



CREATING  
A CLIMATE  
FOR GROWTH

**PRIVA**

# > PRIVA MANAGEMENT INFORMATION

Insight into processes, labor, and crop, from greenhouse to packhouse



## Who is Priva?

Priva creates a climate for growth. We lead the way in the development and production of technology for the optimization of environmental conditions and process management. We provide solutions for horticulture, building automation, and anything in between with our unique combination of software, hardware, and services.

In horticulture, we help business owners take the next step in developing their enterprise. Whether a grower in Mexico with a plastic multi-span greenhouse, a Chinese breeder with a solar greenhouse, or a horticultural entrepreneur with a high-tech closed greenhouse system in the Netherlands, Priva has a suitable solution for you. With every step we take together with our clients, our top priority is more profit per square foot while using less energy and recycling as much water as possible. Whether you are growing ornamental plants (like flowers and potted plants) or healthy, high-quality fruits and vegetables, Priva provides the solutions that help you optimize the indoor climate, recycling of water, use of energy and registration of labor. Streamline your business with process computers, air treatment systems, fertilizer dosing systems, workplace automation, and management information systems.

### **A global network of partners**

Of course, we don't work in isolation. Together with our certified partners, we are ready to help you in over one hundred countries. Whether you need advice, technical installation, maintenance, training, or long-term service, we are here to give you the support you need.





## > PRIVA MANAGEMENT INFORMATION

### Insight into processes, production, and labor

**The efficient deployment of labor, growing production, and expanding business: isn't that what we all want? It all starts with insight into processes, labor, and cultivation. Both larger and smaller companies need a clear overview to help them improve their performance, create a more accurate production forecast, and reduce labor costs.**

The solution lies in a system that offers insight into all processes, the performance of your employees, and the volume and quality of your production. The result: Essential management information that helps you to forecast the production of your horticultural area on which you can base related labor planning.

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#### **Increasing labor costs**

The amount of flexible and seasonal workers has increased considerably over the past years. Nowadays, labor costs make up 20–30% of the total costs of horticultural companies. That is why it is very important to have control over the labor costs within your company. And that starts with insight into those costs. Insight increases the predictability of labor costs and allows you to better assess the effectiveness of labor. With a cost item as large as labor, predictability and insight will give you peace of mind.

#### **The need for reliable product information**

Consumers and companies increasingly demand information on the traceability of products. By better integrating the links within the supply chain, delivery information will be more reliable. Optimizing the supply chain also leads to a shorter delivery time and a higher quality of the product. In the end, this will result in higher profits.

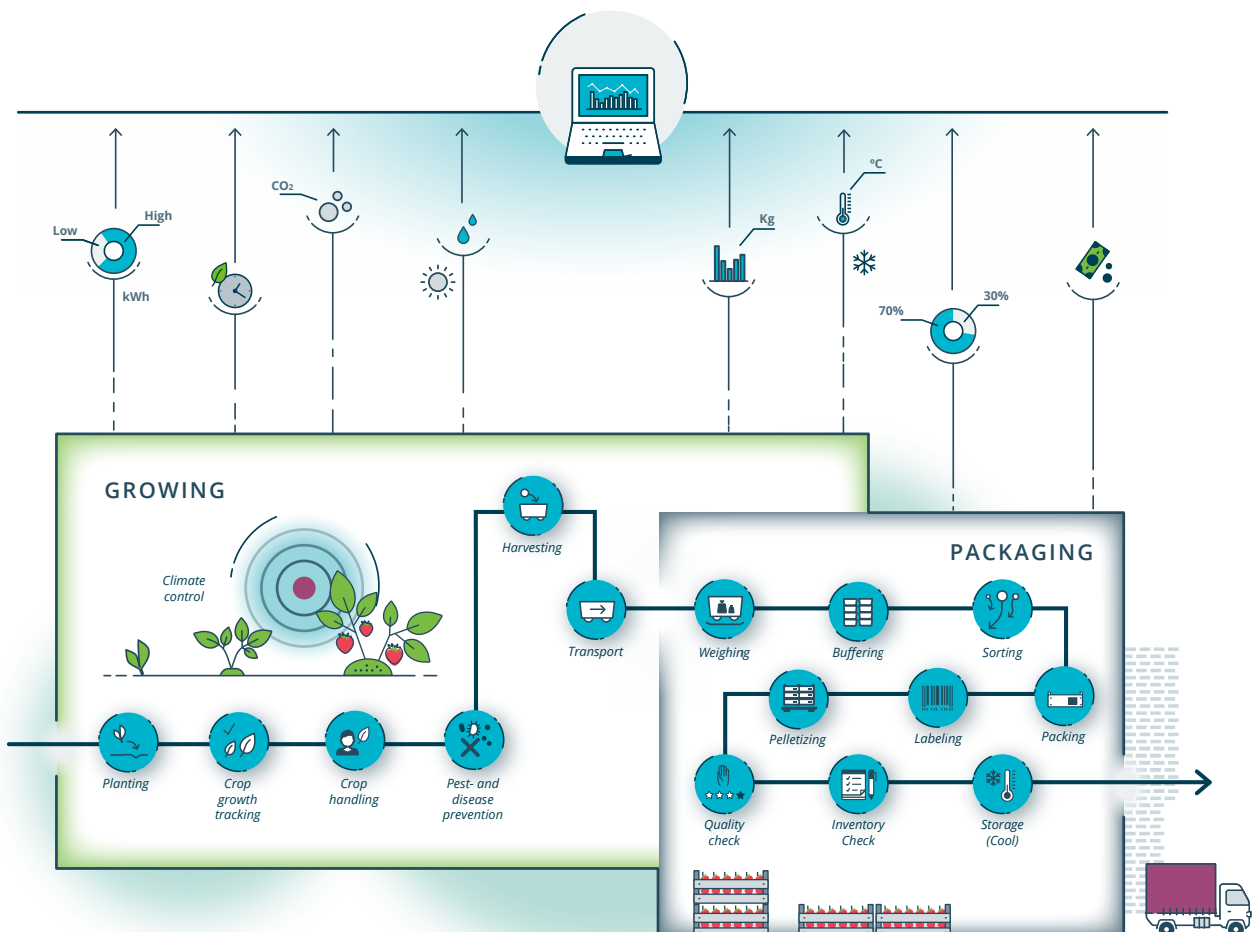
Priva can support you in this. Our complete, modular, and flexible management information system provides you with a clear overview. The system helps you to improve the performance of your company, to make accurate production forecasts, and to reduce labor costs.





## Take charge of every step of your cultivation process

With our management information system, you can control every step of the process, from planting to harvesting and from weighing to packaging.







## UNDERSTAND YOUR BUSINESS INSIDE AND OUT

- > Accurate production and labor forecasting
- > Insight into the performance of employees
- > Easy-to-read graphs and charts
- > Minimal input errors in registration
- > Compare crops, departments, and locations real-time

## Cultivation solution

To achieve optimal yield, a crop needs to grow in the best possible conditions. These conditions change continuously. To create a fully performing crop, the conditions need to be measured, monitored and managed. The primary growing conditions are controlled by a process computer like Priva Connex. With Priva Office (application to control Priva Connex), it is possible to automatically import climate and process data into the central FS Performance information system. With the integrated data, you can easily see the status of your crop, including any aspects that may need adjusting.



### Planting

From the moment of planting, the crop needs maintenance to ensure it is growing optimally. With the right climate and irrigation strategy, the crop can develop in the best way.



### Pest and disease prevention

Pests and diseases, like spider mite and whitefly, can be registered and visualized on a map of your growing facility. This enables you to follow the development and analyze possible production variances.



### Crop growth tracking

With Priva FS Performance, it's very easy to monitor the crop developments. This allows you to decide what crop maintenance activities need to be carried out and how your climate strategy can be best aligned with the cultivation activities.



### Harvesting

Optimize work processes by receiving a planned production per cultivation every day. Now the packhouse team knows what they can expect from the greenhouse for packaging, and the sales team knows what will be available for sale.



### Crop handling

Manual activities like deleafing, lowering, twisting, and pruning are necessary to keep your crop in the best shape. This is very labor intensive. Simply register which employee carried out which activity and where, and you can plan next week's work.



### Transport

Whether the transportation of your product is carried out manually or is fully automated, with Priva FS Performance your transport is fully supported. In addition, you can always trace the product back to where it was harvested.



## Packaging solution

Priva understands the need for good packhouse management. At any given time, a company's management team needs to know who is doing what and how much is being done. The whole packhouse operation is only manageable if you have the right packhouse information.

Each packhouse is different. We know packhouse layout often depends on the type of product that is being processed. No matter what type of packhouse and product you may have, with our packhouse solution you are able to follow the product throughout the packhouse process.



### Weighing

Weigh the volume of products that come into the packhouse with a special production interface, and connect the system to your internal logistics system.



### Labeling

Connect your labeling system with Priva FS Performance and get insight into how many packages are labeled with a certain label.



### Buffering

Keep track of each cart or container that enters or exits the buffer and see by whom, when, and where the contents of the cart were picked.



### Palletizing

After palletizing, your products are placed on pallets and moved to cooling. From that moment, the product is ready for sale.



### Sorting

By connecting your grader machine to FS Performance, you will receive clear grade-out information on cart and/or crop levels related to size, color, and quality.



### Quality check

Quality checks provide you with insight into the quality of the product that leaves the company. This way you can be sure that the product that goes out meets the quality requirements you have set.



### Packing

Register the type and number of packages across the whole packaging line and assign these results to the employee responsible for a particular packaging order. This way, you can measure the productivity of the whole packaging line, and that of individual employees.



### Inventory check & storage (cool)

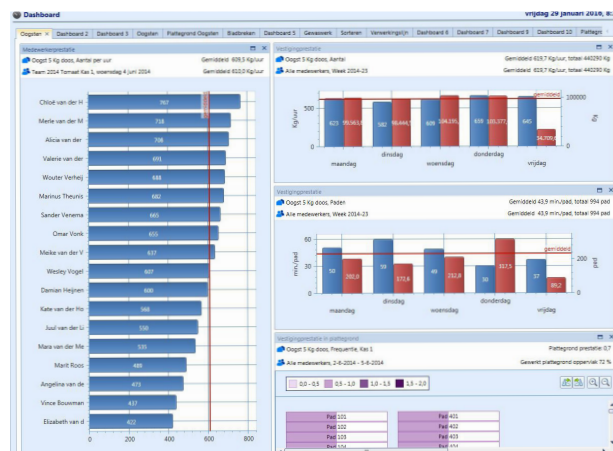
After the products have been placed on pallets, they are brought to the storage area and added to your inventory. The data from the FS Performance database can be imported into your ERP system.

## Priva FS Performance

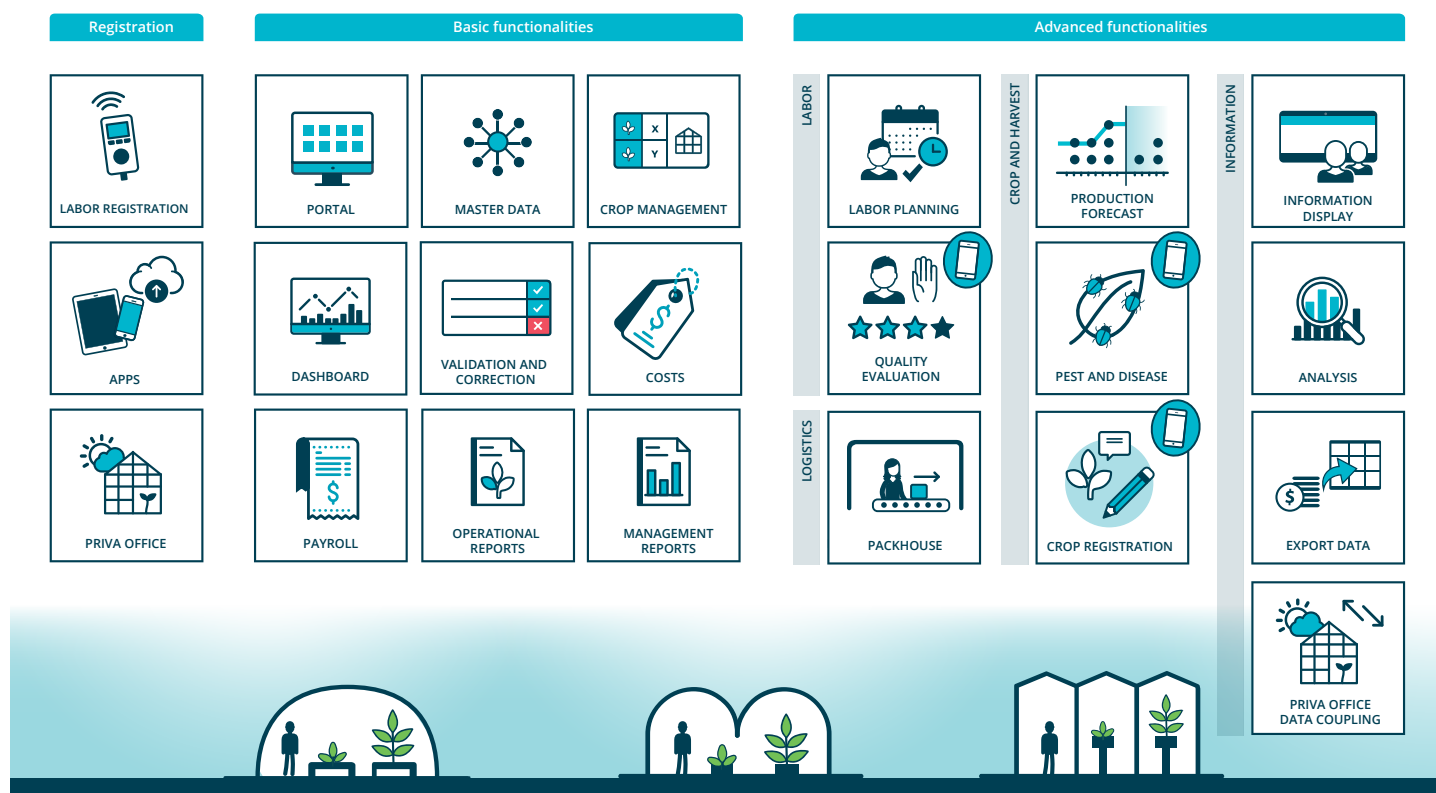
Priva FS Performance is a practical system that allows all your company data to be collected and processed into easy-to-read and comparable information in a clear dashboard view for quick analysis. This will give you real-time insight into the process. Priva FS Performance also allows you to view critical business processes.

*Roman Aratolyevich, TC Yaroslavsky: "Priva FS Performance is a mechanism for optimizing processes in the greenhouse and shows you the real capabilities of your staff."*

Priva FS Performance information is quickly and easily accessible. You and your team can look at the same data and derived information. AYou can easily make comparisons between crops, departments, and even different locations. In this way, you attain maximum performance from your production, labor, and equipment. You can customize your Priva FS Performance with the modules that best suit your needs and ambitions.







## Basic functionalities

### Portal

One portal provides access to all the modules and information available in the FS Performance management information system. An FS Performance portal can be easily installed on as many workstations as you need. The portal gives authorization at different user roles and levels.

### Master data

Single central entry and management of master data, covering all the information relating to employees, activities, locations, and units. Using master data enables you to enter an activity or a new employee just once, even if they are working at multiple sites. Comparing activities over multiple sites is also simple and efficient in this way.

### Crop management

With crop management, you can precisely determine which crops you have when and where in your greenhouse. You can also keep track of hours, production, and costs at crop level. Compare active crops with harvested crops within your company or over multiple sites. Now you have insight into which crops perform better than others and which ones may be more profitable for you.

*Peter Boekstijn, Boekstijn Eggplants: "Saving 10 to 20% on harvest costs is certainly possible".*

### Dashboard

The FS Performance dashboard provides real-time insight into what's happening at all of your connected locations. Business information such as worked hours, actual productivity, quality, planning, and progress, is directly available to you on personal dashboards that are easy to configure.

### Validation and correction

Registration is human labor. Control, correction, and validation is therefore very important. FS Performance offers a state-of-the-art error detection function, by which incorrect inputting by employees is traced automatically. A deviating value directly results in a warning and a logical solution proposal, which you can use to correct issues quickly.

### Costs

Simply manage costs and performance per employee using one or more employee compensation profiles. Costs per hour, piece rates, and bonuses can be set within a profile. When all costs per employee are determined accurately, you will have insight into the costs per kilo of product and the costs per whole cultivation, greenhouse, or location.

### Payroll

With Priva FS Performance, it is possible to create a payroll export file for a set period for your payroll administration. This enables you to simply integrate the collected data with your payroll program or agency.

### Operational reports

With flexible reporting, you will have the ability to gain insight, quickly and easily, into the operational processes of your company. Operational reports will assist your operational management to make their daily decisions.

### Management reports

Management reports support you in answering strategic and operational questions. Comparing sites, greenhouses, crops, and teams inside your company is simple to accomplish; even over multiple months or years.



# Advanced functionalities

## Labor

### Labor Planning

This module allows you to create a weekly work plan for each crop. In the work plan, you can specify which activities have to be carried out, for which specific locations, and what the expected performance of these activities is.

Achieve optimal labor use by assigning the available employees to planned activities based on personal performance and/or costs.

Having access to data on both planned and realized work, FS Performance allows you to monitor real-time progress during a specific week, enabling you to proactively make adjustments to ensure efficient work progress.



### Quality Evaluation

A labor registration system allows you to evaluate employees on their speed and performance. However, this is often not sufficient for evaluating employees properly. Aspects such as the way an employee performs a specific task and the way they handle the harvested product are often as important.

Our Quality Evaluation module allows you to evaluate the quality of the work performed. By combining performance indicators and qualitative feedback, employees become more aware of the work they carry out. This module is also available via an app on your smartphone.

## Crop and harvest

### Production Forecast

This module lets you develop a forecast of the quantity of production that you can anticipate for each crop in the coming weeks, based on your registered crop characteristics.

The module calculates a production forecast in kilograms and kilograms per square meter. By using your smartphone (in combination with the Crop Registration module), you can register plant counts quickly and easily. The realized production data can be placed alongside the expected production data to give insight into real vs. planned production.

Production Forecast can be used in FS Performance to optimize your internal processes - not only for your picking team, but also for your sales and packhouse teams.

### Pest and Disease

This module makes it very easy to register any pests and diseases that are present and visualize them on a map of your company.

The module supports two registration processes:

- > counting pests on sticky traps
- > scouting for pests and diseases in the greenhouse

This module shows you the outbreak and can help you analyze production differences. Pests and diseases are registered in the FS Performance portal or on a smartphone.

### Crop Registration

Crop Registration allows you to enter crop characteristics on your PC or register them directly using your smartphone. Registering them on a smartphone means one-time input of data. Once the smartphone has been connected to your company network, registrations will be synchronized with the FS Performance server. You can create various reports from this or combine your crop registrations with crop conditions and crop production data.





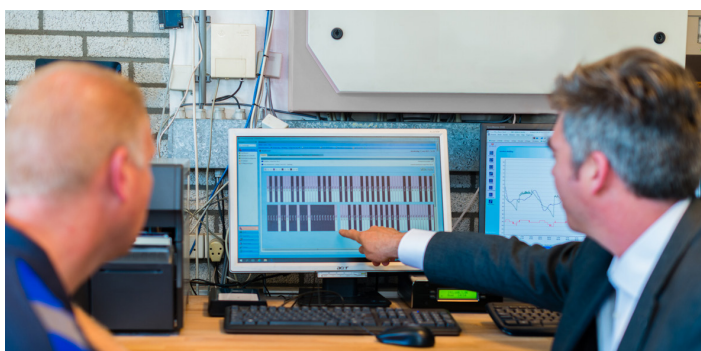
## Logistics

### Packhouse

Besides the weighing of products that come from the greenhouse, the Packhouse module also offers you various options for tracking your packaging and/or sorting processes. FS Performance can help you gain insight into the performance of your employees in the sorting and handling process.

In addition to this, other systems such as grading machines and packaging lines can provide a lot of information that can be linked to the Priva FS Performance system. This results into a complete overview from the moment the product is picked in the greenhouse to the moment the product leaves the company.

### Information



### Information Display

This module allows you to share information with your employees easily and gives you the opportunity to stimulate their efforts and motivation. Through real-time feedback, employees can adapt their performance immediately. You can display employee performances or labor planning, and any other information that you may want to share with your employees. The flexibility of the Information Display module allows you to rotate multiple types of information on the screen. The information on the display refreshes automatically to make sure that your employees are always looking at the latest available information.

### Analysis

The Analysis module is a flexible analysis tool that turns data into information, allowing you to search for business answers by analyzing the information available in FS Performance.

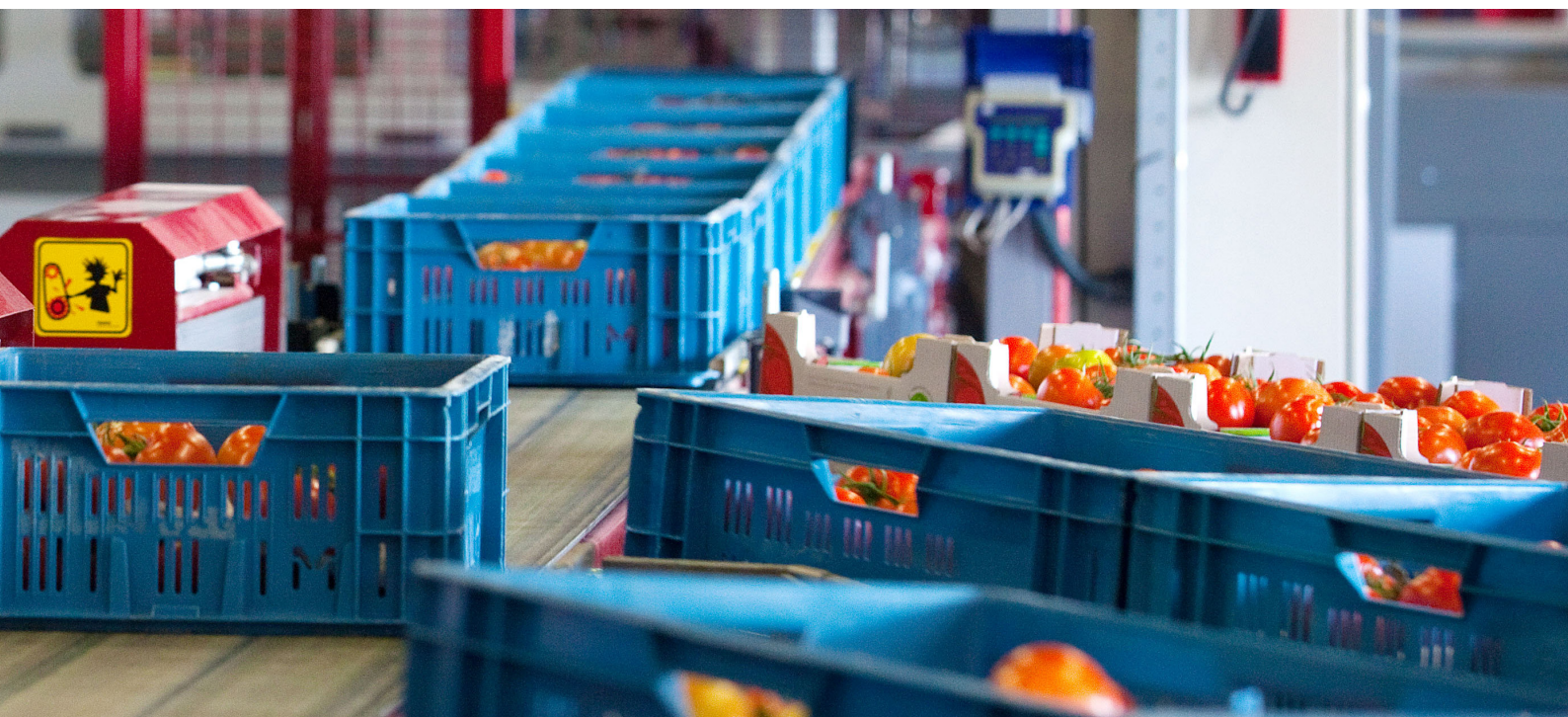
This module enables you to use Microsoft Excel to present the information in any layout you choose, allowing you to detect trends and differences. The module provides an incredibly flexible way of analyzing your climate, labor, and production information in one overview over one or multiple sites, helping you to make important business decisions.

### Export Data

The Export Data module offers the ability to link the data from FS Performance with all the available third-party software packages. FS Performance automatically updates the provided data share, which can be a file format and/or an SQL database.

### Priva Office Data Coupling

When a Priva Office system is present on your location, relevant information coming from the Priva Office system can be shared with the FS Performance management system. This enables you to analyze labor and production results compared to your climate and irrigation strategies.







## Priva FS Reader

You want your employees to be able to register their work quickly and easily. The Priva FS Reader has been specially designed for this purpose, it is proven to be the most commonly used solution in horticulture. Naturally, the FS Reader integrates seamlessly with the FS Performance management information system. By using RFID tags, manual input is no longer necessary. Input errors are a thing of the past! Once scanned, data can be sent immediately to the Priva FS Performance server. The information in the system is always accurate and up-to-date, regardless of the time of day.

### A versatile system

The information collected by means of the FS Reader can be integrated with data on cultivation, production, and harvesting. The system offers immense flexibility and can be used in different companies, wherever and whatever size they are. Whatever your ambitions might be, Priva offers the best solution.

*Nicolas Magueur, tomato grower: "We have opted for FS Performance, because it works with readers for data entry and because all information about personnel, climate, energy, and irrigation is integrated."*

### A short learning curve

The Priva FS Reader is easy to operate thanks to the minimum number of control buttons. As a result, your staff will get to know how to use the readers very quickly. After minimal training, the readers can be used by employees with any language background.

### Feedback during data input

Priva FS Reader helps staff record data correctly by providing feedback on data input. This reduces the number of incorrect entries and enables the obtained information to be increasingly more reliable than before.

### Benefits

- > Specially designed for use in a horticultural environment
- > Registration takes little time
- > Feedback regarding data input minimizes errors
- > Easy-to-use thanks to a minimum number of buttons
- > Wireless and chargeable devices





## Personal Registration App

Do you prefer your employees to use smartphones to register their work? If so, the Personal Registration App is the solution for you. With this app, your employees can use their own smartphone to register their daily activities. The app offers you the same possibilities that the Priva FS Reader has to offer. The app communicates with the server via your local company network. Of course, it is also possible to use the app in combination with Priva FS Readers. In this way, you have a suitable solution for every process and every employee.

### Registration possibilities

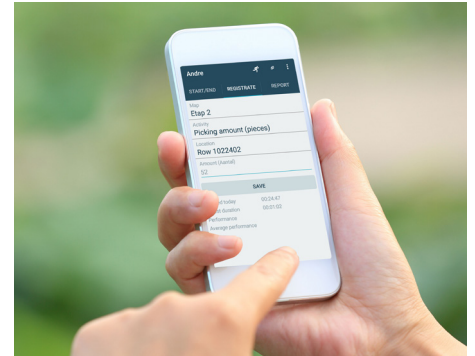
Your employees can log in and out via the app and register all their activities and location(s), including breaks. They can also enter their results with the app, such as the number of containers or boxes or as a direct result (counts). The app also shows you various reports, such as detailed daily data, a concise daily overview, detailed time data, or a concise time overview.

### Offline registrations

After the app has been set up and started, it can be used offline for the rest of the day, i.e. without a Wi-Fi or internet connection with the registration server. This means that all registrations are stored locally and the app searches for a connection with the registration server every minute so that offline registrations can be entered into the database.

### Benefits

- > Feedback on individual and group performance
- > Works with own smartphones
- > Uses the already existing company network



## Mobile Terminal

The mobile terminal is a registration app on a tablet, PC, or laptop that communicates wirelessly with the FS Performance server. Using this terminal, it is possible to log all employees in and out (without any security checks). It is also possible to log employees in and out with PIN codes or fingerprint security. Besides that, personal activities can be registered, such as cleaning or grading. Enter activities quickly and easily via tablet, PC or laptop. You can also assign activities per employee. This way, employees can only choose from the activities which are assigned to them. The mobile terminal app can be downloaded directly from the FS Performance server. With multiple licenses, you can use the mobile terminal app on different devices.

### Benefits

- > Choose the security check of your preference
- > Insight into labor and activities of employees outside the greenhouse
- > Works with own tablets, PCs, or laptops
- > Uses the existing company network



## Packaging Line App

The Packaging Line App is a registration app for a tablet, PC or laptop and has been specially designed for labor activities on the packing line. A line supervisor can register the activities and/or the results of the employees on the packing line. The device needs to be connected to the FS Performance server over a local LAN (wired or wireless).

With the Packaging Line App, it is possible to assign employees and to assign activities to a packaging line position. You can also easily change the work activities for the entire line if you switch to a different type of packaging. You can activate one or multiple positions and register production (box count) on a line manually. A real-time dashboard for the packaging line can be shown.

### Benefits

- > Registration of all employees working on the packaging line by a line supervisor
- > Insight into labor performance of employees working on the packaging line
- > Real-time dashboard for the packaging line
- > Works with own tablets, PCs, or laptops
- > Uses the existing company network

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