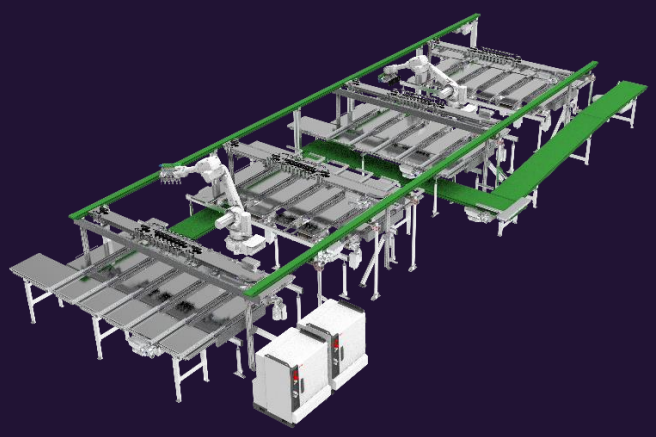
Robotics

In order to automate your research facility, various systems can be integrated.

WPS provides a wide range of systems for process automation. Our expertise includes the automation of greenhouses for production purposes, as well as for research and development facilities, such as those used by breeders, universities and crop protection product developers. To automate processes for plant research WPS offers a wide range of robotics solutions.

Trolley loading robot

A trolley loading robot is an advanced automation solution designed to efficiently and accurately load trays into a trolley without the need for manual intervention. This technology optimizes workflow by ensuring smooth and accurate placement of trays in the trolley, increasing productivity and reducing the labor required for the task.



Tray (un)loading Robot

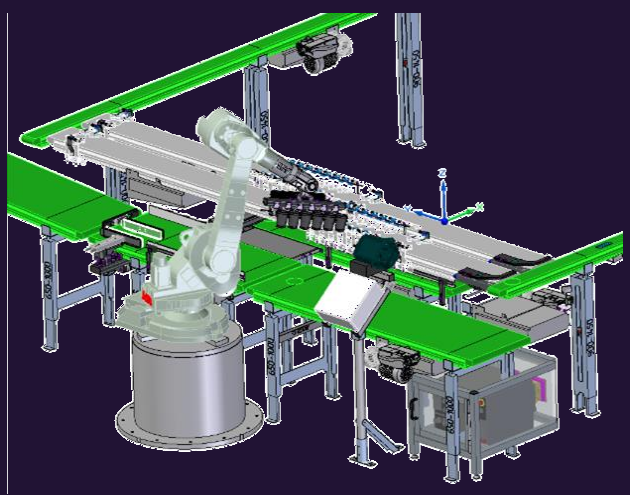
The tray unloading robot is used to remove potted plants from a tray and place them in specially designed plant carriers. Each plant carrier contains an RFID tag that allows us to track the plant through the entire process.

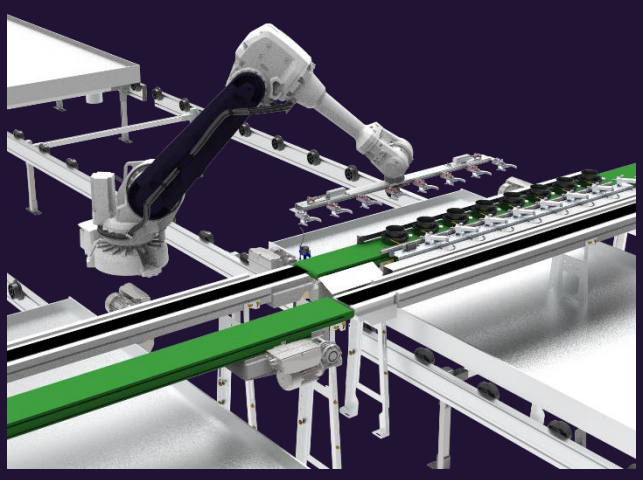
The robot tool is specially designed to pick up multiple pot sizes with the same robot tool.

Plant Mixing Robot

Robotics can be used for automated mixing of plants in a tray. In crop protection research facilities this is useful because it allows for automated preparation of treatments. In plant protection efficacy studies, different treatments need to be tested on a variety of plant samples.

Alternatively, mixing could be used as a randomization method. This allows researchers to observe and analyze the effects of various factors on the plants more accurately. It leads to stronger conclusions and improvements in plant protection methods.





Bench (un)loading Robot

Robots can efficiently remove plants from a bench and place them on a conveyor belt and vice versa. This makes it possible to assess plants individually, while still achieving a high throughput. To facilitate this process, plants are often placed in special carriers, with which the plants can be transported to various stages, such as an inspection station, a water and weighing unit or various camera cabinets. Once the plant has undergone its complete process, the same robot can return the plant on a bench, which can be transported to a cultivation area.