

# Smart Forestry



# Leave nothing to chance

What would it mean to you to always know the smartest route to the timber with the least impact on the forest and well away from waterlogged ground? To be able to prepare tomorrow's work from home so that the right information is available at the start of the working day? Or to be able to allow a service technician to connect to your machine remotely to help you?

Smart Forestry is a platform with development in focus – we are already working on the smart solutions of tomorrow. Smart Forestry gives you access to a collection of digital services that help make the workplace safe, smart, productive and sustainable – regardless of whether you have one or one hundred forest machines. You can keep track of your machines, collaborate with colleagues and make informed decisions based on facts. Smart Forestry currently encompasses three different applications, making it easy to find the best solution for you and your business.

Smart Forestry **Fleet Monitoring** provides you with full control over your machines, the ability to plan harvesting assignments remotely and all the necessary remote control functions – including support.

Smart Forestry **Vision** enables you to work with information layers directly on the map, share information with other machines at the work site and view all production in real time.

Smart Forestry **Precision** gives you access to a new level of possibilities in the forest, with the precise position of the machine used for functions that simplify your working day in various ways.



# Smart Forestry Fleet Monitoring

## Plan for better results

Fleet Monitoring provides you with full control over your machines. It also offers you the opportunity to prepare and plan work tasks for harvesters and forwarders. Since the service is cloud-based, you can plan your work wherever you like, and using any device with internet access. You can register identities, products, areas, maps, GIS data and other important information. This ensures that the operator has the right information even before they start working.

- **Prepare and plan your work using your computer, tablet or smartphone – wherever you want.**
- **The right information helps the operator to spend their working hours on active production**
- **Create clarity and minimise the risk of unnecessary driving and mistakes**
- **Save time, fuel and the environment with well-planned routes**

## All machine information gathered in one place

Fleet Monitoring gathers all information about your fleet and continually provides insights into each individual machine. You can see the utilisation, operating status and exact geographic location of each machine. This entails no extra work for the operator as all data is logged and saved automatically.

- **Quick indication of any problems with a machine, such as a low oil level or faulty steering**
- **Easy to compare fuel consumption and production**
- **Stored operation and production data is easy to tally, reducing your monthly accounts workload**





## Interaction and remote support

Fleet Monitoring gives you remote access to many practical functions: check the battery status, monitor the temperature in the cab or start the diesel heater. Access to remote support where Komatsu Forest's experts connect to your machine offers additional peace of mind. You can even allow a technician to remotely control the machine, troubleshoot any problems and update the settings and software. This minimises downtime and saves both time and money – not least by avoiding costly service callout expenses. Technicians can provide remote training as well.

- **Remote support from experts minimises downtime and this function can also be used to prepare the machine for servicing**
- **Access to practical functions and remote support for your connected machines**
- **Enables training initiatives where new operators can compare their results with those of experienced operators**
- **Secure connection via VPN. The operator must authorise all remote access**



## Smart Forestry Fleet Monitoring

- ✓ Plan for better results
- ✓ Work from anywhere with ease
- ✓ Access all machine data in one place
- ✓ Compare fuel consumption and production
- ✓ Create monthly reports with ease
- ✓ Get remote support and updates

# Smart Forestry Vision

## Share information quickly and conveniently

Vision makes it easy to share information with each other. The harvester operator plans suitable access roads, log roads and landings based on the worksite conditions. The forwarder operator can see the production in each working zone and optimise their forwarding to avoid unnecessary detours. Once the timber has been forwarded to the landing, the operator can mark the zone



| Tree species | Count |
|--------------|-------|
| Tall         | 133   |
| Green        | 504   |
| Low          | 138   |
| Select none  | 85    |

complete, simplifying follow-ups. Functions for marking special areas and boundaries on the map as well as for writing messages enable the team to help each other do a better job. You can also share information with other teams or companies.

- **Collaborate more easily by sharing information between machines and teams**
- **Help each other to achieve more efficient and lower impact felling and forwarding**
- **All information is updated in real time**

## Efficient, low-impact work

Vision helps you to work more efficiently and with less impact on the forest. You can plan the forwarding based on the harvester's tracks, thereby saving time, diesel and the environment. You gain a good overview and reliable production data that make it easy to adjust your planning as needed. The map functions also make it easy to send an easily understood final report once an area has been completed.

- **Area maps with up-to-date information**
- **Plan forwarding based on the harvester's tracks**
- **Work more efficiently with improved map layers**
- **Generate reports and analyse data**
- **Combine maps of areas and production with the latest information about ground conditions**

### Smart Forestry Vision

- ✓ Share information quickly and easily
- ✓ Collaborate seamlessly between operators
- ✓ Monitor production in real time
- ✓ Visualise boundaries and areas on the map
- ✓ Access vital information instantly
- ✓ Make informed decisions

# Smart Forestry Precision

## Save time with new work methods

Precision uses the latest technology in satellite positioning to determine the machine's position with an error margin of just a few centimetres. This paves the way for productive and smart work methods where the operator is provided with key information and support to enable informed decisions. This new technology also offers the potential to mark boundaries and specific trees digitally, based on map data from, say, drones or LiDAR scanning.

- **See the machine's exact position drawn on the map, including the direction of the crane and the location of the crane tip**
- **Precise positioning enables map layers to reflect the real world even better**
- **Greater measuring point density means more accurate machine route plotting**
- **View the exact position of processed logs, not just where they were felled**

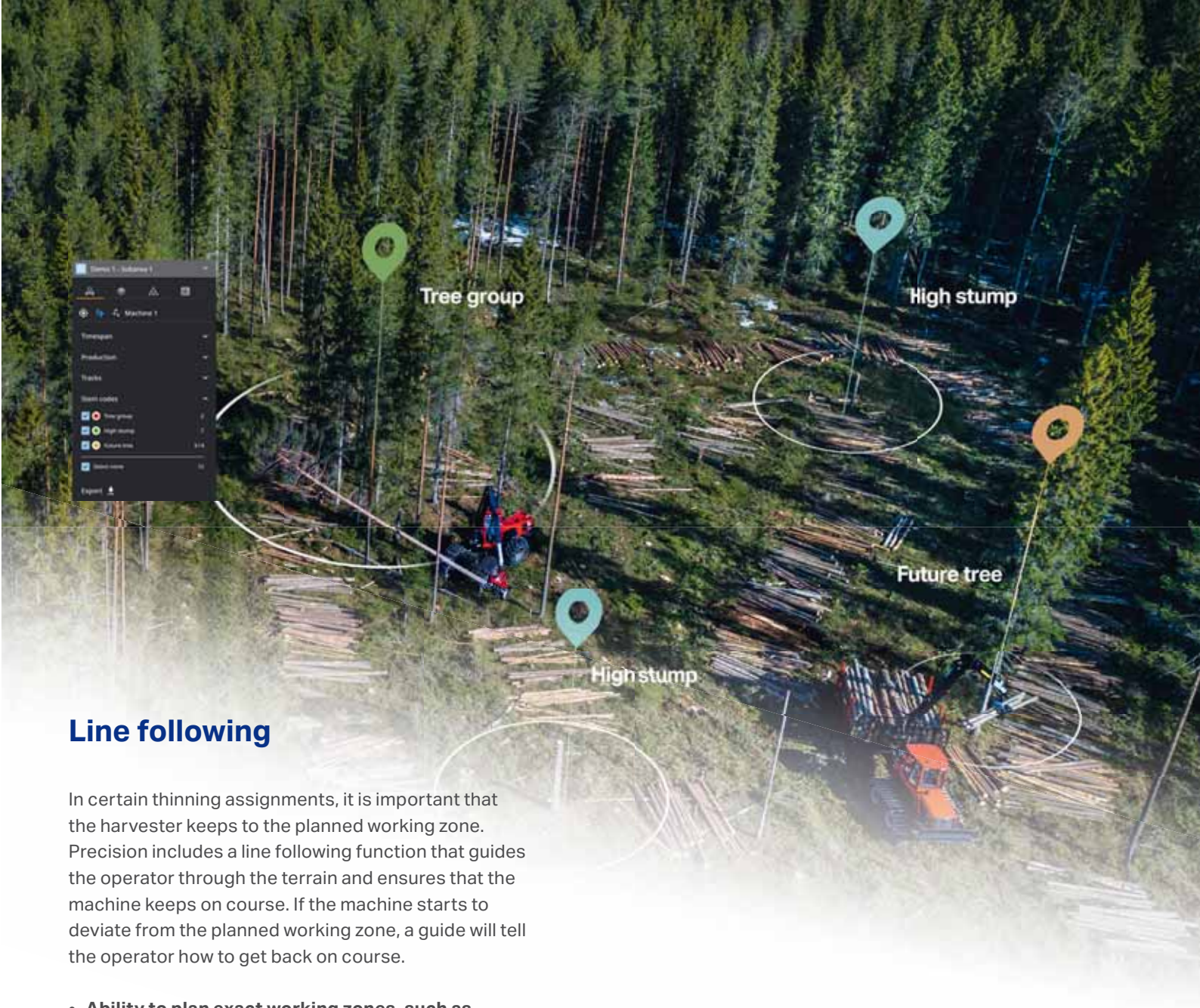
## Mark exact boundaries

Geofencing is a digital fence that is added when planning an area. This could be around a harvesting area or to mark a protected area such as an ancient monument or the remains of a coal pile.

A feature that offers greater peace of mind for forest owners and operators alike as it indicates more clearly where the operator should harvest and the areas they should avoid, enabling them to safely harvest close to an area boundary without the risk of harvesting the neighbour's trees.

- **The extreme precision ensures a tool fit for creating reliable boundaries**
- **Set an alarm to indicate when the machine or crane tip is approaching a boundary**





## Line following

In certain thinning assignments, it is important that the harvester keeps to the planned working zone. Precision includes a line following function that guides the operator through the terrain and ensures that the machine keeps on course. If the machine starts to deviate from the planned working zone, a guide will tell the operator how to get back on course.

- **Ability to plan exact working zones, such as thinning routes**
- **The operator receives help and guidance to keep on course**

## Classify based on silvicultural considerations

Stem code visualisation means that individual stems can be visualised using stem codes based on, for example, biodiversity considerations. This supports the operator in their work, enabling them to make better decisions more easily and making it easier to follow directives, such as regarding the distance between future trees.

- **Precision has tools to help the operator plan high stumps and future trees**
- **Track the number of high stumps created on the screen rather than manually**
- **Visualisation helps show that the work has been conducted in accordance with the forest owner's instructions**

### Smart Forestry Precision

- ✓ Facilitate work with precise positioning
- ✓ Navigate with realistic map conditions
- ✓ Work with precision in protected areas
- ✓ Follow pre-defined paths accurately
- ✓ Visualise tracks and progress
- ✓ Maximise work efficiency



# Smart Forestry

– which applications are right for you?

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## Would you like to learn more?

Contact your local dealer to learn more about how Smart Forestry can simplify your working day. You can also visit our website for the latest updates.

[www.komatsuforest.com/smartforestry](http://www.komatsuforest.com/smartforestry)

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The content of our services may vary somewhat between markets. Not all functions presented in the brochure are available on all models or in all countries. Please contact your local Komatsu representative to find out what applies in your particular market.



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