ORIANDA

Mobile Maintenance

Status quo and latest trends

Introduction

It is remarkable - in 2007, Apple launched the first iPhone on the market and thus set an enormous dynamic in motion. Today, mobile devices - especially smartphones and tablets, but increasingly also smartwatches and data glasses - have become an integral part of our everyday lives. Even more: They changed our lives a great deal. And that goes for private life as well as for business.

The way we listen to music is an impressive example of this change. This is happening more and more via streaming services such as Spotify or Deezer. Instead of buying individual albums, we buy access to countless tracks. This would hardly have been possible without mobile devices. After all, who wants to listen to music on their PC at home?

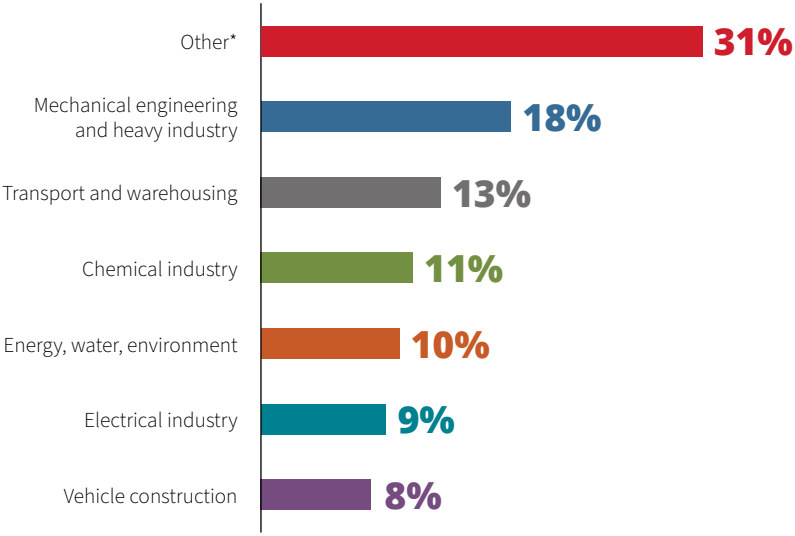
In the business world, smartphones and other devices often bridge existing media gaps. In recent decades, most companies have digitized a large number of processes with the help of a number of systems. However, when data had to be exchanged between employees in a targeted manner, it quickly became complex. Then, for example, the sales representative in the field passed on his customer's orders to the office by telephone. Or the managing director leafed through an impractical stack of paper with key figures in the waiting area of the airport. If mobile devices are used, orders can be entered directly in the ERP system and all KPIs can be accessed at any depth.

Potential for maintenance?

It is obvious that mobile solutions are also worthwhile for maintenance. Firstly, employees are usually on site at the asset - so they cannot use a stationary computer. Secondly, they need a great deal of information from different sources. And thirdly, it is helpful if they can give immediate feedback on their work and the state of the asset. Using mobile solutions has multiple positive effects: This increases the efficiency and quality of the actual maintenance processes as well as the efficiency and quality of the upstream and downstream administrative processes.

But what does it look like in practice? Do the companies recognize the opportunities and therefore initiate corresponding projects? Our study „Mobile Maintenance

In which industry is your company active?



**The participants of the study had the possibility to name their industry in the free text, if it is not available in the selection. Enclosed is an excerpt of the entries: Pharmaceuticals, food industry, automotive suppliers, consumer goods, plant construction, paper industry, healthcare.*

- status quo and current trends“ provides answers. We interviewed 276 people from Switzerland, Germany and Austria. They work for operators or manufacturers of machines and plants. The size of their companies ranges from less than 50 employees to over 10,000. A central finding: the majority of companies see the value of mobile solutions in maintenance. More than half are already using them today. And most of those who have been reluctant so far are planning to use it. Their main goal - as can be plausibly deduced from the answers to various questions - is to work more efficiently with the help of mobile solutions. You will find all the results in detail below.

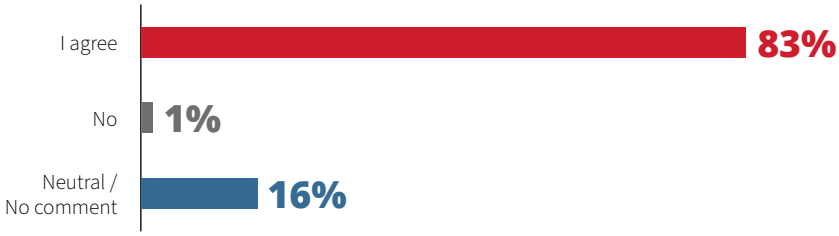
We wish you an interesting read

Sincerely

Ewald Rehm
CEO Orianda Solutions AG

Question 1

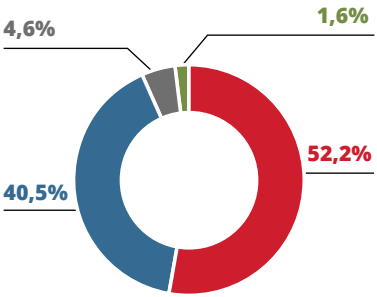
Do you agree with the following statement? „The use of mobile solutions in maintenance leads to economic and/or qualitative added value.“



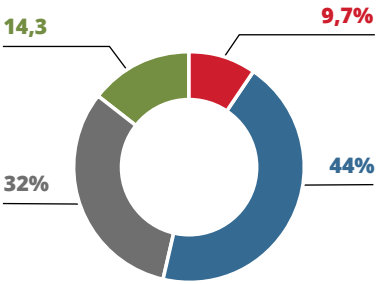
Question 2

Please indicate how you assess the suitability of the following equipment types for use in maintenance:

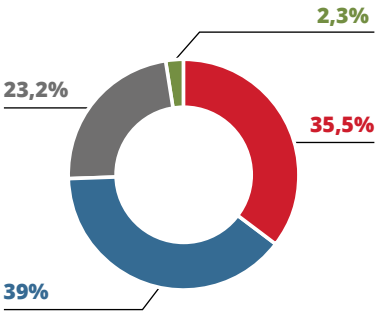
Tablet



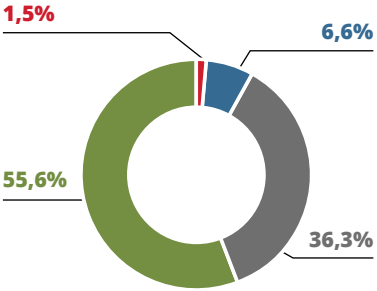
Data glasses



Smartphone



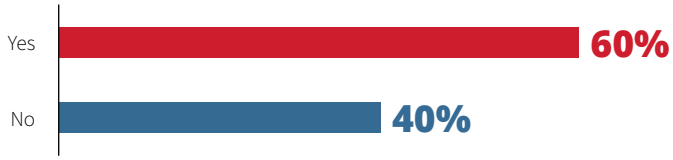
Smartwatch



- Very high suitability
- High suitability
- Low suitability
- Very low suitability

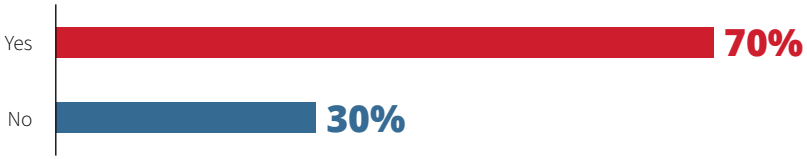
Question 3

Do you use mobile devices for maintenance?

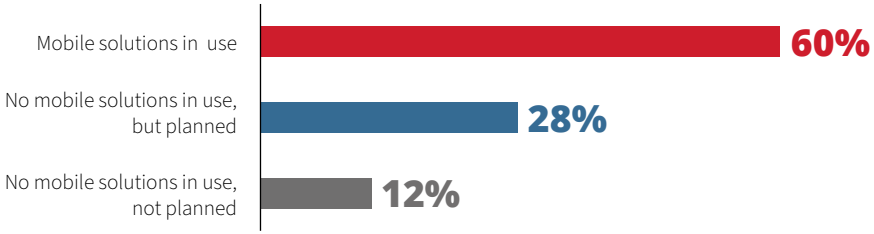


Question 4

If you have not yet used any mobile devices in maintenance: Are you planning the introduction of mobile end devices in maintenance?



Combination of the results from question 3 and question 4 - related to the population of answers:

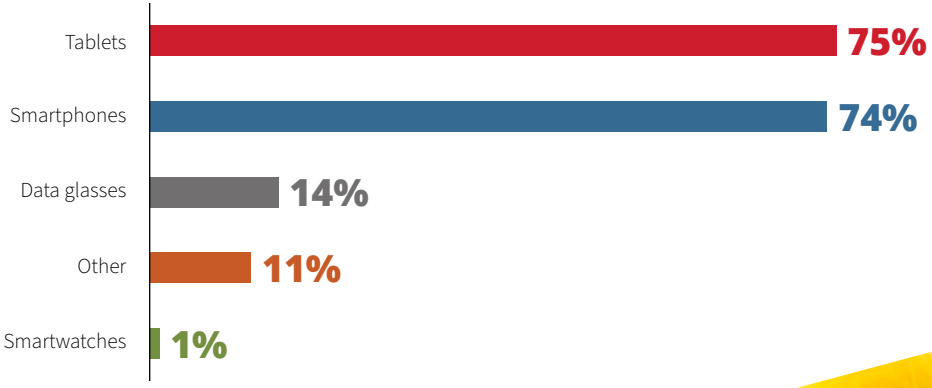


Question 5

If you already use mobile devices in maintenance:

Which devices are in use?

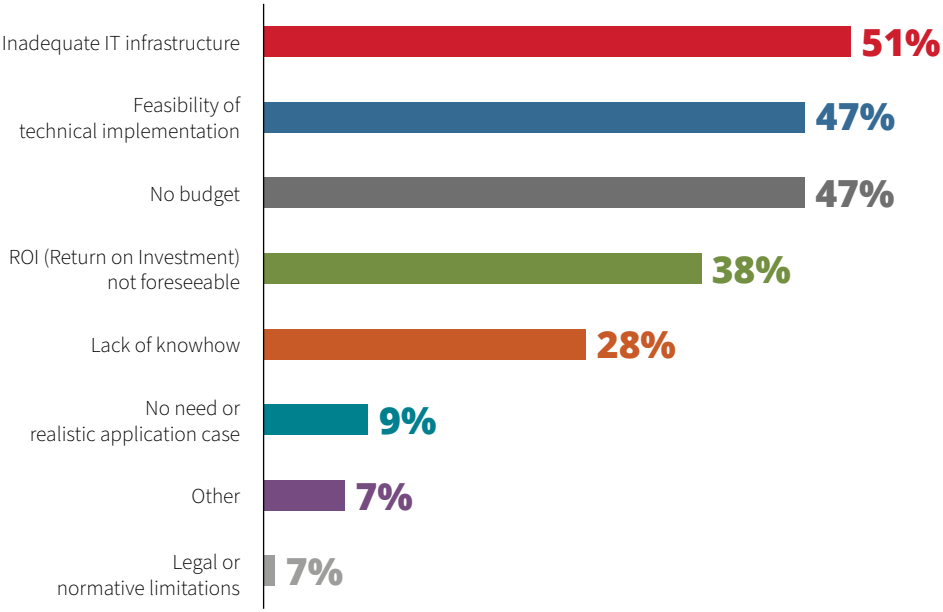
Multiple answers possible



Question 6

If you are planning the introduction of mobile devices in a timely manner: **Why have mobile devices not been used so far?**

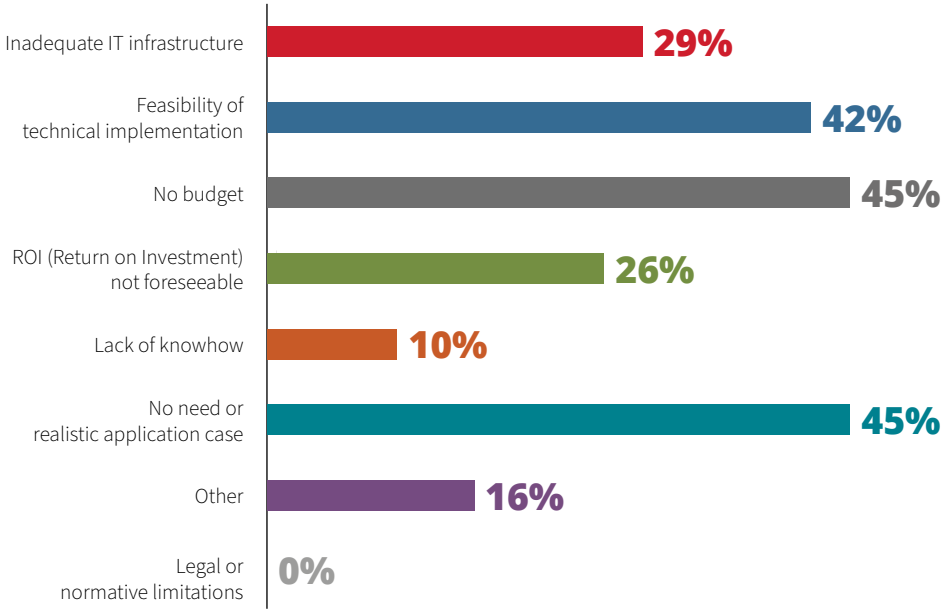
Multiple answers possible



Question 7

If you are not planning the introduction of mobile devices: **What are the reasons for this decision?**

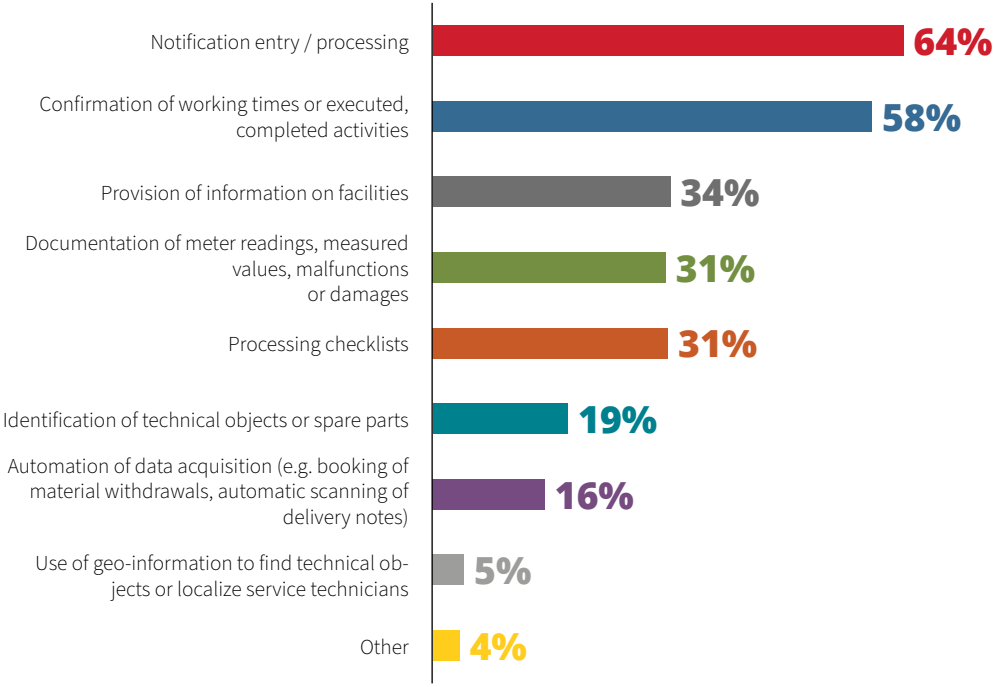
Multiple answers possible



Question 8

If you are already using mobile devices in maintenance: **For which applications are tablets/ smartphones used?**

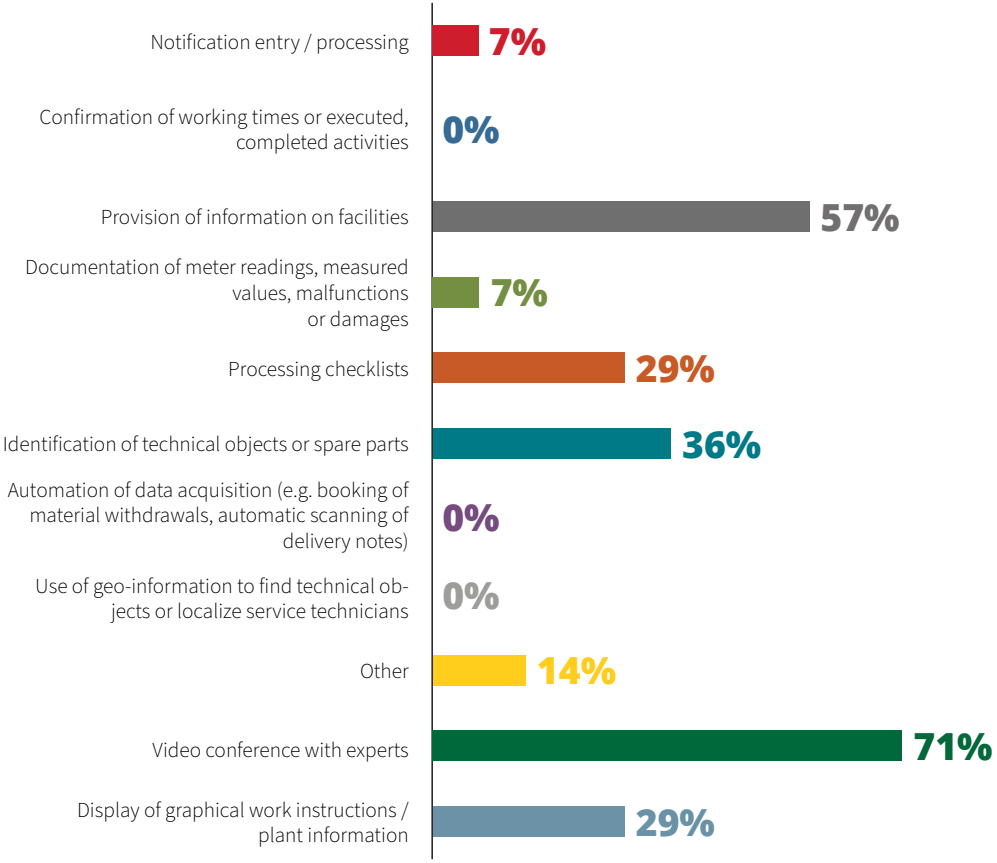
Multiple answers possible



Question 9

If you are already using mobile devices in maintenance: **For which applications are data glasses used?**

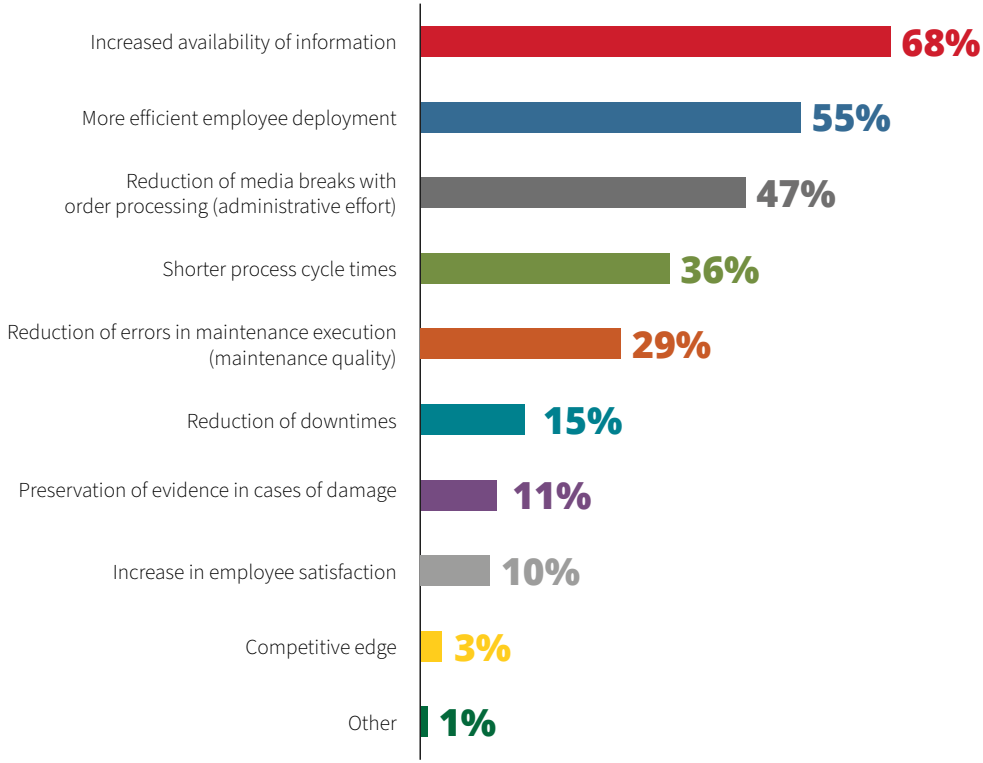
Multiple answers possible



Question 10

If you are already using mobile devices in maintenance: **What were the hoped-for added values through the use of tablets/ smartphones?**

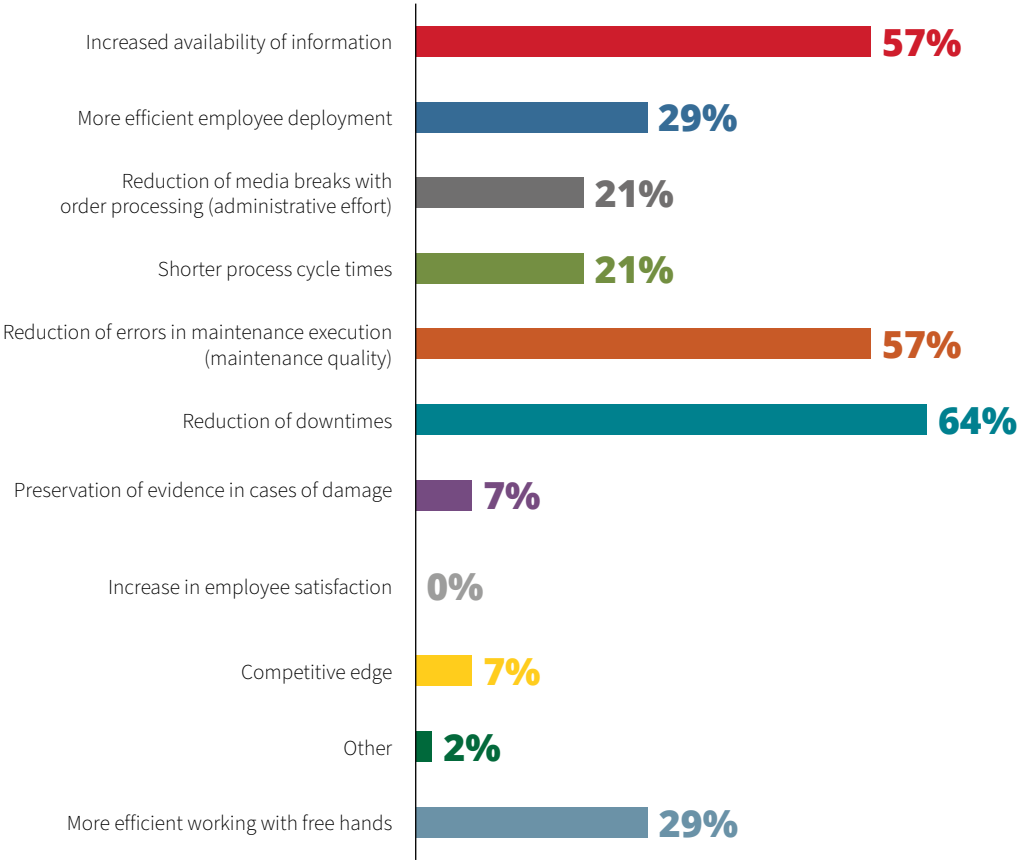
Multiple answers possible



Question 11

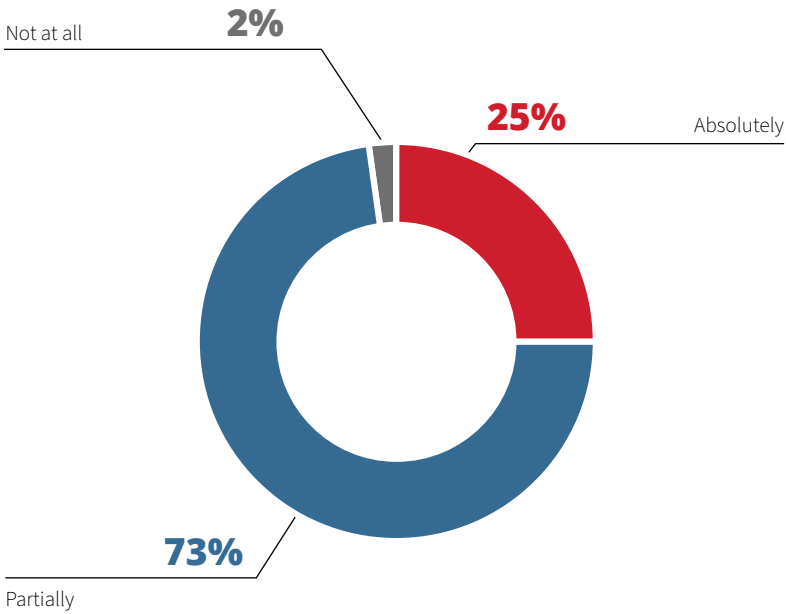
If you are already using mobile devices in maintenance: **What were the hoped-for added values through the use of data glasses?**

Multiple answers possible



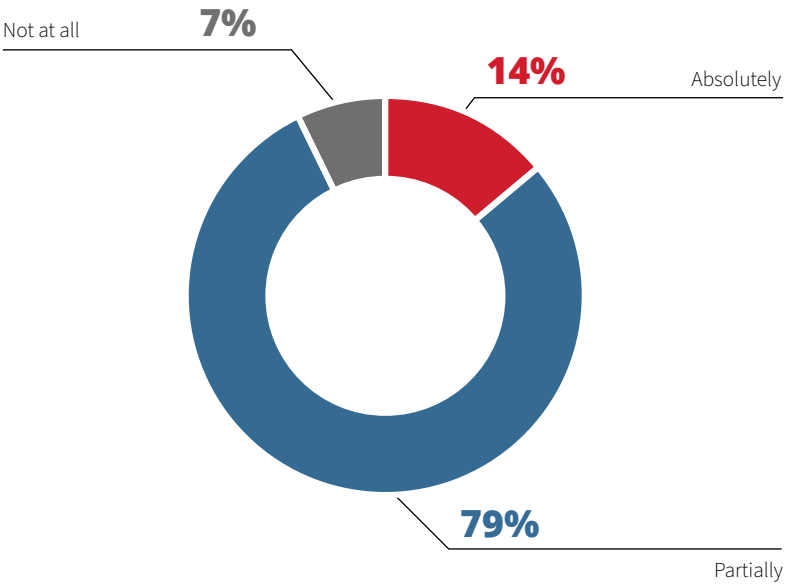
Question 12

If you are already using mobile devices in maintenance: **Could the hoped for added value be realized through the use of tablets/ smartphones?**



Question 13

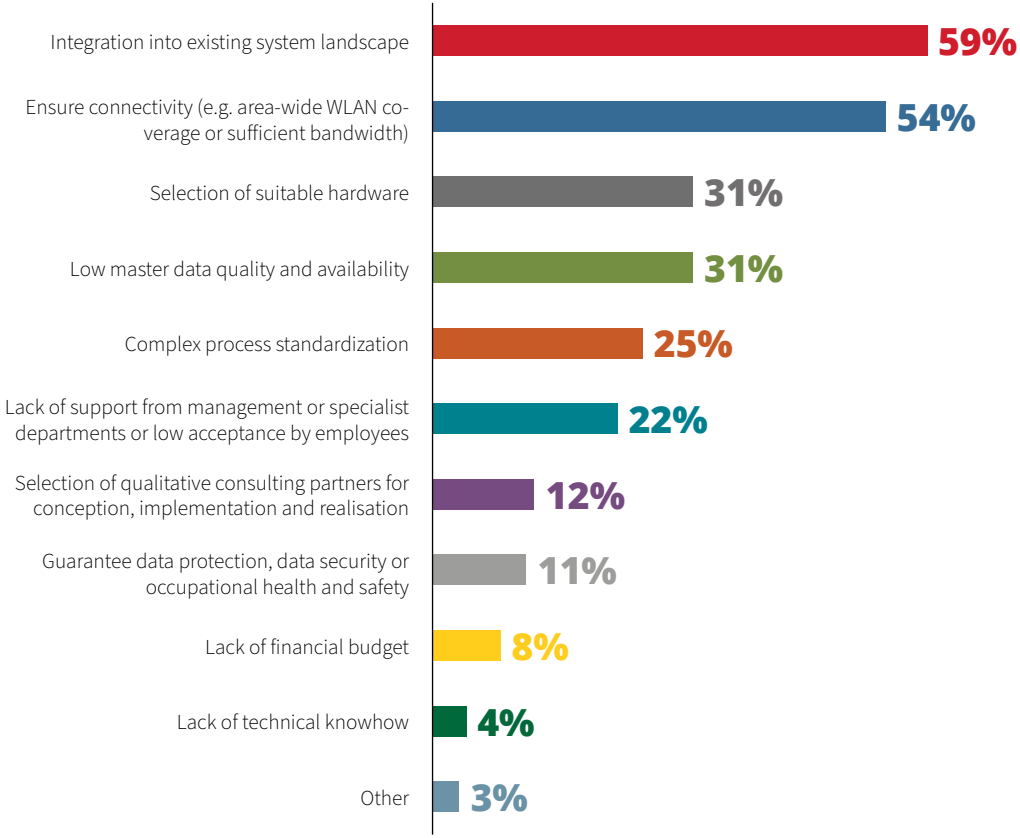
If you are already using mobile devices in maintenance: **Could the hoped for added value be realized through the use of data glasses?**



Question 14

If you are already using mobile devices in maintenance: **Which challenges arose during the introduction of tablets/smartphones?**

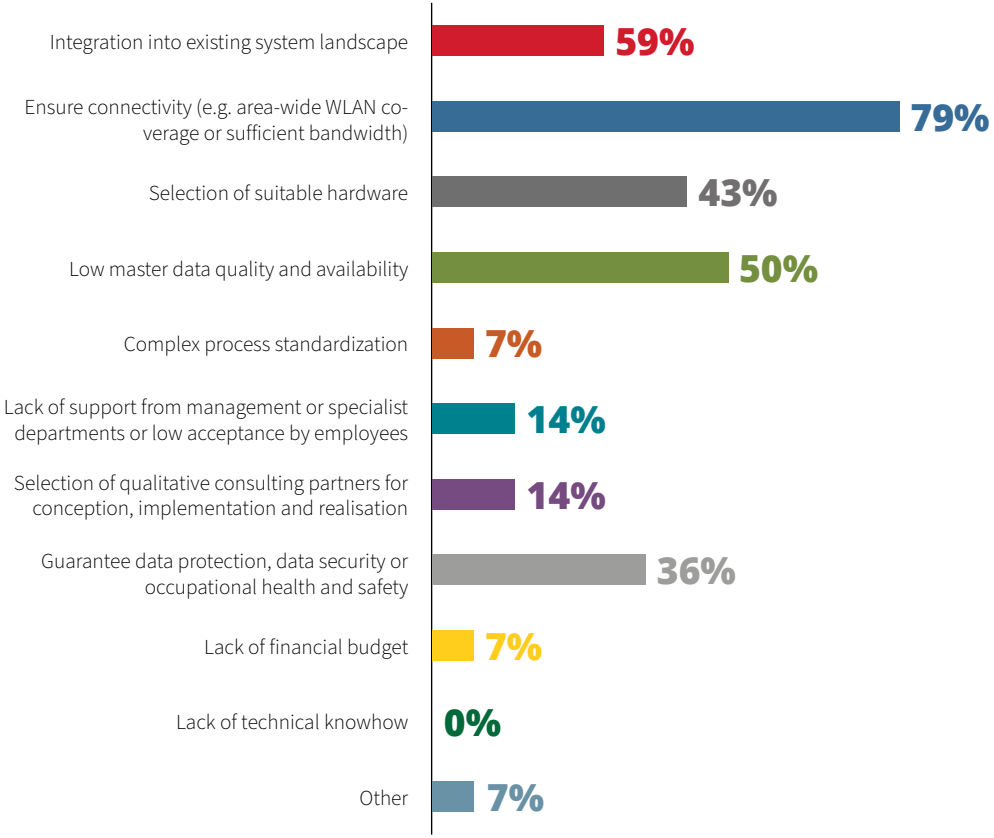
Multiple answers possible



Question 15

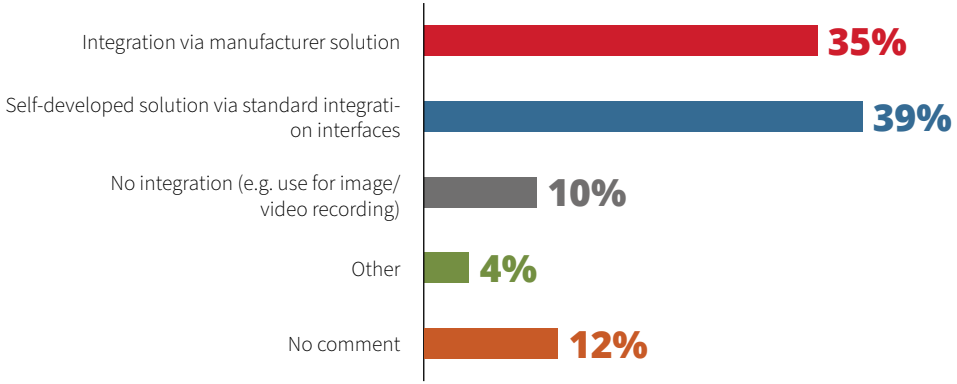
If you are already using mobile devices in maintenance: **Which challenges arose during the introduction of data glasses?**

Multiple answers possible



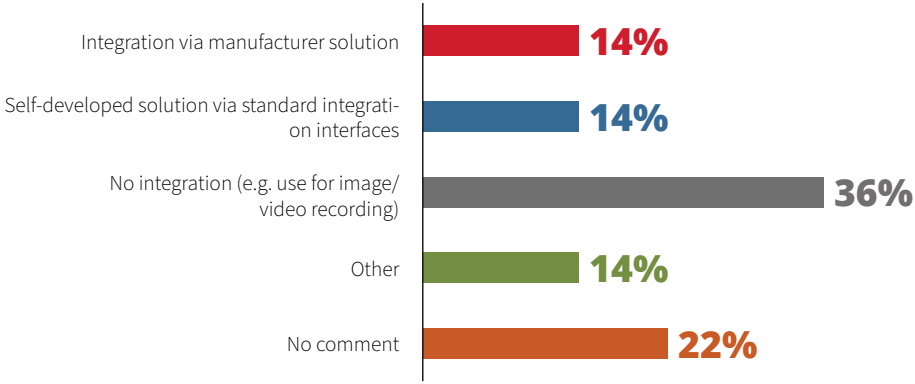
Question 16

If you are already using mobile devices in maintenance: **How are tablets/smartphones connected to your ERP or maintenance management system?**



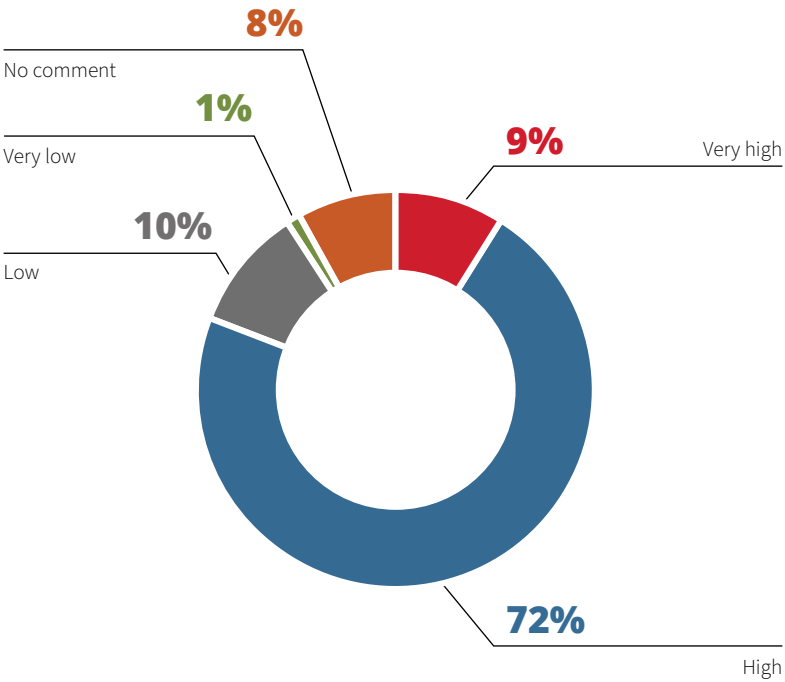
Question 17

If you are already using mobile devices in maintenance: **How are the data glasses connected to your ERP or maintenance management system?**



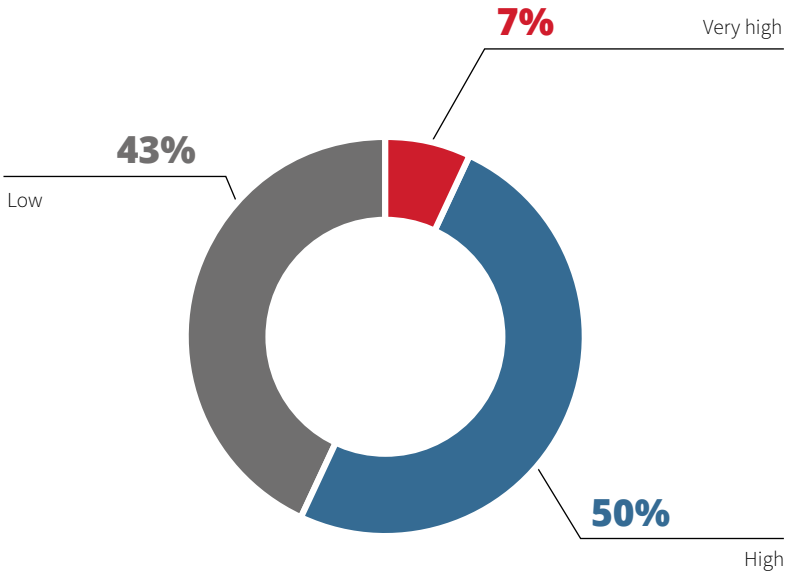
Question 18

If you are already using mobile devices in maintenance: **How high is the user acceptance of tablets/smartphones?**



Question 19

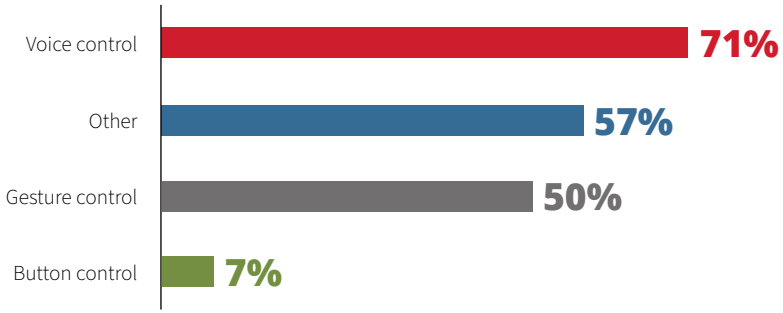
If you are already using mobile devices in maintenance: **How high is the user acceptance of data glasses?**



Question 20

If you are already using mobile devices in maintenance: **Which input formats of the data glasses are used in your company?**

Multiple answers possible



Conclusion

There is more or less consensus among the interviewees that mobile solutions for maintenance represent an enormous potential. For example, 82 percent answer „Yes“ to the question of whether their use leads to economic or qualitative added value - only one percent does not recognize any benefit and answer „No“. So far it is not surprising that 60 percent of subscribers state that they already use mobile devices in maintenance. 28 percent do not yet use mobile solutions, but plan to do so in the foreseeable future. Only twelve percent have been cautious so far and want to remain so in the future. Tablets (75 percent) and smartphones (74 percent) are the most commonly used, and 14 percent of participants use data glasses in their companies. Smartwatches (one percent) do not play a role at the moment.

Different expectations of different end devices

An important goal for users of tablets and smartphones (68 percent) and for users of data glasses (57 percent) is increased information availability. The use of tablets and smartphones also focuses on more efficient staff deployment (55 percent) and a reduction in media breaks in order processing (47 percent). These two aspects are of secondary importance when data glasses are used. In addition to the increased availability of information, the reduction of downtimes (64 percent) and the reduction of errors in maintenance execution (57 percent) are particularly important.

There are two interrelated declarations for these different priorities: First, all users of data glasses also use smartphones or tablets. It can therefore be assumed that their expectations are spread across both groups of devices. This is consistent and obvious if, secondly, it is assumed that both groups of devices are suitable for different scenarios due to their specific nature. The answers to the concrete use cases speak in favour of the fact that the participants see this in exactly the same way: Smartphones and tablets are mainly used to record and process messages (64 percent) and to report back working hours and completed tasks (58 percent). Data glasses should enable video conferences with experts (71 percent) and provide information on the system (57 percent).

Added value can still be increased

With all these positive attributions, the assessment of the results currently has to be somewhat more differentiated. Only 25 percent of the participants said that the hoped-for added value had been fully realised with regard to tablets and smartphones. With 73 percent, the vast majority only see their expectations partially fulfilled. The situation is similar with regard to data glasses. Here, 14 percent state that the hoped-for added value has been achieved in full, 79 percent in part.
So wish and reality are a little far apart. This may have something to do with the fact that the wish is unrealistic - that the potential of mobile solutions is overestimated. Or when selecting and implementing mobile solutions, certain factors that are crucial for success were not taken into account. From our point of view, there is a lot to be said for the second assumption. There are also some hints for this in the answers of the study participants.

Integration is what counts

When asked about the challenges that arose during the introduction, 59 percent of users of smartphones and tablets mention the integration into the existing system landscape. The figure for users of data glasses is only 29 percent. However, the fact that the value here is significantly lower can be explained by the fact that often no connection at all to an ERP or maintenance management system was made (36 percent) - so difficulties could not arise at all.
In general, it is worth taking a closer look at the type of connection: The technological integration of tablets and smartphones took place in 35 percent of the cases via a solution from the manufacturer, in 39 percent via a solution developed by the company itself and in 10 percent not at all. In 14 percent of the cases, the manufacturer‘s solution was used for the data glasses, in 14 percent a solution developed in-house and - as already mentioned - in 36 percent no solution at all. In this context, the reasons that have so far prevented companies from introducing a mobile so-

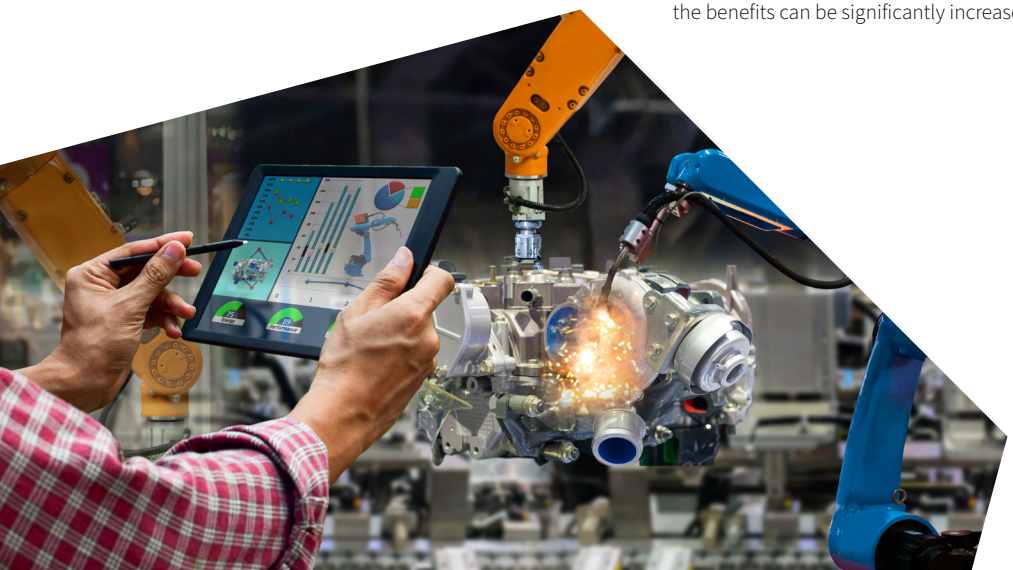
lution are also interesting. Among the participants who are still reluctant but are planning an implementation, this is often due to an inadequate IT infrastructure (51 percent) - at least that is the assessment - and the feasibility of the technical implementation (47 percent). Companies that are not planning an introduction rarely cite an inadequate IT infrastructure as a reason (29 percent). However, the feasibility of technical implementation is also an issue for them (42 percent). In our experience, strategically oriented integration of mobile solutions is the key to exploiting the full potential. The fact that companies easily underestimate this is all too understandable. After all, we are all used to the fact that apps can be downloaded quickly, installed conveniently and used directly - free of charge - as a result of our daily private experience. In the business context, this is inevitably different. The first step is to raise awareness of this. The second is to focus on four key areas of action:

- „Strategy and organisation“,
- „Processes and master data“,
- „Technology – meaning hardware and software“,
- “People“.

If a few key questions are answered here, a mobile solution for maintenance can be developed which can be integrated at all levels, which is actually used by the employees and thus offers the greatest possible added value.

Example resource scheduling

This can be illustrated by integrated resource planning and order processing. Resource planning can initially be carried out with a stationary solution that is integrated itself and can thus access data from adjacent systems. This is possible, for example, with SAP Multiresource Scheduling (SAP MRS). If order processing is also mobile, the benefits can be significantly increased:



employees can immediately see the orders assigned to them on their mobile devices and are supported in route planning. They receive up-to-date information on the asset and the availability of spare parts. They enter their confirmation of order completion, condition and withdrawal of materials directly at the device and trigger subsequent processes such as ordering spare parts immediately. This reduces asset downtime and employee workload. In addition, more accurate and up-to-date data is available for evaluations.

The future is mobile - we are sure of that. For companies that have already implemented their first projects, it is therefore important not to be discouraged by any difficulties, to learn from experience and to persevere - step by step, but with a concrete plan as to where they should go. Those who are still hesitant should not take too much time in our opinion - at least they should realise what added value the mobilisation of maintenance can bring them.

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About Orianda

Orianda Solutions AG, based at Lake Constance, is your contact for holistic end-to-end consulting in the context of SAP Asset and maintenance management. We digitalize and mobilize your business processes in a future-oriented and sustainable way with the help of SAP standard solutions based on the SAP Intelligent Asset Management Suite (SAP IAM).
In doing so, we examine and recognize the potential of the latest technologies and innovations and always have the interests of our customers in focus.
Our expertise ranges from the proven SAP solutions in SAP ERP or S/4HANA to the latest and most innovative SAP cloud solutions.

Our customers benefit from our experience and best-practice approaches and can be found in a wide range of industries, including transportation & logistics, mechanical and plant engineering, manufacturing, utilities, the public sector, and pharmaceuticals & chemicals.
Since the company was founded in 1998, around 60 employees are now working for our customers - for asset and maintenance management that is precisely tailored to the specific processes of the respective company and is perfectly mapped in technological terms.

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