

"Innovations in Forestry Operations"

- Eero Lukkarinen, Area Director (Canada) –

PONSSE PLC

- Ponsse is a forest machine company concentrating on sales, service, manufacturing and technology related to cut-to-length forest machines
- Main markets: Finland, Russia, Sweden, Germany, France, North and Latin America
- 12 subsidiaries and 32 dealers
- All forest machined manufactured in Vieremä and electronic manufactured in Epec Seinäjoki
- Research & Development 3 % from total turnover
- Turnover 612 MEUR (2018)

1 635 Ponsse employees globally

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77 % of the machines are exported

20 % share of the service business in turnover

~50 % of the R&D engineers are designing information systems



NEW TECHNOLOGY & INNOVATION IN CTL

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New Technology & Services Boosting Productivity





Safety

- Target Zero Incidents
- Operator Safety & Ergonomy
 - ActiveFrame / Auto-Levelling
 - Safer Cabin, better visibility
- Route Towards Autonomy
 - Safety Around the Equipment & Area Isolation
- TIVE FRAME
- PEOPLE Training, Control, Processes and Management Involvement !!





How to increase Productivity

How to Support Less Skilled Operators to be more productive ??

How to optimise the learning curve ??

How to support operators on decision making ??

How to ensure that new assistants will actually ease the operators' work, not just bring more complexity ??

- Assistants for production optimisation and easier control
 - Automated Bucking & ActiveCrane Tip Control
- Further automation to provide "micro-breaks" and breaks to operator
- Assistants to support with decision making
- Future Semi Autonomy and Autonomous systems

Difference between skilled and less skilled operator can be up to 50 %

Harvester Operation is demanding and productivity drops during the long shift

Operators have limited time to thing about the next steps

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Productivity & Cost Optimisation



Productivity – Automated Bucking





ActiveCrane – Tip Control



Active Crane is a crane control system, where the direction and speed of the boom tip is controlled instead of individual joint movements



Good example : Assistant, which makes operator operation easier without adding complexity !!

Productivity – Operator Digital Learning Path



Productivity – Semi- Autonomy & Autonomy



Source: FPInnovations

Remote Control, Tele-operated and Semi-Autonomous Equipment

- Person in the cabin
- Person operating remotely
- Step-by-step....

Autonomous Equipment & Driverless Solutions

- Most probably requires a joint development project with a large customer, OEM & technology providers
- Who will be the first one...



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Sustainable Forest Operations



Transparency

Changes the Way of Working

- Connectivity
- Information flow phases, equipment
- Open Interfaces and Standards
- Eco-Systems new type of way of working



Summary

- New Innovation enable process optimisation
- Needed Core Technology Exists
 - Technology needs to be "Forest Proven"
- Information allows Fact Based Decision Making \rightarrow Optimisation
- New Skills are needed & Training of Personnel is Essential
- New Technology Continues Changing the Way of Working
- Change Continues Step-by-Step
- End of the Day People will Make the Change !!!

A LOGGER'S BEST FRIEND

PONSSE