives and wanted to make it easier for employees to familiarize themselves with process workflows.

The following case study illustrates the application possibilities of mupudia:

Gear56 is a mechanical engineering company headquartered in Germany that specializes in the manufacturing of gearboxes for wind turbines. The business is located in a rural area and has had to deal with several obstacles in recent years. One of the company's biggest challenges is finding and retaining skilled personnel.

Because Gear56 is located in a rural area, it relies on a limited pool of skilled professionals and finding qualified people to manufacture complex gearboxes for wind turbines proved to be difficult. Moreover, skilled professionals may not necessarily want to relocate to a rural area to work for Gear56.

The fierce competition for qualified talents is another problem that Gear56 needed to address. Competitors in the same industry, particularly those in urban areas, might pay higher wages and offer better working conditions to attract qualified people. This makes it harder for Gear56 to remain competitive and to find the best talents.

Providing training and development for its workforce is a complex task. Gear56 produces highly specialized products that require equally specialized training. Attracting the right people with the required skills and expertise is challenging, and training and educating new hires can be costly and time-consuming.

In short: Gear56 faces several challenges with regard to finding and retaining skilled personnel. It needs to develop creative strategies to attract and retain talents, offer attractive pay, a flexible work schedule as well as targeted training and development programs.

To master those challenges, Gear56 invests in automation and digitalization. Below, we introduce you to three of the company's employees who rely on **mupudia** for their daily work.
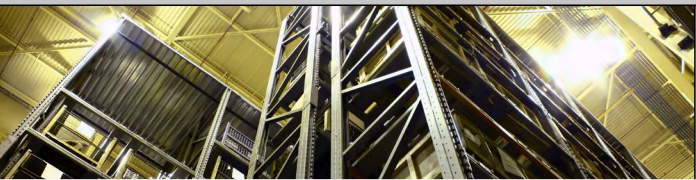
Meet Stefan, Anna and Sarah who work for Gear56 and illustrate the benefits of using a digital assistance system:

Factory Manager
Stefan

Production Assistant
Anna

Quality Controller
Sarah

Factory Manager Stefan

Stefan is a capable, experienced factory manager with a strong sense of responsibility. As an experienced manager, he knows how to motivate and lead his team to achieve optimum results.

The following aspects are particularly important for Stefan:

1. Increased efficiency: Stefan would like to work more efficiently and is looking for products that can help him save time and resources.

2. Problem-solving: Stefan wants to solve problems quickly and efficiently and needs products that help him identify and solve potential issues.

3. Adoption of technologies: Stefan is interested in using the latest technology. He is looking for products that help him understand and capitalize on current trends and developments.

4. Data analysis: Stefan places particular emphasis on data analysis and is looking for products that enable him to analyze and interpret data quickly and easily.

5. Cost savings: Stefan wants to save money and is interested in products that minimize costs and contribute to the optimization of existing processes.

By using **mupudia** Stefan was able to digitalize and optimize the company's asset management. Gear56 uses a variety of machines in different departments to guarantee smooth order fulfillment. **mupudia**'s asset management feature enables him to see the entire process at a glance.

When processes are digitally documented, everyone has access to troubleshooting information and processes can be significantly optimized by analyzing existing process data. With **mupudia** the company was able to optimize their process workflows and realize cost savings of more than 10%.
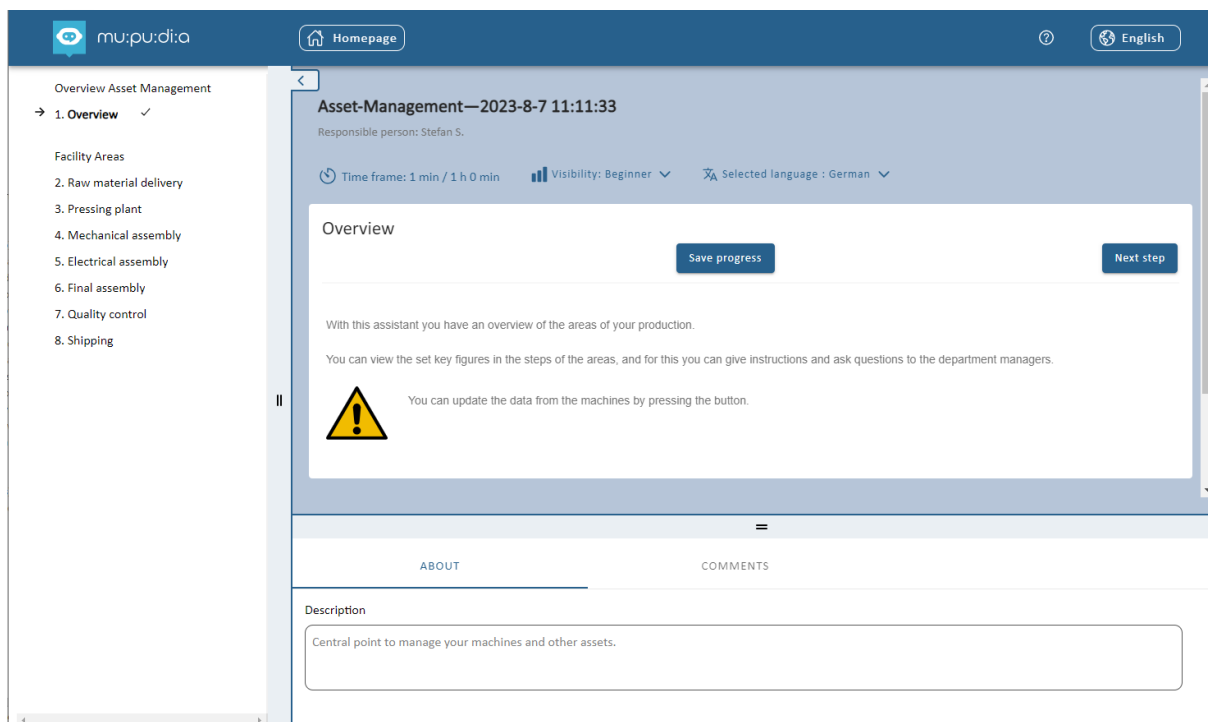
Production Assistant Anna

25-year-old Anna has no previous experience in the field of industrial production but is highly motivated and committed to fulfilling her new role.

Anna places particular importance on:

1. Quickly familiarizing herself with new processes: Anna wants to be able to quickly familiarize herself with new processes. Sometimes, she hesitates to ask her colleagues for help, because she knows that it will distract them from their own work. She appreciates a solution that allows her to quickly find the required information interfering with other people's work.

2. State-of-the-art technology and equipment: Anna is interested in new technologies and equipment that simplify her work and contribute to office modernization.

3. Reduced stress and workload: Anna appreciates solutions that help reduce stress and decrease her workload without negatively impacting her performance.

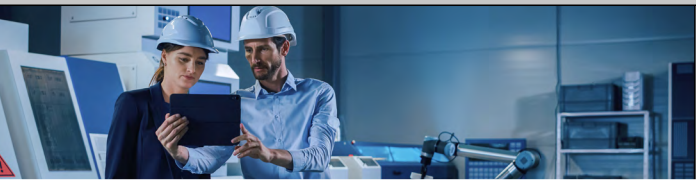**4. Improved cooperation:** Anna is looking for solutions that facilitate efficient communication and promote cooperation with colleagues. In her role as a production assistant, Anna participates in many processes and wants to promote fast and open communication. As a digital native a digital solution is her preferred choice.

On her first day at work, Anna received a tablet with the **mupudia** app. It included a digital onboarding assistant that introduced her to the most important business aspects and enabled her to familiarize herself with company at her own pace. By using **mupudia**'s onboarding assistant, new employees can quickly get acquainted with the company It provides basic information and covers questions such as:

- How does the locking system work?
- Where are the different departments located?
- Where are common areas located in the building?
- Who are the most important contacts?
- How do I log on to a company PC for the first time?

Anna particularly values **mupudia**'s automated translation feature that enables every new team member to access important onboarding information in their own language. After all, first impressions count!

Quality Controller Sarah

Sarah is a diligent and talented quality controller who is committed to achieving the highest quality standards. She successfully completed a quality management education and has years of quality control experience under her belt.

Sarah particularly values:

1. Monitoring and control: Being able to monitor and control the production process is crucial for Sarah. For her, features for easy process monitoring and control are indispensable components of digital assistance systems.

2. Data security: Sarah places particular importance on data privacy and security. Consequently, a digital assistant needs to provide adequate data privacy and security measures.

3. Efficiency: Sarah is constantly looking for new ways to optimize production and to conserve both time and resources. She appreciates products that boost efficiency and productivity.

4. Flexibility: Sarah values flexibility and adaptability, therefore, a digital assistant needs to easily adapt to changing requirements.

5. Technical support: Sarah uses technical systems on a daily basis and expects a digital assistance system to offer technical support and training.

Sarah uses **mupudia** to digitalize quality control processes. Quality control is highly structured and requires a tremendous amount of documentation. The continuous monitoring of collected data is crucial part of her work and used to take up a lot of her time before she started working with **mupudia**. Its documentation and analysis features offer her added value. Prior to using **mupudia**, she thoroughly researched its data security features. The fact that the software was developed in accordance with AWS best practices for data security won her over. Process reliability is another vital aspect for her since it guarantees the safe recording of quality control results.

Sarah is pleased to see how quickly she can introduce new employees to in-house processes with **mupudia**. Because Sarah is committed to continuously enhance existing processes, she appreciates the fact that **mupudia** easily and seamlessly adapts to new requirements.

Conclusion: mupudia is a Flexible, Easy-to-use Companion that Supports the Digital Transformation in Companies

> Our **digital assistance system mupudia** optimally supports the digitalization of business processes. It is easy and intuitive to use, flexibly adapts to changing requirements and promotes process optimization.
In short: **mupudia** is an indispensable companion for the digital transformation in companies.

It focuses on people to minimize the effects of demographic change and assists businesses with future-proofing their processes. Your entire workforce can benefit from **mupudia**'s versatility.

Typical applications include:

>> Commissioning
>> Preventive maintenance
>> Production quality control
>> Knowledge management
>> Onboarding and training
>> Assembly, installation and repairs
>> Inspections, on-site safety audits
>> Building safety and management
>> Incident reporting
>> Time tracking
>> Manufacturing & engineering
>> Business analytics
>> Asset management
>> Documentation (reporting)

By using **mupudia**, you can begin to digitally map your business processes in no time. **mupudia** offers added value for all departments and promotes the integration of skilled professionals from various cultural backgrounds.

WHAT WE HAVE TO OFFER

When creating a digital assistance system, we support you every step of the way – from concept to completion and best-in-class customer support.

We focus on providing solutions that are tailored to your needs. Apart from a comprehensive consultation that also includes complementary workshops, we first evaluate and analyze all aspects of the project in close cooperation with you. We then develop a prototype and take care of the safe commissioning of the final product to guarantee that your digital assistance system will work reliably for years to come. In addition, we develop supplementary analyses to help you reveal hidden optimization potential.

Contact us today to learn how your business can benefit from using a digital assistance system.
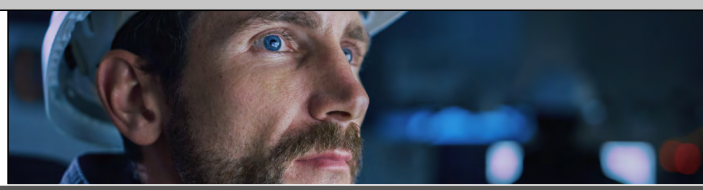
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Multi Purpose Digital Assistant

Empower your people.
Preserve your knowledge.
Digitalize your process.
Amplify your possibilities.

We believe that your company can benefit from digital assistance systems and automated processes and would be happy to discuss the details of a custom solution with you. Contact us today to schedule an appointment for a personal consultation.

Send an email to info@psi-technics.com or call +49 2630 91590-0.

Simply scan the QR code or visit our website to learn more.

www.mupudia.com

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